Program Requirements for Residency Education in Pediatrics

Bold = Common Program Requirements; Underlining indicates revision.

I. Introduction

This document represents a step towards a competency-based system of pediatric education and training. The remnants of the structure/process system are still evident in this document in order to facilitate the transition and ensure some familiar infrastructure while we develop and study new methods to assess education outcomes in our training programs. Residency programs in pediatrics must provide 3 years of consecutive training that involve progressive responsibility.

A. Duration and Scope of Training

Programs must provide residents with a broad exposure to the health care of children and substantial experience in the management of diverse pathologic conditions. This must include experience in child health supervision and those conditions commonly encountered in primary care practice. It must also include experience with a wide range of acute and chronic medical conditions of pediatrics in both the inpatient and ambulatory settings.

Programs must provide a progressive educational experience with increasing patient care responsibility over a 3-year period. The first year should include an introduction to the basic experiences on which the rest of the training will be based. During the last 24 months of training, the program must require at least 5 months of supervising the activities of more junior residents within the approved educational settings. The supervisory responsibilities must involve both inpatient and outpatient experience.

Throughout the 3 years of training, emphasis must be placed on enhancement of residents' competence in the medical interview, physical examination, and communication and interpersonal skills. Preventive health care, ethical issues, and discussions of the cost of diagnostic tests, procedures, and therapies should be a part of all rotations.

B. Goal of the Residency

The goal of residency training in pediatrics is to provide educational experiences that prepare residents to be competent general pediatricians able to provide comprehensive, coordinated care to a broad range of pediatric patients. The residents' educational experiences must emphasize the competencies and skills needed to practice general pediatrics of high quality in the community. In addition, residents must become sufficiently familiar with the fields of subspecialty pediatrics to enable them to participate as team members in the care of patients with chronic and complex disorders.

Residents must be given the opportunity to function with other members of the health care team in both inpatient and ambulatory settings to become proficient as leaders in the organization and management of patient care.

II. Institutions

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 institutions.

B. Participating Institutions

1. Assignment to an institution must be based on a clear educational rationale, integral to the program curriculum, with clearly-stated activities and objectives. When multiple participating institutions are used, there should be assurance of the continuity of the educational experience.

2. Assignment to a participating institution outside the primary teaching site for one month or longer requires a specific letter of agreement with the sponsoring institution. Such a letter of agreement should:

a) identify the faculty who will assume both educational and supervisory responsibilities for residents;

b) specify their responsibilities for teaching, supervision, and formal evaluation of residents, as specified later in this document;

c) specify the duration and content of the educational experience; and

d) state the policies and procedures that will govern resident education during the assignment.

C. Assignment to Integrated/Affiliated Institutions

An accredited program may be independent or may occur in two or more institutions that develop formal agreements and conjoint responsibilities to provide complementary facilities, teaching staff, and teaching sessions. When affiliated institutions are utilized and a single program director assumes responsibility for the entire residency, including the appointment of all residents, the determination of all rotations, and the assignment of both residents and

members of the teaching staff, the affiliated institution may be proposed as integrated. Ordinarily, a hospital may not be an integrated part of more than 1 pediatric residency and a program may not propose the primary teaching site of another accredited program as an integrated participant. The RRC must approve the designation of a participating hospital as integrated. In making its determination, the RRC will consider the proximity of the hospital to the primary teaching site and the duration of rotations planned. Normally, at least 3 months of required experience should occur at a hospital that is designated as integrated. A significant increase in the time spent at an integrated hospital should receive prior approval from the RRC. Within a single program some participating hospitals may qualify as integrated, while others are merely affiliated.

Although no limit is placed on the duration of rotations to institutions that are integrated with the primary hospital's pediatric program (although the duration must have RRC approval), rotations to participating institutions that are not integrated with the primary hospital may not exceed a total of 9 months during the 3 years of training. No more than 3 months of these outside rotations may be in institutions that do not have their own pediatric residencies.

Rotations to other programs should enrich but not replace core experiences. When residents rotate to an institution that has its own accredited pediatric residency, the rotating residents must be fully absorbed into the prevailing pattern of instruction and patient care at the same level as the pediatric residents of that affiliated institution.

Residency programs that offer training to residents from other pediatric residencies must provide instruction and experience equivalent to that given to their own residents. They should enter into agreement with other programs only if they are prepared to absorb those residents into the prevailing pattern of education and patient care.

III. Program Personnel and Resources

The Chief of Pediatrics/Department Chair must have overall responsibility for all educational programs that are carried on within the Department of Pediatrics, including those in the subspecialties. All program descriptions submitted to the RRC from this department must bear this person's signature, in addition to that of the DIO and the program director, indicating that the Chief or Chair has reviewed and approved the materials submitted.

A. Program Director

1. There must be a single program director responsible for the program. The person designated with this authority is accountable for the operation of the program. Given the differences in training programs, there may be flexibility in defining program leadership, provided there is a

minimum of 0.75 FTE dedicated to this aspect of the residency program that is financially supported by the institution. The program director must be supported for at least 50% professional effort dedicated to the educational program, or at least 20 daytime hours per week. If that is the case, there must be another key faculty member who contributes 25% assisting the program director, i.e., 1 program director at 50 % time and 1 key faculty/associate program director at 25% time (see Faculty section below).

In the event of a change of either program director or department chair, the program director should promptly notify the executive director of the Residency Review Committee (RRC) through the Web Accreditation Data System of the Accreditation Council for Graduate Medical Education (ACGME).

2. The Program Director, together with the faculty, is responsible for the general administration of the program, and for the establishment and maintenance of a stable educational environment. Adequate lengths of appointment for both the program director and faculty are essential to maintaining such an appropriate continuity of leadership.

3. Qualifications of the program director are as follows:

a) The program director must possess the requisite specialty expertise, as well as documented educational and administrative abilities.

b) The program director must be certified in the specialty by the American Board of Pediatrics**, or possess qualifications judged to be acceptable by the RRC.**

c) The program director must be appointed in good standing and based at the primary teaching site.

4. Responsibilities of the program director are as follows:

a) The program director must oversee and organize the activities of the educational program in all institutions that participate in the program. This includes selecting and supervising the faculty and other program personnel at each participating institution, appointing a local site director, and monitoring appropriate resident supervision at all participating institutions.

b) The director is responsible for preparing an accurate statistical and narrative description of the program as requested by the

RRC, as well as updating annually both program and resident records through the ACGME's Accreditation Data System.

c) The program director must ensure the implementation of fair policies, grievance procedures, and due process, as established by the sponsoring institution and in compliance with the Institutional Requirements.

d) The program director must seek the prior approval of the RRC for any changes in the program that may significantly alter the educational experience of the residents. Such changes, for example, may include: the addition or deletion of a participating institution; a change in the format of the educational program; and/or a change in resident complement.

A modest change in the resident complement may be made without prior RRC approval if the program has the necessary resources to train the additional resident(s) without diluting the experience of those already in the program. A program that plans to implement such an increase should review the most recent letter of notification from the RRC for any citations pertaining to resources. Any such citations should be addressed prior to implementing an increase in complement. Proposed increases must be reported electronically through the ACGME Web Accreditation Data System (WebADS.)

On review of a proposal for any major change in a program, the RRC may determine that a site visit is necessary.

B. Faculty

1. Sponsoring institutions must provide the requisite numbers of key faculty based on program size. **At each participating institution, there must be a sufficient number and diversity of faculty with documented qualifications to instruct, supervise adequately,** and function as general pediatrician and subspecialist role models for **all residents in the program.**

If the program director receives institutional support for 50% time dedicated to the program, there must be an institutionally supported key faculty member or associate program director (defined as at least 25% time) who assists the program director in the administrative and clinical oversight of the educational program. Additional key faculty, as defined above, are required as follows based on program size: for 30–60 residents (consider combined residents as 1 FTE, not 0.5 FTE) 1 additional key

faculty; for 61-90 resident, 2 additional key faculty; and for more than 90 residents, 3 additional key faculty.

In addition to the key faculty noted above, all programs should have one person who functions as a liaison between the residents and faculty. This may be a either a PGY-4 resident/junior faculty member, or a PGY-3 resident who is relieved of all other clinical responsibilities during the time s/he is acting in the liaison role. Additional support is required as follows, based on program size: for 30–60 categorical residents, 1 additional liaison; 61-90 categorical residents 2 additional liaisons; and for more than 90 categorical residents, 3 additional liaisons. These numbers reflect minimum support and may need to be increased in programs using multiple sites for training and/or those that sponsor combined training programs.

Within the primary hospital and/or integrated participating hospitals, there must be teaching staff with expertise in the area of general pediatrics who will serve as teachers, researchers, and role models for general pediatrics. These physicians should have a continuing time commitment to direct patient care to maintain their clinical skills. Hospital-based as well as community-based general pediatricians should participate actively in the program as leaders of formal teaching sessions, as outpatient preceptors, and as attending physicians on the general inpatient services. The number of general pediatricians actively involved in the teaching program must be sufficient to enable each resident to establish close working relationships that foster role-modeling. Where teaching staff participate on a part-time basis, there must be evidence of sufficient involvement and continuity in teaching.

Similarly, within the primary hospital and/or integrated participating hospitals, there must be qualified teaching staff with subspecialty expertise who will serve as teachers, researchers, and role models for the residents. Specifically, there must be teaching staff with training and/or experience in behavioral and developmental pediatrics and in adolescent medicine. Within the primary hospital and/or integrated participating hospitals, there must also be teaching staff in at least 5 of the listed pediatric subspecialties (see Section V. B. 2. d) from which the 4 required 1-month rotations must be chosen. These pediatric subspecialists must function on an ongoing basis as integral parts of the clinical and didactic components of the program in both outpatient and inpatient settings.

A surgeon having significant experience with pediatric patients must play a major role in the residents' education with respect to surgical diagnoses and preoperative and postoperative care. A pathologist and a radiologist who have significant experience with pediatric problems and who interact regularly with the pediatric residents are also essential.

2. **The faculty, furthermore, must devote sufficient time to the educational program to fulfill their supervisory and teaching responsibilities. They must demonstrate a strong interest in the education of residents, and must support the goals and objectives of the educational program of which they are members.** A measure of the commitment of the teaching staff to the pediatrics program is the degree to which patients under their care are available for resident education.

3. **Qualifications of the physician faculty are as follows:**

   a) **The physician faculty must possess the requisite specialty expertise and competence in clinical care and teaching, as well as documented educational and administrative abilities and experience in their field.**

   b) **The physician faculty must be certified in the specialty and in their subspecialty area, where appropriate, by the American Board of Pediatrics, or possess qualifications judged to be acceptable by the RRC.** Each time the program is evaluated by the RRC it is the responsibility of the program director to provide evidence of appropriate qualifications for teaching staff who lack board certification.

   c) **The physician faculty must be appointed in good standing to the staff of an institution participating in the program.**

4. **The responsibility for establishing and maintaining an environment of inquiry and scholarship rests with the faculty, and an active research component must be included in each program. *Scholarship* is defined as the following:**

   a) **The scholarship of *discovery*, as evidenced by peer-reviewed funding or by publication of original research in a peer-reviewed journal;**

   b) **The scholarship of *dissemination*, as evidenced by review articles or chapters in textbooks;**

   c) **The scholarship of *application*, as evidenced by the publication or presentation of, for example, case reports or clinical series at local, regional, or national professional and scientific society meetings.**

   Complementary to the above scholarship is the regular participation of the teaching staff in clinical discussions, rounds, journal clubs, and

research conferences in a manner that promotes a spirit of inquiry and scholarship; the offering of guidance and technical support (e.g., research design and statistical analysis for residents involved in research); and the provision of support for residents' participation, as appropriate, in scholarly activities.

5. Qualifications of the nonphysician faculty are as follows:

a) Nonphysician faculty must be appropriately qualified in their field.

b) Nonphysician faculty must possess appropriate institutional appointments.

C. Other Program Personnel

Additional necessary professional, technical, and clerical personnel must be provided to support the administration of the program.

Teaching by other health professionals such as nurses, pharmacists, social workers, child-life specialists, physical and occupational therapists, speech and hearing pathologists, respiratory therapists, psychologists, and nutritionists is highly desirable.

For administrative support, each training program must have one staff level residency coordinator who devotes 100% effort to the residency program. Additional support is required as follows, based on program size: 30-60 residents, one full-time administrative assistant; for 61-90 residents, two administrative assistants; and for programs with more than 90 residents, 3 administrative assistants to the full time residency coordinator.

D. Resources

The program must ensure that adequate resources (e.g., sufficient laboratory space and equipment, computer and statistical consultation services) are available.

1. Inpatient and Outpatient Facilities

The inpatient and outpatient facilities must be adequate in size and variety, and must have the appropriate equipment necessary for a broad educational experience in pediatrics.

There must be an emergency facility that is appropriately equipped and staffed for the care of pediatric patients. The program must also have an intensive care facility that is appropriately equipped and staffed for the

care of a sufficient number of seriously ill pediatric patients to provide adequate experience for the number of residents in the program.

2. Medical Databases

There must be access to an on-site library or electronic access to a collection of appropriate texts and journals in each institution participating in the residency program. Access must be readily available during nights and weekends.

3. Patient Population

Programs must provide residents with patient care experience in both inpatient and outpatient settings. A sufficient number, variety, and complexity of patients, ranging in age from infancy through young adulthood, must be present. A deficient or excessive patient load may jeopardize the accreditation status of the program.

IV. Resident Appointments

A. Eligibility Criteria

The program director must comply with the criteria for resident eligibility as specified in the Institutional Requirements.

B. Number of Residents

Because peer interchange is a very important component of the learning process, each program is expected to recruit and retain a sufficient number of qualified residents to fulfill the need for peer interaction among those training in pediatrics. An inability to recruit the required minimum number of residents and/or a high rate of resident attrition from a program over a period of years will be a cause of concern to the RRC.

Residents at more than one level of training must interact in the care of inpatients, allowing for frequent and meaningful discussion during all phases of the training program (e.g., neonatal, outpatient, inpatient, and emergency services). To achieve this, a program should offer a minimum total of 12 resident positions, i.e., 4 at each level, exclusive of subspecialty residents. Except for periods of transition, the same number of positions should be offered in each of the 3 years of training. The RRC will consider the presence of residents from combined pediatrics programs, e.g., medicine/pediatrics or pediatrics/emergency medicine, when it evaluates the adequacy of the resident complement and of peer interaction. The total number of residents from combined programs should not be so large as to have a negative effect on the education of categorical residents.

C. Resident Transfers

To determine the appropriate level of education for a residents who are transferring from another residency program, the program director must receive written verification of previous educational experiences and a statement regarding the performance evaluation of the transferring resident prior to their acceptance into the program. This documentation should be available for review by the site visitor. **A program director is required to provide verification of residency education for residents who may leave the program prior to completion of their education.**

D. Appointment of Fellows and Other Students

The presence of residents from other specialties or programs who rotate on the pediatric service must not dilute the experience and peer interaction of the pediatric residents.

V. Program Curriculum

A. Program Design

1. Format

The program design and sequencing of educational experiences will be approved by the RRC as part of the review process. Each program must describe a core curriculum that complies with the RRC's requirements and in which all residents participate. All residents in the program must have a minimum of 18 months of training in common. In addition, programs that utilize multiple hospitals or that offer more than one track must provide evidence of a unified educational experience for each resident.

2. Goals and Objectives

The program must possess a written statement that outlines its educational goals with respect to the knowledge, skills, and other attributes of residents for each major assignment and for each level of the program. This statement must be distributed to residents and faculty, and must be reviewed with residents prior to their assignments.

B. Specialty Curriculum

The program must possess a well-organized and effective curriculum, both didactic and clinical. The curriculum must also provide residents with direct experience in progressive responsibility for patient management.

The ACGME Competencies were used as the basis for organizing this section of the requirements.

1. PATIENT CARE

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

The pediatric patients that must be available for resident education range in age from infancy through young adulthood. Residents must be exposed to a diverse population of patients in various clinical settings. The program must provide evidence of the breadth and depth of inpatient experience in the format determined by the Residency Review Committee.

In keeping with the current focus of health care delivery, which is in the ambulatory setting, a minimum of 40% and a maximum of 60% of clinical training should be devoted to ambulatory experiences. These experiences include all assignments in the continuity practice, emergency and acute care, and community-based practices, as well as the ambulatory portion of normal/term newborn, subspecialty, developmental/behavioral, and adolescent experiences.

Residents must be given progressive responsibility under close faculty supervision within a team that fosters peer and supervisory interchange. The availability of consultative resources appropriate to the patient base must be ensured, while allowing residents to participate in the full spectrum of patient care from admission through discharge in the inpatient setting, and from intake through follow-up in the outpatient setting.

The patient load for residents at all levels of training should allow time for close and effective management and detailed study of patients, yet should challenge residents with diverse and complex problems at increasing levels of responsibility. Indicators for a satisfactory patient care experience include: adequate numbers of patients, diversity of diagnoses, and acuity/complexity of the patients.

Residents should demonstrate competence in the following elements of patient care:

a) Gathering essential and accurate information about the patient.

The history and physical examination serve as the basic foundation upon which all of clinical medicine is built. Programs must ensure that residents can perform a detailed and accurate history and physical examination appropriate for the context of the age and developmental level of the patient. In the initial stages of training, this should be demonstrated for patients with routine diagnoses. By the end of residency training, programs should document resident competence in history-taking and physical examination for any patient.

Residents should be able to:

(1) Interview patients/families about the particulars of the medical condition for which they seek care, with specific attention to behavioral, psychosocial, environmental, and family unit correlates of disease

(2) Perform complete and accurate physical examinations.

To document the achievement of competence for this element of Patient Care, residents must be evaluated performing histories and physical examinations. This must be accomplished through direct observation using a structured approach with different evaluators in different settings (e.g., documentation by the faculty in the adolescent clinic that the resident is capable of performing a pelvic exam).

b) Making informed diagnostic and therapeutic decisions.

c) Developing and carrying out management plans.

The program must ensure that residents have the opportunity for independent evaluation, management, and coordination of care under the guidance of faculty. It is not an appropriate educational experience if the above are accomplished by attending physicians without resident involvement. Residents must demonstrate progressive autonomy over the course of training that affords them the ability to act in a supervisory role under the guidance of faculty. A minimum of 5 supervisory months is required.

Programs must provide opportunities for the following:

(1) Independent evaluation and development of a differential diagnosis, diagnostic work-up, therapeutic management,

coordination of care, and discharge planning under faculty guidance;

(2) Diagnosis and management of acute episodic medical illness, such as meningitis, sepsis, dehydration, pneumonia, diarrhea, renal failure, seizure, coma, hypotension, hypertension, and respiratory illnesses;

(3) Diagnosis and management of acute problems associated with chronic diseases, such as diabetic ketoacidosis, status asthmaticus, status epilepticus, oncologic therapy and complications, congenital heart disease, cystic fibrosis, chronic renal disease, gastrointestinal disorders, hepatic failure, metabolic disorders, neurologic disorders, and rheumatologic disorders;

(4) Pediatric aspects of the management of surgical patients, both preoperatively and postoperatively, including interaction with the surgical team.

In addition to the above each resident should demonstrate the following:

(5) Ability to determine which patients require in-hospital care and why, including medical, psychosocial, and environmental considerations;

(6) Skills in deciding which patients can be managed in a general inpatient and which require higher levels of care and expertise in a critical care unit;

(7) Ability to select and interpret appropriate studies in the evaluation of patients;

(8) Ability to utilize best evidence to determine therapeutic management;

(9) Ability to work with a health care team, including, but not limited to, nursing, child life therapy, social services, physical therapy, occupational therapy, and case managers for discharge planning;

(10) Appropriate utilization of consultants.

<u>Supervising residents/faculty must document the resident's ability to make diagnostic and therapeutic decisions based on best</u>

evidence and to develop and carry out management plans. This may be accomplished through direct observation in the clinical setting, by chart reviews or chart stimulated recall, faculty review of completed case-based modules, an observed structured clinical examination (OSCE), or some combination of these or other methods.

d) Prescribing and performing all medical procedures.

The program must teach residents those procedural skills appropriate for a general pediatrician in both hospital and ambulatory settings. Residents must demonstrate knowledge of the indications, contraindications, and complications to be able to obtain informed consent for each of the required procedures. An important aspect of respect and compassion for the patient requires one to address the pain associated with procedures. Supervision of residents should occur until they demonstrate the necessary skill for independent practice. These educational experiences should be graduated so that residents build and maintain skills throughout the training program.

Each program must provide sufficient training in the following skills:

(1) Basic and advanced life support

(2) Endotracheal intubation

(3) Placement of intraosseous lines (demonstration in a skills lab or PALS course is sufficient)

(4) Placement of intravenous lines

(5) Arterial puncture

(6) Venipuncture

(7) Umbilical artery and vein catheterization

(8) Lumbar puncture

(9) Bladder catheterization

(10) Gynecologic evaluation of prepubertal and postpubertal females

(11) Wound care and suturing of lacerations

(12) Subcutaneous, intradermal, and intramuscular injections

(13) Developmental screening test.

(14) Procedural sedation

(15) Pain management

In addition, programs should provide exposure to the following procedures or skills:

(16) Circumcision

(17) Tympanometry and audiometry interpretation

(18) Vision screening

(19) Hearing screening

(20) Simple removal of foreign bodies, e.g., from ears or nose

(21) Inhalation medications

(22) Incision and drainage of superficial abscesses

(23) Reduction and splinting of simple dislocations/fractures

(24) Chest tube placement

(25) Thoracentesis

The program must document instruction in the performance of procedures including indications, contraindications and complications. Residents must use the on-line log provided by the ACGME to record their procedures. The program director must document the competence of each resident. The program must also document that residents have completed training in both Pediatric Advanced Life Support and the Neonatal Resuscitation Program.

e) Counseling patients and families.

Pediatricians serve as both caregivers and educators for patients and their families in order that they may participate in shared

decision making. An important component of this process is the ability to deliver both good and bad news in a sensitive and professional manner.

Faculty must document effective counseling of patients and families by residents based on direct observation and comment from patients and families.

f) Providing effective health maintenance and anticipatory guidance.

As a primary care specialty, pediatrics has a major focus on preventive health care in the context of the family and the environment. While continuity of care is an important component of any clinical experience, a continuity clinic where the resident assumes responsibility for the comprehensive care of a group of patients is an essential component of training. Residents must be able to develop therapeutic relationships with patients and families, coordinate the care of children with complex and multiple problems, and provide child health supervision with an emphasis on age and developmentally appropriate anticipatory guidance and screening.

Residents must be able to:

(1) provide health supervision to patients of all ages from newborn through adolescence and into young adulthood where appropriate;

(2) provide anticipatory guidance regarding developmental issues and preventive health care;

(3) implement age-appropriate screening, including oral health;

(4) manage patients with chronic disease by coordinating the care rendered by other health care providers.

Faculty must document that residents possess the necessary knowledge, skills, and attitudes to provide longitudinal primary care to patients.

g) Using information technology to optimize patient care.

Programs should emphasize the resident's use of basic computer skills, techniques for electronic retrieval of the medical literature, and the use of electronic information networks.

The program must document the resident's ability to use the information technology systems within the clinical setting and to apply the information to patient care.

2. **MEDICAL KNOWLEDGE.**

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

In addition to knowledge content, it is critical that residents demonstrate their ability to acquire/access new knowledge, interpret the evidence they uncover, and then apply it in the clinical setting.

Each trainee should demonstrate competence in the following elements of medical knowledge:

a) Knowing the basic and clinically supportive sciences, which are appropriate to pediatrics.

The patient population available for resident education on the inpatient service must be of sufficient number, age distribution, and variety of complex and diverse pathology to assure the residents of adequate experience with infants, children, adolescents and young adults, where appropriate, who have acute and chronic illnesses, as well as with those with life-threatening conditions.

(1) Inpatient

Resident experience on the inpatient service must be for a minimum of 5 months. A variety of patient experiences will meet this requirement including general pediatric patients, mixed non-intensive care subspecialty patients, or a single group of non-intensive care subspecialty patients. No more than 1 of the 5 required months may be devoted to the care of patients in a single subspecialty.

Residents at more than one level of training must interact in the care of inpatients. Residents on the inpatient service must be supervised by pediatric faculty who have extensive experience in and knowledge of the care of pediatric patients with illnesses of sufficient severity to warrant hospitalization. The utilization of general pediatricians in this role is encouraged, provided that consultative services from pediatric subspecialists and other specialists

appropriate to the patient population are readily available. Breadth and depth of experience will be periodically reviewed by the RRC. A first-year resident should have direct responsibility for an average daily minimum of 5 inpatients. If the minimum number of patients is not met, resident inpatient logs will be required to attest to the adequacy of the experience.

Regularly-scheduled teaching rounds must be conducted by qualified generalists and subspecialists who are directly involved in patient care. Rounds should be targeted to the knowledge and skills required of a general pediatrician, and should emphasize the appropriate utilization of subspecialist colleagues. The correlation of the pathophysiologic basis of the disease process should be stressed. During ward rotations, there must be teaching rounds that are patient-based and that address such areas as interpretation of clinical data, pathophysiology, differential diagnosis, cost-effective management of the patient, and the appropriate use of technology and disease prevention. These rounds must be held at least 3 times per week, and may not be replaced by rounds that are primarily work-oriented.

In-house call or night call is defined as those duty hours beyond the normal workday when residents are required to be immediately available in the assigned institution. In addition to providing patient care, the purposes of night call include the following: 1) learning the evolution of disease though continuity of patient care over an extended period of time; 2) cumulative acquisition and maintenance of skills; and 3) fostering progressive independent decision-making. A night float system may be used. *Night float* is defined as those duty hours restricted to evening and overnight hours in a block format when residents are required to be present in the assigned institution. During a night float rotation residents do not have daytime responsibilities. Structured night float rotations for which there are formal goals and objectives and a specific evaluation component and that provide an educational experience (i.e., both rounds and conferences with faculty), may count for 1 of the 5 required months on non-intensive care inpatient services.

(2) Emergency and Acute Illness Experience

The experience in emergency and acute illness must constitute a minimum of four months. Two of these months should be in emergency medicine, of which the equivalent of 1 month may be completed longitudinally. At least 1 of these months must be a block rotation in an emergency department that serves as the receiving point for EMS transport and ambulance traffic and is the access point for seriously-injured and acutely-ill pediatric patients. This may be either a pediatric emergency department or a combined pediatric/adult emergency department. Assignment to an acute care center or walk-in clinic to which patients are triaged from the emergency department will not fulfill this requirement.

The remaining required experience may be in the emergency department or, if patients are available in sufficient numbers, in another setting where acutely-ill pediatric patients are seen. Optional sites may include walk-in clinics, or acute care centers. Preferably, this experience would be as a block rotation, but integration into other longitudinal experiences is acceptable if the required duration and the educational goals and objectives can be met and documented and appropriate supervision ensured.

The experience must be designed to develop resident competence in managing unselected and unscheduled patients with acute illness and injury of varying degrees of severity, from very minor to life-threatening.

Specific objectives of this experience must include but not be limited to development of skills in the following: evaluation and care of patients with acute illnesses or injuries of varying degrees of severity; resuscitation, stabilization, and triage of patients after initial evaluation; interaction with other professionals involved in emergency care in the emergency department, including the trauma team; emergency physicians; specialists in surgery, anesthesia, radiology, relevant pediatric and surgical subspecialties; dentists; and others as appropriate; interaction with emergency medical personnel in the provision of pre-hospital care for acutely-ill or -injured patients, <u>which at minimum includes telephone contact and either preparation of patients for transport or receipt of patients who have been transported via the EMS system</u>.

The program director must ensure that the pediatric residents have first-contact evaluation of pediatric patients and continuous on-site supervision. It is not a sufficient educational experience if the pediatric resident functions only on a consultative basis or deals only with a pre-selected patient population. Residents in these settings must have on-site supervision by board-certified emergency medicine specialists with expertise in the care of pediatric patients, or by members of the pediatric teaching staff who have documented experience in the care of acute pediatric illnesses and injuries.

Residents should have the opportunity to work on a multidisciplinary clinical team to learn the role of the general pediatrician in such a setting. A system for patient outcome feedback to the resident should be established. The resident's performance must be evaluated on a regular basis by staff directly involved in the acute and emergency care experience, and appropriate feedback must be provided to the resident and to the program director.

The pediatric residents' major responsibility must be for an appropriate range of pediatric patients, although they may be called on to care for some adult patients to ensure adequate volume and diversity. Programs that share the emergency and acute illness patient base with other training programs, such as emergency medicine, pediatric emergency medicine, and family practice, must document that a sufficient and appropriately diverse pediatric patient population is available to the pediatric residency program. Residents must have ready access to major medical databases.

The comprehensive experience for all residents should include but not be limited to the following disorders, and should emphasize the pathophysiologic correlates of the clinical situations:

(a) Acute major and minor medical problems including but not limited to respiratory infection, respiratory failure, cardiopulmonary arrest, dehydration, coma, seizures, diabetic ketoacidosis, asthma, skin disorders, pyelonephritis, sepsis, shock, fever, and childhood exanthems;

(b) Acute manifestations/exacerbations of chronic diseases;

(c) Acute major and minor surgical problems including but not limited to appendicitis, bowel obstruction, burns, foreign body inhalation and ingestion, abscess drainage, and head trauma;

(d) Poisonings and ingestion;

(e) Physical and sexual abuse;

(f) Minor trauma (including splinting, casting, and suturing);

(g) Major trauma (including active participation with the trauma team);

(h) Participation in prehospital management and transport;

(i) Acute psychiatric, behavioral, and psychosocial problems;

(j) Admission or discharge planning, including communication with the personal physician.

(3) Continuity Experience

A program must document a half-day session for a minimum of 36 clinic weeks per year for each resident throughout the three years of training. The program must provide adequate continuity experience for all residents to allow them the opportunity to develop an understanding of and appreciation for the longitudinal nature of general pediatric care, including aspects of physical and emotional growth and development, health promotion/disease prevention, management of acute, chronic, and end-of-life medical conditions, family and environmental impacts, coordination of patient-centered care both within the practice and with multidisciplinary providers, and practice management. The scope of each resident's continuity clinic patient population must be documented with a log that includes age, diagnoses, and encounter dates.

The program must ensure that residents are exposed to a continuity-patient population sufficient in number and of adequate variety to meet the educational objectives. It must include well patients and those with complex and chronic problems. Patients initially managed in the normal newborn nursery, emergency department, inpatient service, intensive care unit (pediatric and neonatal), subspecialty clinics, and other sites may be enrolled in the residents' panels.

Residents must see progressive numbers of continuity patients, with a minimum of 3 patients per session in year 1, 4 in year 2, and 5 in year 3. Where residents participate in more than one half-day of continuity clinic per week in the same clinic or in different settings, the combined experience will be considered.

The curriculum should emphasize the generalist approach to common office-based pediatric issues including anticipatory guidance from birth through young adulthood, developmental and behavioral issues, and immunization practices and health promotion, as well as the care of children with chronic conditions. Residents must learn to serve as the coordinator of comprehensive primary care for children with complex and multiple health-related problems, and to function as part of a health-care team. Subspecialty consultants and allied health personnel must be available to residents in the care of their continuity patients.

Residents must assume responsibility for the continuing care of a group of patients throughout their training, either as an individual practitioner or as a team member. In an effort to foster a continuity experience that emulates a pediatric practice setting, the concept of group or team practice will be supported. If a team practice is implemented, there must be a documented regular and formal mechanism for sharing information among the team members.

Regardless of the setting, there should be a continuity relationship among the resident(s), preceptor(s) and a group of patients. To enhance the communication that is essential to continuity of experience, team size should not be excessive, and must include a preceptor or a small group of preceptors. The number of preceptors should be limited to

enhance the resident-preceptor relationship. Consistency of preceptors over time is desirable.

The preceptors' responsibilities include, but are not limited to, mentoring the residents in communication skills, quality improvement skills, practice management system complexities, and patient advocacy (refer to competencies in Practice-Based Learning and Improvement and Systems-Based Practice). Inherent in the principle of continuity of care is that patients are seen on a regular and continuing basis. Isolated block experiences alone will not satisfy this requirement. Ideally, residents should participate in the care of their patients through any hospitalization, assess them during acute illnesses, and be available to facilitate other services, such as school-related evaluations and specialty referrals.

The number of teaching staff in the continuity clinic must be sufficient to ensure an appropriate educational experience for all residents present. Teaching staff who serve as attendings in the continuity clinic must have expertise in the area of general pediatrics, and be able to function as role models in general pediatrics. They must be actively involved in direct patient care to maintain their expertise and credibility. These and other competing responsibilities, however, must not compromise their availability for supervision and consultation with the residents.

(4) Normal/Term Newborn Experience

There must be the equivalent of at least 1 month in the care of normal/term newborns. This may not be part of a neonatal intensive care unit (NICU) rotation, but it may be combined with another experience over a longer period of time if an equivalent duration is demonstrated and the educational goals of both experiences can be met. If competence in newborn care cannot be achieved in one month, it is desirable for a program to incorporate additional newborn experience. Faculty with expertise in general pediatrics should be involved in this training through teaching and/or supervision. The experience should also include at least the following:

(a) Recognition and appropriate intervention for high-risk infants;

(b) Distinguishing well from ill infants;

(c) Performance of a physical examination on newborn infants, which includes assessment of gestational age and the appropriateness of intrauterine growth;

(d) Identification of common anomalies, birth defects, and syndromes, including counseling the parents;

(e) Provision of routine newborn care;

(f) Recognition and treatment of common physiologic deviations in the newborn;

(g) Identification and management of infants of mothers with substance abuse and/or sexually transmitted diseases (STDs) or other infections;

(h) Routine newborn screening and appropriate follow-up of infants with positive test results;

(i) Preventive measures including immunization schedules and safety issues, such as counseling parents on the importance of infant safety seats and knowledge of normal infant nutrition, including breast feeding and knowledge of normal newborn growth and development;

(j) Discharge planning.

(5) Community and Child Advocacy Experiences

There must be structured educational experiences with goals and objectives, planned didactic and experiential opportunities for learning, and methods of evaluation, that prepare residents for the role of advocate for the health of children within the community. These should include both didactic and experiential components that may be integrated into other parts of the curriculum (e.g., continuity, adolescent, behavior/development) or they may be designed as distinct longitudinal or block rotations.

Residents must be supervised by pediatricians and other health professionals experienced in the relevant content

areas. The curriculum should include, but not be limited to, the following subjects:

(a) Community-oriented care with focus on the health needs of all children within a community, particularly underserved populations;

(b) Culturally-effective health care;

(c) Common environmental toxins such as lead as well as potential agents used in bioterrorism, and their effect on child health;

(d) The role of the pediatrician as a consultant to schools, early childhood education, and child care settings;

(e) The role of the pediatrician in the legislative process;

(f) The role of the pediatrician in disease and injury prevention;

(g) The role of the pediatricians in the regional emergency medical system for children, as well as their role in handling mass casualties.

These experiences should utilize settings within the community, such as community-based primary care practice settings; community health resources and organizations, including governmental and voluntary agencies (e.g., local and state public health departments, services for children with disabilities and special health care needs, Head Start, schools, including elementary school through college, day care settings, home health services, hospice, facilities for incarcerated youth, and facilities for treatment and management of substance abuse).

(6) Subspecialty Education

Education in the various subspecialties of pediatrics is a vital part of the training of general pediatricians. Although it is not possible for each resident to have a formal rotation through every subspecialty, it is required that all residents be exposed to the specialized knowledge and methods of

the pediatric subspecialties through longitudinal experiences on the general inpatient and intensive care services and in outpatient settings. Residents should be taught when to seek consultation, when to refer to the subspecialist, and how to manage chronic illness as a team member with the subspecialist and other allied health professionals.

The curriculum must be designed to teach each resident the knowledge and skills appropriate for a general pediatrician, including the management of psychosocial problems that affect children with complex chronic disorders and their families. The experiences should include appropriate reading assignments, subspecialty conferences, and other activities that familiarize the residents with the techniques and skills used by the subspecialists.

All of the formal subspecialty rotations must involve an adequate number, variety, and complexity of patients to provide each resident with an appropriately broad experience in the subspecialty. Outpatient experiences should be integrated into all subspecialty rotations to provide an opportunity for residents to develop the skills needed to manage patients with complex illnesses in a primary care practice.

During these rotations the resident must be given appropriate patient care responsibilities with an opportunity to evaluate and formulate management plans for subspecialty patients. In the outpatient subspecialty clinics and with appropriate supervision by a subspecialist, the resident should function as the physician of first contact. Experiences in which the resident is solely an observer will not fulfill this requirement.

Subspecialty faculty must be directly involved in the supervision of residents and be readily available for consultation on a continuing basis. The supervision must be provided by pediatricians who are currently qualified to be physician faculty.

(a) Intensive Care Experience (NICU and PICU)

The intensive care experiences must provide the opportunity for residents to deal with the special needs of critically ill patients and their families. The

intensive care experience must be for a minimum of 5 and a maximum of 7 months. This must include a minimum of 3 and a maximum of 4 block months of neonatal intensive care (Level II or III) and 2 block months of pediatric intensive care. Night and weekend responsibilities when the residents are predominantly responsible for the NICU will be included in the allowable maximum intensive care experience, with 200 hours being considered the equivalent of 1 month. However, when the resident is covering the entire inpatient service, including neonatal intensive care or the delivery room, these hours need not be included in the calculation of time in intensive care. Hours covering the PICU are not included in calculation of time in intensive care. To provide additional experience for those who may need it for future practice, 1 additional elective block month in critical care may be allowed. As is the case with any block month, it may include call. For a program that trains pediatricians to practice in non-urban areas that require the primary care pediatrician to resuscitate critically ill infants and children, the program may petition the RRC for additional critical care experience, providing appropriate justification.

The curricula in neonatal and pediatric intensive care must be structured to familiarize the resident with the special multidisciplinary and multiorgan implications of fluid, electrolyte, and metabolic disorders; trauma, nutrition, and cardiorespiratory management; infection control; and recognition and management of congenital anomalies in pediatric patients. It also must be designed to teach the following:

i) Recognition and management of isolated and multiorgan system failure and assessment of its reversibility;

ii) Understanding of the variations in organ system dysfunction by age of patient;

iii) Integration of clinical assessment and laboratory data to formulate management

and therapeutic plans for critically ill patients;

iv) Invasive and noninvasive techniques for monitoring and supporting pulmonary, cardiovascular, cerebral, and metabolic functions;

v) Participation in decision making in the admitting, discharge, and transfer of patients in the intensive care units;

vi) Resuscitation, stabilization, and transportation of patients to the ICUs and within the hospital;

vii) Understanding of the appropriate roles of the generalist pediatrician and the intensivist/neonatologist in these settings;

viii) Participation in preoperative and postoperative management of surgical patients, including understanding the appropriate roles of the general pediatric practitioner and the intensivist in this setting;

ix) Participation, during the neonatal intensive care experience, in perinatal diagnostic and management discussions;

x) Resuscitation and care of newborns in the delivery room;

xi) Evaluation and management, during the pediatric intensive care experience, of patients following traumatic injury.

(b) Adolescent Medicine

The program must provide all residents with experience in adolescent medicine that will enable them to recognize normal and abnormal growth and development in adolescent patients. The experience must include, as a minimum, a 1-month block rotation to ensure a focused experience in the area

of adolescent medicine. This experience must be supervised by faculty qualified to teach adolescent medicine.

The program must also provide the resident with an integrated experience that incorporates adolescent issues into ambulatory and inpatient experiences throughout the 3 years (e.g., inpatient unit, community settings, continuity clinic, and subspecialty rotations).

It must include instruction and experience in at least the following:

i) Normal pubertal growth and development and the associated physiologic and anatomic changes;

ii) Health promotion, disease prevention, and anticipatory guidance of adolescents;

iii) Common adolescent health problems, including chronic illness, sports-related issues, motor vehicle safety, and the effects of violence in conflict resolution;

iv) Interviewing the adolescent patient with attention to confidentiality, consent, and cultural background;

v) Psychosocial issues, such as peer and family relations, depression, eating disorders, substance abuse, suicide, and school performance;

vi) Male and female reproductive health, including sexuality, pregnancy, contraception, and STDs.

(c) Developmental/Behavioral Pediatrics

The program must provide all residents with an adequate experience in developmental/behavioral pediatrics to ensure that the resident recognizes normal and abnormal behavior and understands child development from infancy through young

adulthood. The experience must include, as a minimum, a 1-month block rotation that is a focused experience in behavioral/developmental pediatrics. The experience must be supervised by faculty qualified to teach developmental/behavioral pediatrics.

The program must educate the residents in the intrinsic and extrinsic factors that influence behavior to enable them to differentiate behavior that can and should be managed by the general pediatrician from behavior that warrants referral to other specialists. Clinical and didactic components of behavioral, psychosocial, and developmental pediatrics should be integrated into the general educational program and into each patient encounter, when possible.

The program also must provide an integrated experience that incorporates behavioral and developmental issues into ambulatory and inpatient experiences throughout the 3 years (e.g., inpatient unit, community setting, continuity clinic, and subspecialty rotations). The program must include instruction in at least the following components to enable the residents to develop appropriate skills:

i) Normal and abnormal child behavior and development, including cognitive, language, motor, social, and emotional components;

ii) Family structure, adoption, and foster care;

iii) Interviewing parents and children;

iv) Psychosocial and developmental screening techniques;

v) Behavioral counseling and referral;

vi) Management strategies for children with developmental disabilities or special needs, within the context of the medical home;

vii) Needs of children at risk, e.g., those in poverty, from fragmented or substance

abusing families, or victims of child abuse/neglect;

viii) Impact of chronic diseases, terminal conditions, and death on patients and their families;

ix) Recognizing and coordinating care for childhood and adolescent mental health problems that require referral for diagnosis and treatment.

(d) Additional Required Subspecialty Experience

Excluding the adolescent medicine, developmental/behavioral, and intensive care experiences, the minimum time each resident must commit to subspecialty rotations is 7 months, four of which must be taken at the primary teaching site and/or integrated hospitals. Within these 7 months, each resident must complete a minimum of 4 different 1-month block rotations taken from the following list of pediatric subspecialties or closely allied specialties:

Allergy/Immunology	Infectious Diseases
Cardiology	Nephrology
Endocrinology	Neurology
Genetics	Pulmonary
Gastroenterology	Rheumatology
Hematology/Oncology	

The additional 3 months may consist of single subspecialties or combinations of specialties from either the list above or the list below. Combinations of specialties may be structured as block or longitudinal experiences.

Anesthesiology	Otolaryngology
Child Psychiatry	Radiology
Dermatology	Pediatric Surgery
Ophthalmology	Pediatric Physical
Orthopaedics and	Medicine and
Sports Medicine	Rehabilitation

During the 3 years of training, no more than 3 block months, or its equivalent, may be spent by a resident in any one subspecialty. Subspecialty research electives that involve no clinical activities need not be counted as one of these 3 block months.

(e) Elective Experiences

Electives should be designed to enrich the educational experience of residents in conformity with their needs, interests, and/or future professional plans. Electives must be well-constructed, purposeful, and effective learning experiences, with written goals and objectives. The choice of electives must be made with the advice and approval of the program director and the appropriate preceptor.

(7) Conferences

Departmental conferences, including regular morbidity and mortality conferences, seminars, teaching rounds, and other structured educational experiences must be conducted on a regular basis and with sufficient frequency to fulfill educational goals. Reasonable requirements for resident attendance should be established for the various conferences, their attendance should be documented, and there must be appropriate faculty participation.

Clinical curricula invoke both knowledge and skill requirements which cannot be separated in the evaluation of performance. As such, performance in the areas described above is subject to the elements of the patient care competency as well as the content-specific element of the medical knowledge competency described above.

Programs must document provision of didactics and experiential learning. Both the spectrum of, and resident and faculty attendance at, conferences or other designated learning activities must be documented.

Faculty must evaluate the resident's knowledge in a structured manner using such methods as direct observation of clinical encounters, written/oral examinations or teaching modules. The performance of program graduates

on the ABP certification examination is of high significance in this regard.

b) Critically evaluating and applying current medical information and scientific evidence for patient care.

The dramatic changes in knowledge content warrant that every resident become facile with identification of primary sources and the ability to critique the evidence presented in these sources in preparation for potential application in the clinical setting.

Faculty must document the resident's ability to access, appraise and apply knowledge. Faculty evaluations must address the ability of residents to apply best medical evidence to the care of patients. Evaluation must be based on direct observation and precepting in a clinical setting.

In addition, the program must evaluate the competence of residents in performing an evidence-based exercise. This exercise may include, but is not limited to, a journal club presentation or other structured exercise in which best evidence is applied to a focused clinical question. The evaluation should be based on predetermined criteria.

3. **PRACTICE-BASED LEARNING AND IMPROVEMENT.**

This involves the investigation and evaluation of care for their patients, the appraisal and assimilation of scientific evidence, and improvements in patient care.

Delivery of optimal health care in the current environment of knowledge discovery and technology requires that each physician make a serious commitment to self-directed life-long learning. Reflection on one's practice, by identifying strengths and limitations, is the first step in practice improvement. The learner can then build on this reflective process by developing an individualized learning plan (i.e., documented personal learning objectives and strategies to achieve them). It is the responsibility of training programs to provide an environment conducive to practice analysis and the resources to facilitate this reflective process for the residents.

Each resident should demonstrate competence in the following elements of practice-based learning and improvement.

a) Taking primary responsibility for life-long learning to improve knowledge, skills, and practice performance.

One of the underpinnings of competency-based education is the pivotal role of the learner in the educational process. During training it is critical that programs foster self-directed learning so that this practice becomes a way of life as the resident evolves into an independent practitioner. Bridging the transition from residency to the next career step requires an individualized learning plan that extends beyond residency.

b) Analyzing practice experience to recognize one's strengths, deficiencies, and limits in knowledge and expertise.

Reflection on practice is key to professional development. Programs must provide a safe environment that encourages practitioners to identify weaknesses, deficiencies, and errors as the first step in the creation of an individualized learning plan. Changing practice based on new learning will set a precedent for future practice improvement.

c) Using evaluations of performance provided by peers, patients, superiors, and junior colleagues to improve practice.

Ongoing feedback is critical if one expects to meet a threshold for competence. The need for, and the role of, faculty mentors in providing guidance and feedback cannot be overemphasized. In addition, feedback from a variety of evaluators allows residents to gain an understanding of how their behaviors impact others with whom they interact. Residents should be encouraged to incorporate comment into future practice. Reflection on, and response to, comment should be monitored by the program.

d) Locating, appraising, and assimilating evidence from scientific studies related to their patient's health problems.

e) Using information technology to optimize lifelong learning.

The rapidity with which new knowledge is generated makes it imperative that residents know how to use to technology to keep abreast of new discoveries and best evidence. Programs are responsible for ensuring that their trainees are facile with the necessary skills to utilize information technology in the acquisition of knowledge.

f) Actively participating in the education of patients, families, students, residents and other health professionals.

Programs must provide trainees with excellent role models who demonstrate the value of teaching patients/families about preventive health care and educating them about disease processes. Faculty should also model the teaching skills necessary to educate residents in a variety of teaching venues, such as small group seminars, large group lectures, and clinical precepting.

An ethos of ongoing reflection for the purpose of improved quality of care for patients should permeate every aspect of training to reinforce the need for trainees to adopt this practice as a lifelong habit. The critical steps to achieve competency in this domain involve self-assessment, feedback from others, reflection on feedback and identification of strategies that will lead to improvement of future practice.

Documented meetings between an individual resident and mentor or advisor for purposes of feedback and guidance must occur at least twice a year. Mentors must guide the residents in their ability to use self-assessment techniques and analysis of events that exemplify particularly positive or negative behaviors to identify personal and professional strengths and weaknesses. In response residents must develop relevant learning plans that begin during and extend beyond residency.

In order for the resident to achieve learning objectives, the resident must have a documented ability (see Medical Knowledge) to locate, appraise and assimilate evidence from scientific studies related to their patient's health problems. Resident familiarity with general and rotation-specific learning goals and objectives and attendance at conferences is a first step toward life-long learning and must be documented.

The program must document that residents also acquire the skills needed to analyze and improve the quality of clinical practice. This can be accomplished by participation in a quality improvement project or activity (e.g., membership in an institutional quality improvement committee).

Evaluation of participation in education must be documented with evaluations of the resident's teaching abilities by faculty and/or learners.

4. INTERPERSONAL AND COMMUNICATION SKILLS

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

Effective written and verbal communication, including telephone triage, is critical to practicing the science of medicine; style of communication is critical to practicing the art of medicine.

Each resident should demonstrate competence in the following elements of interpersonal and communication skills:

a) Communicating effectively in a developmentally appropriate manner with patients and families to create and sustain a professional and therapeutic relationship across a broad range of socioeconomic and cultural backgrounds.

In the practice of pediatrics, the ability to communicate must not only extend to different cultural backgrounds and socioeconomic strata as in other disciplines, but also extend to different developmental levels. In order to be effective, the communication must target both the patient and the family. Perceptions by the patient and family of residents' level of interest and concern will affect their judgment as to the quality of care provided and their willingness to comply with recommendations.

b) Communicating effectively with physicians, other health professionals, and health related agencies.

Effective transfer of information from one provider to another allows for continuity of the care that is being provided, thus optimizing outcomes for the patient. This skill can be learned and practiced by communication with peers during the training process.

In addition, communication with other primary care providers and other health care professionals is critical to effective and efficient patient care.

c) Working effectively as a member or leader of a health care team or other professional group.

The ability to function as part of a team is important in optimizing patient care since no one individual has all the needed expertise to attend to the medical, psychological, and social needs of patients. Teamwork during training also lays the groundwork for future collegial relationships in a primary care practice within a community or as a faculty member within a division and department of pediatrics.

d) Acting in a consultative role to other physicians and health professionals.

Senior residents should be called upon to act as consultants under the supervision and guidance of the faculty. This role may be played out in a variety of venues including, but not limited to, subspecialty consult services, as the primary care coordinator for continuity patients, for EMT's transporting patients to the hospital, for referring physicians seeking advice about patient transfer, for case managers, nurses and social workers in the routine care of patients, and for nurse practitioners teaming with residents to provide patient care.

e) Maintaining comprehensive, timely, and legible medical records.

For effective transfer of information to occur among providers records must be meticulous in detail, clearly and legibly written, and completed in a timely manner.

The program must document teaching that addresses each of the elements of this competency. This must begin with role modeling. Role modeling should be supplemented by direct observation of resident communication skills in real or simulated situations.

Written evaluations based on direct observation must document effective communication with patients/families, supervisors, fellow residents, allied health professionals, non-medical staff, and referring physicians. These evaluations must address effective communication of health care information, as well as effective coordination of care in inpatient and outpatient settings.

In addition, the program must document a process for evaluation of each resident's skill in written documentation and timely completion of medical records.

5. PROFESSIONALISM

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

Equally important to knowledge and clinical acumen is the delivery of care by a physician who lives up to what is expected of a professional. It is an honor to be entrusted with the care of someone's children, and residents' behavior must reflect an appreciation of this by demonstrating professionalism at all times and in all circumstances.

Each resident should demonstrate competence in the following elements of professionalism.

a) Demonstrating respect, compassion, integrity, and honesty; a responsiveness to the needs of patients and society that supercedes self-interest; accountability to patients, society, and the profession.

It is critical to demonstrate the attributes of a professional in every clinical encounter. Each patient has the right to a physician who puts the well-being of the patient first, and society has the right to a physician workforce that likewise has the best interest of society at heart.

b) Demonstrating high standards of ethical behavior which include respect for patient privacy and autonomy, and maintaining appropriate professional boundaries.

Medical ethics, including but not limited to the ethical principles of medical practice and the ethical aspects of the relationship of the physician to patients (e.g., initiating and discontinuing the treatment relationship, confidentiality, consent, issues of life-sustaining treatments, when to begin and stop resuscitation, legal and ethical issues in the end-of-life decision-making) and the relationship of the physician to the patients family (e.g., the interdisciplinary management of the psychosocial concerns of the patients family) the relationship of other physicians and to society (e.g., the impaired physician, peer review, conflicts of interest, resource allocation, institutional ethics committees, and ethical issues in research) should be emphasized in the didactic curriculum and modeled by the faculty in clinical practice. Reflection on the personal and professional impact of grief and loss should likewise be emphasized.

c) Demonstrating sensitivity and responsiveness to a diverse patient population including but not limited to diversity in gender, age, culture, race, religion, disabilities, and sexual orientation.

To maximize one's impact on the health and well-being of the individual patient, and how that patient functions in the context of his/her family and community, it is important to have both an understanding of and an appreciation for all of the psychosocial factors that make people who they are. The ability to demonstrate a knowledge, understanding, and acceptance of individual and cultural differences will promote greater trust on the part of the patient and a greater likelihood that the patient will reveal personal

information that may be pertinent to his/her diagnosis, management, and ability to comply with prescribed therapies.

The program must document teaching that addresses each of the elements of this competency. This may consist of, but is not limited to, traditional lectures, case-based teaching modules, discussion of vignettes, or role playing exercises that address aspects of ethical and professional behavior.

Written evaluations of residents' professional and ethical behavior by patients/families and members of the health care team based on direct observation must document elements of this competency.

Discussion of critical incidents (especially positive or negative behaviors) in the realm of professionalism must be part of the ongoing mentoring of every resident.

6. SYSTEMS-BASED PRACTICE

This is manifested by actions that 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.

In order to prepare residents to operate within the health care delivery environment once training has been completed, the program must ensure structured educational experiences to address the following:

- risk management;
- cost effectiveness in medicine;
- health care organization, financing, and practice management, including the organization and financing of health care services for children at the local, state, and national levels and the role of the pediatrician in the legislative process; and
- the organization and financing of clinical practice, including personnel and business management, scheduling, billing and coding procedures, telephone and telemedicine management, and maintenance of an appropriate confidential patient record system.

Each trainee should demonstrate competence in the following elements of systems-based practice.

a) Knowing how types of medical practice and delivery systems differ from one another, including methods of controlling health care cost, assuring quality, and allocating resources.

Programs must demonstrate how they address the administrative infrastructure of the different types of health care delivery models. This should include, but not be limited to, the following: personnel, financing, quality improvement activities, and resource allocation.

b) Practicing cost-effective health care and resource allocation that does not compromise quality of care.

Learning to become conscientious about cost is a critical habit that residents should acquire during training. Equally important is the ability to balance cost-effectiveness with quality of patient care. Training should take place in an environment where faculty role model the ability to consider and balance cost containment with resource allocation with quality of care. Discussions regarding these issues should be infused into the daily routine of patient care activities.

c) Advocating for quality patient care and assist patients in dealing with system complexities.

The complexities of today's health care delivery system warrant that physicians not only become familiar with resources available to patients and their families, but also become facile with helping them to access these resources.

d) Partnering with health care managers and health care providers to assess, coordinate, and improve health care.

An understanding of the principles involved in discharge planning is necessary to ensure efficient transition and continuity of care for patients once they leave the inpatient setting. Partnerships with case managers and other health professionals are equally important in the coordination of care in the outpatient arena as patients navigate between primary care and subspecialty providers.

e) Knowing how to advocate for the promotion of health and the prevention of disease and injury in populations.

In order to best serve a patient population, one must develop a familiarity with the natural history and epidemiology of major health problems in the community which one serves. A background understanding of cultural norms and health beliefs is also of crucial importance in addressing preventive care. Pediatricians should invest in the health literacy of the community

served so that families can access, process, and understand health information to the extent that it allows for shared decision making about their health.

f) Acknowledging medical errors and examining systems to prevent them.

The report of the Institute of Medicine, "To Err is Human," highlights the significant number of medical errors that occur in routine practice. The optimal strategy for preventing errors is through development and implementation of system strategies and processes that are not subject to human error. This way of thinking will require a change in the ethos in which we practice. The educational leadership will need to work with faculty, who in turn will role model for residents, the importance of the perspective of examining the systems within which we deliver health care in order to prevent medical errors.

The program must document teaching that addresses each of the elements of this competency. These sessions may include, but are not limited to, traditional conferences or completion of case-based learning modules.

The program must also document experiential learning for the element that addresses the system causes of health care errors. Examples include, but are not limited to, a resident presentation at morbidity and mortality conference focusing on potential system errors, or resident participation in an institutional process that identifies a system-based cause of an adverse patient outcome.

Demonstration of competence must be documented by faculty evaluations that assess each of the elements in this domain. In addition, evaluations by other health professions must be obtained to assess residents' ability to function as part of an interdisciplinary team.

C. Residents Scholarly Activities

Each program must provide an opportunity for residents to participate in research or other scholarly activities, and residents must participate actively in such scholarly activities.

D. ACGME Competencies (Addressed in the previous section)

The residency program must require its residents to obtain competence in the six areas listed below to the level expected of a new practitioner. Programs must define the specific knowledge, skills, behaviors, and attitudes required, and provide educational experiences as needed in order for their residents to demonstrate the following:

1. ***Patient care*** **that is compassionate, appropriate, and effective for the treatment of health programs and the promotion of health;**

2. ***Medical Knowledge*** **about established and evolving biomedical, clinical, and cognate sciences, as well as the application of this knowledge to patience care;**

3. ***Practice-based learning and improvement*** **that involves the investigation and evaluation of care for their patients, the appraisal and assimilation of scientific evidence, and improvements in patient care;**

4. ***Interpersonal and communication skills*** **that result in the effective exchange of information and collaboration with patients, their families, and other health professionals;**

5. ***Professionalism,*** **as manifested through a commitment to carrying out professional responsibilities, adherence to ethical principles, and sensitivity to patients of diverse backgrounds;**

6. ***Systems-based practice,*** **as manifested by actions that 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.**

VI. Resident Duty Hours and the Working Environment

Providing residents with a sound academic and clinical education must be carefully planned and balanced with concerns for patient safety and resident well-being. Each program must ensure that the learning objectives of the program are not compromised by excessive reliance on residents to fulfill service obligations. Didactic and clinical education must have priority in the allotment of residents' time and energies. Duty hour assignments must recognize that faculty and residents collectively have responsibility for the safety and welfare of patients.

A. Supervision of Residents

1. **All patient care must be supervised by qualified faculty. The program director must ensure, direct, and document adequate supervision of residents at all times. Residents must be provided with rapid, reliable systems for communicating with supervising faculty.**

2. **Faculty schedules must be structured to provide residents with continuous supervision and consultation.**

3. **Faculty and residents must be educated to recognize the signs of fatigue and adopt and apply policies to prevent and counteract the potential negative effects.**

B. Duty Hours

1. **Duty hours are defined as all clinical and academic activities related to the residency program, ie, patient care (both**

inpatient and outpatient), administrative duties related to patient care, the provision for transfer of patient care, time spent in-house during call activities, and scheduled academic activities such as conferences. Duty hours do not include reading and preparation time spent away from the duty site.

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

3. Residents must be provided with 1 day in 7 free from all educational and clinical responsibilities, averaged over a 4-week period, inclusive of call. One day is defined as one continuous 24-hour period free from all clinical, educational, and administrative activities.

4. Adequate time for rest and personal activities must be provided. This should consist of a 10 hour time period provided between all daily duty periods and after in-house call. The RRC will not consider requests for a rest period that is less than 10 hours.

C. On-Call Activities

The objective of on-call activities is to provide residents with continuity of patient care experiences throughout a 24-hour period. In-house call is defined as those duty hours beyond the normal work day when residents are required to be immediately available in the assigned institution.

1. In-house call must occur no more frequently than every third night, averaged over a four-week period.

2. Continuous on-site duty, including in-house call, must not exceed 24 consecutive hours. Residents may remain on duty for up to 6 additional hours to participate in didactic activities, transfer care of patients, conduct outpatient clinics and maintain continuity of medical and surgical care. While continuity care remains a priority, morning and afternoon continuity clinics after residents have had a 24-hour duty period may be cancelled up to a frequency of one time per month (4 weeks) per resident. Post-call residents may not attend other clinics, such as subspecialty clinics.

3. No new patients may be accepted after 24 hours of continuous duty. A new patient is defined as any patient for whom the resident has not provided care during the previous 24 hour period,

or who is not a part of the resident's continuity panel or the panel of the resident's continuity team, if such exists.

4. At-home call (pager call) is defined as call taken from outside the assigned institution.

a) The frequency of at-home call is not subject to the every third night limitation. However, at-home call must not be so frequent as to preclude rest and reasonable personal time for each resident. Residents taking at-home call must be provided with 1 day in 7 completely free from all educational and clinical responsibilities, averaged over a 4-week period.

b) When residents are called into the hospital from home, the hours residents spend in-house are counted toward the 80-hour limit.

c) The program director and the faculty must monitor the demands of at-home call in their programs and make scheduling adjustments as necessary to mitigate excessive service demands and/or fatigue.

D. Moonlighting

1. Because residency education is a full-time endeavor, the program director must ensure that moonlighting does not interfere with the ability of the resident to achieve the goals and objectives of the educational program.

2. The program director must comply with the sponsoring institution's written policies and procedures regarding moonlighting, in compliance with the Institutional Requirements III. D.1.k.

3. Moonlighting that occurs within the residency program and/or the sponsoring institution or the non-hospital sponsor's primary clinical site(s), ie, internal moonlighting, must be counted toward the 80-hour weekly limit on duty hours.

E. Oversight

1. Each program must have written policies and procedures consistent with the Institutional and Program Requirements for resident duty hours and the working environment. These policies must be distributed to the residents and the faculty.

Monitoring of duty hours is required with frequency sufficient to ensure an appropriate balance between education and service.

2. Back-up support systems must be provided when patient care responsibilities are unusually difficult or prolonged, or if unexpected circumstances create resident fatigue sufficient to jeopardize patient care.

F. Duty Hours Exception

An RRC may grant exceptions for up to 10% of the 80-hour limit*, to individual programs based on a sound educational rationale. However, prior permission of the institution's GMEC is required. The RRC for Pediatrics will not consider requests for exceptions to the 80 hour limit to residents' work week.

VII. Evaluation

A. Resident

1. Formative Evaluation

The faculty must evaluate in a timely manner the residents whom they supervise. In addition, the residency program must demonstrate that it has an effective mechanism for assessing resident performance throughout the program, and for utilizing the results to improve resident performance.

a) Assessment should include the use of methods that produce an accurate assessment of residents' competence in patient care, medical knowledge, practice-based learning and improvement, interpersonal and communication skills, professionalism, and systems-based practice.

b) Assessment should include the regular and timely performance feedback to residents that includes at least semiannual written evaluations. Such evaluations are to be communicated to each resident in a timely manner, and maintained in a record that is accessible to each resident.

c) Assessment should include the use of assessment results, including evaluation by faculty, patients, peers, self, and other professional staff, to achieve progressive improvements in residents' competence and performance.

3. Final Evaluation

The program director must provide a final evaluation for each resident who completes the program. This evaluation must include a review of the resident's performance during the final period of education, and should verify that the resident has demonstrated sufficient professional ability to practice competently and independently. The final evaluation must be part of the resident's permanent record maintained by the institution.

B. Faculty

The performance of the faculty must be evaluated by the program no less frequently than at the midpoint of the accreditation cycle, and again prior to the next site visit. The evaluations should include a review of their teaching abilities, commitment to the educational program, clinical knowledge, and scholarly activities. This evaluation must include annual written confidential evaluations by residents.

C. Program

The educational effectiveness of a program must be evaluated at least annually in a systematic manner.

1. Representative program personnel (i.e., at least the program director, representative faculty, and one resident) must be organized to review program goals and objectives, and the effectiveness with which they are achieved. This group must conduct a formal documented meeting at least annually for this purpose. In the evaluation process, the group must take into consideration written comments from the faculty, the most recent report of the GMEC of the sponsoring

2. The program should use resident performance and outcome assessment in its evaluation of the educational effectiveness of the residency program. Performance of program graduates on the certification examination should be used as one measure of evaluating program effectiveness. The program should maintain a process for using assessment results together with other program evaluation results to improve the residency program.

D. RRC Evaluation

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 Pediatrics. In its evaluation of residency programs, the RRC will take into consideration the information provided by the American Board of Pediatrics regarding resident

performance on the certifying examinations during the most recent 3 to 5 years. A program will be judged deficient if, over a period of years, the rate of those passing the examination on their first attempt is less than 60% and/or if fewer than 80% of those completing the program take the certifying examination.

VIII. Experimentation and Innovation

Since responsible innovation and experimentation are essential to improving professional education, experimental projects along sound educational principles are encouraged. Requests for experimentation or innovative projects that may deviate from the program requirements must be approved in advance by the RRC, and must include the educational rationale and method of evaluation. The sponsoring institution and program are jointly responsible for the quality of education offered to residents for the duration of such a project.

IX. Certification

Residents who plan to seek certification by the American Board of Pediatrics should communicate with the office of the board regarding the full requirements for certification.