

Chapter Four

Guidelines for Post-graduate Training Programs

INTRODUCTION

How long does it take, or should it take, to train a physician to become a competent pediatrician? Given the various approaches to basic medical school training, this is not a straightforward question. However, there is a body of Knowledge, Skills, and Abilities (KSAs) that we believe must be mastered following basic medical school in order for a physician to qualify as a pediatrician. While the Global Pediatric Education Consortium (GPEC) does not recommend a specific length or duration of the postgraduate training experience (local/regional/national contexts may dictate more or less training years) there are requisite experiences that should take place during post-graduate medical training to produce a competent pediatrician. Some countries engage their trainees in two years of post-graduate training but many have five-year programs that result in specialized pediatric physicians. Our recommendations consist of content and form that may be incorporated into any training setting on any timeline to assist trainers produce competent pediatricians.

General Goals of Training

It is our belief that the training experience should be one in which the trainee becomes progressively competent in *comprehensive* and *coordinated care* over the entire spectrum of pediatric patients and problems in the local community. Trainees should be sufficiently familiar with the subspecialty areas of pediatrics in order to provide quality coordinated care, when feasible in the local health system, or when it is necessary to manage or assist in the management of chronic and complex disease conditions. It is important that postgraduate training occur in both the **ambulatory** and **inpatient** settings where possible, based upon recommended clinical rotations as described below.

Core Recommendations

Following are core recommendations based on best-practices from around the world and taking into consideration the experiences of our delegate organizations.

Recommendation #1: For optimal training to occur, we recommend that the training experience, regardless of total length, *involve progressive responsibility of patient care and trainee supervision*. The experience should include didactic and practical experience in child health maintenance and the conditions commonly found in hospital and ambulatory pediatric care settings. The outcome of training should be a sound, competent pediatrician who is able to practice pediatrics in an unsupervised setting independently or as part of a health team.

Recommendation #2: Training should be a coordinated experience. Appropriate faculty-to-student ratios are vital to quality training. Faculty and support staff should be qualified to teach and supervise inpatient and outpatient experiences of trainees. One faculty member should

function as the “Director” of training and be responsible for coordinating all aspects of the training experience including didactic and experiential training. The Director should provide stability to the training environment by ensuring continuity of faculty, adequate qualifications of faculty and support staff, and organizing the appropriate assessment opportunities for trainees in order to provide feedback on progress. Faculty should be licensed in their disciplines according to local/regional/national requirements and should hold appropriate institutional appointments. It is advantageous that the faculty be comprised of hospital-based and community-based physicians. It is highly recommended that non-physician health professionals be part of the teaching aspects of training as well as the experiential aspects; these could include nurses, nurse practitioners, community health workers, pharmacists, social workers, rehabilitation therapists, psychologists, and nutrition specialists.

Recommendation #3: The ideal training environment should include inpatient, outpatient, and emergency settings, in both rural and urban settings if possible.

Recommendation #4: An adequate patient population mix of neonates, children, adolescents, and young adults is highly recommended – if possible in the local setting. Excessive patient service loads may suggest an inappropriate reliance upon trainees for service obligations, which typically has adverse effects on the overall training experience. Therefore, training directors and supervising faculty should be responsible to regulate service loads during the patient portion of training while ensuring a comprehensive training experience.

Recommendation #5: Trainees should have access to e-mail, the Internet, and electronic libraries to ensure optimal training in the current technical era.

Recommendation #6: Training programs should provide an in-depth approach to the broad field of pediatric knowledge and experience. The training curriculum should be competency-based and appropriate to each level of training. Training should include adequate time for a range of teaching modalities such as morbidity and mortality conferences, seminars, and lectures covering the core aspects of training.

Recommendation #7: Trainees should have input into the design, development, and implementation of the training program, the curriculum, assessment, and other aspects of the program.

Example Core Rotations

GPEC has considered the clinical experience of residents from many countries in many training contexts. What follows are several examples of how a training program might consider structuring the clinical (ie, rotations) experience. As in all aspects of using the Global Pediatric Curriculum, these recommended clinical experiences will need to be tailored to the local training environment. These tables can serve as templates to consider when developing or designing a residency training program.

Example 1

Rotation/ Area of Specialization	Recommended Percentage +/-
General Pediatrics (Inpatient & Outpatient)	30%
Emergency/Acute	10% (at least 3% in an Emergency Department if available)
Community/Advocacy	3% (or as appropriate to local setting)
Intensive Care (Neonatal & Children)	15%
Adolescent Medicine & Developmental/Behavioral Pediatrics	2-6%
Pediatric Subspecialties Examples: Allergy/Immunology, Anesthesiology, Cardiology, Endocrinology, Gastroenterology, HIV, Hematology/Oncology, Infectious Diseases, Nephrology, Neurology, Pulmonology, Rheumatology, Psychiatry, Dermatology, Ophthalmology, Orthopedics and Sports Medicine, Otolaryngology, Radiology, Surgery, Rehabilitation	30%
Electives In areas of interest to the resident or of necessity for the local health system, eg, unique health problems	1-3%
Scholarly Pursuits/Research	1-3%

Note: The GPEC is indebted to the Accreditation Council of Graduate Medical Education (ACGME) for its insight into training program structure and function. We borrowed heavily from the ACGME's website in 2011 and 2012 in preparing these recommendations.

Example 2

Rotation/ Area of Specialization	Recommended Percentage +/-
General Pediatrics Inpatient Service	15%
Emergency/Acute	10% (at least 3% in an Emergency Department if available)
Continuity Experience	15% (over duration of training as appropriate to local setting)
Normal Newborn	3%
Community/Advocacy	3% (or as appropriate to local setting)
Intensive Care	10% (Neonatal Unit) 5% (Pediatric Unit)
Adolescent Medicine	1-3%
Developmental/Behavioral Pediatrics	1-3%
Pediatric Subspecialties Allergy/Immunology, Cardiology, Endocrinology, Gastroenterology, HIV, Hematology/Oncology, Infectious Diseases, Nephrology, Neurology, Pulmonology, Rheumatology	20% (minimum of 4 different rotations/areas)
Additional Pediatric Subspecialties Anesthesiology, Psychiatry, Dermatology, Ophthalmology, Orthopedics and Sports Medicine, Otolaryngology, Radiology, Surgery, Rehabilitation	10% (minimum of 3 different rotations)
Electives In areas of interest to the resident or of necessity for the local health system, eg, unique health problems	1-3%
Scholarly Pursuits/Research	1-3%

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