

Caring For Adults:

A Comparison of Three Residency Options

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Concerned about the information medical students receive when making residency choices, the Association of Professors of Medicine (APM) -- the national organization of chairs of departments of internal medicine at the US medical schools and several of their affiliated teaching hospitals -- commissioned a series of three commentaries aimed at providing students and their advisors valuable information regarding three specialties whose practitioners care for adults: internal medicine, family medicine, and combined internal medicine/pediatrics. This commentary details the differences in residency training between internal medicine, family practice, and medicine/pediatrics.

The series will continue next month with an article that addresses the qualitative and quantitative differences in the clinical practice of the three disciplines. In April, the final article will articulate the clinical philosophies of internal medicine, family practice, and medicine/pediatrics. APM hopes these commentaries will serve to help medical students gain a clearer understanding of the options available in primary care as they make their career selections.

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CASE SCENARIO

A third-year medical student is referred to your office for discussion of future residency programs. The student has decided that her medical career must include caring for adult patients. After a recent pediatric rotation, she also gets excited about possibly adding pediatrics. She is now left with the dilemma of internal medicine alone, combined internal medicine/pediatrics, or family medicine. She understands that you have helped other students compare and evaluate these three career paths, and she hopes to obtain an objective comparison.

This paper explores the objective differences and similarities between residency education in internal medicine, combined internal medicine/pediatrics, and

family practice. How do the objective differences shape the outcomes from postgraduate education? What advice should be offered to students who seek help in deciding the best personal career option?

GOALS, ACCREDITATION, AND CERTIFICATION

The most obvious differences between the three residency programs include the length of training and the stated goals of residency training. Internal medicine residency is three years in length and requires the "study and practice of health promotion, disease prevention, and diagnosis and treatment of men and women from adolescence to old age, during times of health and through all stages of acute and chronic illness."⁽¹⁾

Family practice residency requires formal rotations in internal medicine, pediatrics, obstetrics, gynecology, and surgery over three years. "The goal of the family practice training program is to produce fully competent physicians capable of providing care of high quality to their patients. Family practice residency programs should provide opportunity for the residents to learn, in both the hospital and ambulatory settings, those procedural skills that are within the scope of family practice."⁽²⁾

The combined internal medicine/pediatrics residency programs are four years in duration with the stated objective of "training...general physicians for practice/academic careers addressing the spectrum of illnesses in the newborn, children, adolescents, and adults."⁽³⁾

In all programs it is preferable to complete one's education in the same residency program to facilitate continuity of patient care over several years. The guidelines for both family practice and combined internal medicine/pediatrics specifically address this issue.

Accreditation of internal medicine and family practice residency programs is conducted by the constituted Residency Review Committee (RRC) for each specialty.

Combined internal medicine/pediatric programs are not accredited by an individual RRC, but the medicine component and the pediatric component of the combined program are separately accredited by the RRC responsible for the sponsoring categorical programs. Moreover, combined internal medicine/pediatrics programs function under guidelines approved by the American Board of Pediatrics (ABP) and the American Board of Internal Medicine (ABIM).

It is expected that upon completion of the family practice program the candidate will pass the examination given by the American Board of Family Practice; similarly, candidates from internal medicine are expected to pass the examination prepared by ABIM. Residents finishing approved combined internal medicine/pediatrics programs may take the certification examinations from both ABIM and ABP. In the case of the combined residencies, a senior resident may not take either specialty examination until he/she completes the full four-year integrated program.

CURRICULUM

Medicine Training

The curricular requirements between the three residencies vary dramatically (Figure). The family practice resident is required to have a minimum of eight months of formal training in adult medicine. Six of the eight months must be in the inpatient setting; of the eight months, there is one month each of required critical care experience and required cardiology experience.

Internal medicine residents, as of July 1998, will be required to spend 12 months on inpatient rotations and a minimum of 12 months in the ambulatory environment. Internal medicine residents will be required to have three months of intensive care experience (but no more than six months). They will also need to have demonstrated significant experience in cardiology and an experience in geriatric medicine.

In contrast, combined internal medicine/pediatrics residents must obtain 20 months of experience with "meaningful patient responsibility" (responsible for decision making, order writing, and planning follow-up care) in the domain of internal medicine. These 20 months include a specific rotation in geriatric medicine and two months of intensive care experience. The number of inpatient months are not specified, but, since residents in internal medicine programs will be required to have a minimum of 12 months in the inpatient setting, the internal medicine/pediatrics resident should have a minimum of eight inpatient months. The remainder of the experience in internal medicine must include significant exposure to cardiology and six

months in ambulatory settings to include subspecialty internal medicine clinics as well as continuity care. Four months of the total 24 months may include internal medicine subspecialties and horizontally related specialty rotations, such as psychiatry, during which the resident may have less personal patient responsibility.

Pediatric Training

Combined internal medicine/pediatric residents spend 24 months in a pediatric setting with 50% of the time spent in an ambulatory setting. The pediatric inpatient ward experience requires five months with at least two months in a supervisory role. Three months of neonatal intensive care unit are required, as is one month in a pediatric intensive care unit. In addition, the medicine/pediatrics resident is required to experience minimally one month specifically in the care of a normal newborn infant. The medicine/pediatrics resident is also required to participate in at least four months of pediatric subspecialty experiences. Pediatric experience in family practice includes four months of block inpatient or outpatient formal experience as well as the continuity care of children over the three years of residency. There is no pediatric requirement for residents in internal medicine programs, though education in the care of adolescents is required and a clinical experience is strongly suggested.

Emergency Medicine Training
Emergency medicine is required in all three residency programs. Family practice requires a minimum of a one-month block experience, while the internal medicine regulations require at least four weeks of direct experience in blocks of not less than two weeks. Internal medicine/pediatrics also requires two emergency medicine block experiences during the 24 internal medicine months as well as an additional three months of acute illness care during the pediatric component (one month of which must be in an emergency department receiving emergency medical systems transport). The remaining two months of pediatric acute illness experience could be in a walk-in clinic, an urgent care center, or an emergency department. "Training in minor surgery and orthopedics should be included in this rotation."⁽³⁾

Gender-Specific Care Training

Formal education in the care of women differs between residency programs. Family practice requires a minimum of two months of experience in maternity care "including the principles and techniques of prenatal

care, management of labor and delivery, and postpartum care. This must involve sufficient instruction and experience to enable residents to manage a normal pregnancy and delivery."(2) A continuity experience of rendering prenatal, natal, and postnatal care to pregnant women is also required. In addition, the family practice resident must have a minimum of 140 hours of "structured experience in the care of the gynecological system in non-pregnant women."(2) Separate from the experiences in obstetrics and gynecology, the family practice requirements clearly articulate the need for "education in the prevention and detection of diseases in women"(2) including societal issues, effect of the community on women's health, and mental health issues of women.

Internal medicine requirements include the area of "gender-specific health care." (1) It delineates the need for residents to receive instruction in the "prevention, counseling, detection, and diagnosis and treatment of women and men's health."(1) It suggests the use of "women's health clinics, obstetric or gynecologic clinics, [sexually transmitted disease] clinics, general medicine clinics, urology clinics, and other specialty clinics"(1) for related clinical experiences. Medicine/pediatrics guidelines do not specify time for experience in gender-related illnesses but the expectation is to parallel the requirements as specified for the categorical internal medicine programs.

Specialized Training

Family practice programs must adhere to other time-defined requirements in a broad range of specialties. All residents must have a structured two month experience in surgery including ambulatory and operating room experience. A minimum of 140 hours is dictated in a structured experience in the care of orthopedic disorders in addition to a sports medicine experience. Sixty hours of dermatology and 60 hours of formal instruction in practice management are defined. Other curricular experiences in the care of the older patient, community medicine (including occupational medicine and disease prevention/health promotion), and diagnostic imaging and nuclear medicine are required without specific time allocation. The family practice resident is encouraged to learn the "procedural skills within the scope of family practice".(2)

Internal medicine training requirements define structured educational experiences in consultative medicine, adolescent medicine, preventive medicine, sports medicine, school health, and non-internal medicine specialties including psychiatry, dermatology, medical ophthalmology, otorhinolaryngology,

orthopedics, and rehabilitation medicine as necessary for the practice of internal medicine. The requirements do not dictate length of rotation or method of learning. Internal medicine residents are required to develop technical proficiency in advanced cardiac life support, techniques to obtain venous and arterial blood, abdominal paracentesis, thoracentesis, arthrocentesis of the knee, central venous line placement, lumbar puncture, and nasogastric intubation. Proficiency in additional procedures should be determined by "the training environment, residents' practice expectations, the availability of skilled teaching faculty, and privilege delineation."(1)

Combined internal medicine/pediatrics guidelines do not specify the required procedures but because the programs are accredited with the categorical program, it is expected that the combined residents will fulfill the same procedural and general curricular requirements.

The RRC for family practice precisely outlines the curriculum required in human behavior and mental health. This education is to be primarily accomplished in the ambulatory setting through both longitudinal clinical experiences and didactic sessions supervised by family physicians, psychiatrists, and behavioral scientists. The RRC for internal medicine is less proscriptive in its description of the "psychosocial curriculum" but does demand that the resident "receive instruction and feedback to master the interviewing, communication, and interpersonal skills that are necessary to elicit and record a thorough and accurate history, establish and maintain a therapeutic physician-patient relationship, and initiate or motivate the patient to implement optimal medical management." (1) In addition to covering these specific internal medicine requirements, the combined medicine/pediatrics resident receives specific instruction in the psychosocial problems of the adolescent and must complete a one-month structured experience in behavioral/developmental pediatrics. (Table)

Ambulatory Continuity

A major difference which divides the three residency programs is the proscriptive concerning the continuity ambulatory requirement. All programs require the resident to follow a panel of undifferentiated patients over the complete length of training and limit block interruptions to maintain continuity. All programs dictate a minimum of one half-day of continuity experience beginning in the first postgraduate year. Divergence of the proscriptive experience includes the minimal continuity time for senior residents, the number

of patients seen, and the setting in which the experience may occur.

Combined internal medicine/pediatrics residents must minimally attend a one half-day of continuity experience throughout four years. This experience may either be in a weekly combined medicine/pediatrics practice or by alternating weekly medical and pediatric continuity experiences. Experiences may be in hospital clinics, free-standing health centers, or private practices. Residents are encouraged to follow their patients throughout any hospitalization.

Internal medicine residents may also be assigned to continuity experiences in hospital general medical clinics, free-standing health centers, or private offices as long as the resident follows a panel of patients for which he/she has responsibility. The duration of assignment is for the entire three year residency program to provide for observation of the natural course of disease. Residents are to be assigned on average not less than one new patient and three return patients each half day.

Family practice dictates that the first-year resident must be assigned three patients each half day (defined as at least three hours) of continuity practice. In the second year of training, residents must be assigned to their continuity practice minimally two half days per week and see a minimum of six patients per session. In the third postgraduate year, the resident is assigned minimally three half days to the practice and must see eight patients per session. The unique aspect of family practice programs is that the continuity experiences must be in approved family practice centers. The core of every family practice program, the center is designed to be the "primary setting for training in the knowledge, skills, and attitudes of family practice."⁽²⁾ The center must be "for the exclusive use of the residency, i.e., all activities in the family practice center must be residency-related and under the direction of the program director."⁽²⁾ The RRC for family practice specifically outlines the staffing, resident work space, number of examination rooms, faculty offices, and educational space required. Although other health professionals might be educated within the center, the "efficiency and education of the family practice residents must not be compromised by the training of other health care professionals."⁽²⁾

Qualitative Differences

The qualitative differences among the residencies are reflected in the written requirements and the non-verbal

expectations expressed by program faculty. The family practice ethos is repeatedly documented in the RRC requirements. "Continuity of care and family-oriented comprehensive care must be integral components of all programs. Residents must be taught throughout their training to demonstrate and to articulate clearly the following philosophy and concepts of family practice to patients and colleagues. The family physician assumes responsibility for the total health care of the individual and family, taking into account social, behavioral, economic, cultural, and biologic dimensions."⁽²⁾ The RRC restates the same precepts: "The program should implement a plan to ensure that residents retain their identity and commitment to the principles and philosophic attitudes of family practice throughout the training program, particularly while they rotate on other specialty services."⁽²⁾ The success of the continued emphasis on keeping the resident directed toward the goals of the specialty are definitely reflected in the outcome of the residency programs. Greater than 95% of the graduates practice as family physicians and remain in the specialty.

Internal medicine's requirements are much less identity-directed and reflect the roots of internal medicine in the study of human physiology and the internal organs. This emphasis is reflected in the RRC statements: "The basic sciences should be integrated into the daily clinical activities by clearly linking the pathophysiologic process and findings to the diagnosis, treatment, and management of clinical disorders. Residents should acquire an in-depth understanding of the basic mechanisms of normal and abnormal human biology and behavior and the application of current knowledge to practice."⁽¹⁾ The roots of the specialty are further emphasized in the requirement that "conferences should include information from the basic medical sciences, with emphasis on the pathophysiology of disease and reviews of recent advances in clinical medicine and biomedical research."⁽¹⁾ With the greater time spent in intensive care units, inpatient wards, and subspecialty services, the majority of internal medicine graduates have entered subspecialty postgraduate programs. Given the change in medical practice with a much greater proportion of diagnostic workups and a majority of chronic medical management completed in the ambulatory setting, there has been a resurgence of graduates remaining in general internal medicine. The most current report from ABIM demonstrates 47% of recent graduates entering subspecialty programs.⁽⁴⁾ Combined internal medicine/pediatrics programs were first begun in the early 1970s to offer an in-depth pathway to the care of patients of all ages. Current studies demonstrate that 88% of graduates care for both adults and children, with 70% caring for patients in a primary care setting.⁽⁵⁾ Data obtained in the late 1980s

demonstrated that students who opted for medicine/pediatrics had considered internal medicine as a second option, not family practice.(6) Although the pool of applicants for family practice and combined medicine/pediatrics overlap, many program directors believe that the applicant pool substantially differs based on personal approach to medical problem solving and comfort in caring for the undifferentiated patient. The need to know the physiological and biological basis for disease is offset by one's ability to handle uncertainty. Some describe a deductive versus inductive approach to patient care. Where an individual falls along the continuum will often dictate their final choice of career.

Response to the student

A good advisor understands the differences in the specialty career paths and remains aware of the continuous changes that occur in accreditation requirements and the variability between individual programs. The advisor can serve as the guide for the student as he explores his personal approach to learning and patient care. The answer to the correct career path lies with the individual characteristics of the physician as he/she relates to the differences in the specialties. It is fortunate that several options are available to physicians who wish to be personal physicians for adults and /or their families.

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Table: Comparison of proscribed curricula in human behavior and mental health.

Family Practice	Internal Medicine	Medicine Pediatrics
Medical ethics, including patient autonomy, confidentiality, and quality of life issues	Clinical ethics to include the principles of bioethics	Clinical ethics to include the principles of bioethics
Alcoholism and other substance abuse	Substance abuse disorders	Substance abuse disorders
Patient/physician relationship	Patient/physician relationship	Patient/physician relationship
Patient interviewing skills	Patient interviewing skills	Patient interviewing skills
Family violence including child, partner, and elder abuse (physical and sexual), as well as neglect	Principles of recognition and management of domestic violence and sexual, family, and elder abuse	Principles of recognition and management of domestic violence and sexual, family, and elder abuse
Psychopharmacology	Physician impairment	Physician impairment
Emotional aspects of nonpsychiatric disorders	End-of-life care	End-of-life care
Normal psychosocial growth and development in individuals and families		Adolescent psychology
Stages of stress in a family life cycle		Behavioral/developmental pediatrics
Sensitivity to gender, race, age, sexual orientation, and cultural differences in patients		
Diagnosis and management of psychiatric disorders in children and adults		
Factors influencing patient compliance		