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Please see Quick Facts Tables in the back pocket of this publication.

PEDIATRICS 101

Developed by the American Academy of Pediatrics (AAP) Medical Student Outreach and Pediatric Career Support Program, Department of Membership.

If you are interested in becoming a medical student member of the AAP, call the AAP Membership Department at 800/433-9016 or obtain a medical student membership application online at <http://www.aap.org/member/memcat.htm>.

SECTION 1: INTRODUCTION

P*ediatrics 101* is a resource guide to information and expertise about one of the most rewarding medical specialties. The content briefly explores some of the things to think about in preparing for a career in medicine. In broad strokes it describes premedical and medical education, the training experience, and career opportunities. At each step you will find links to pursue content in more depth. *“Quick Facts,”* located inside the back cover, provide additional information about pediatric careers.

If you are considering a career in pediatrics, read closely and think carefully. Medical training is a huge commitment and a major investment. Approach physicians you know and ask for their insights. Consult the resources you’ll find in this guide.

If you are then still drawn to pediatrics, count yourself very lucky and let your heart be your compass. Consider the words of an 82-year-old general pediatrician who still teaches medical students: “When you’re a general pediatrician you’re a member of every family that you take care of. Would I recommend pediatrics? You bet your life!”

This publication appears both in print and on the American Academy of Pediatrics Web site (<http://www.aap.org/profed/career.htm>).

If you have the print version, please consult the Web version for quick links to many useful resources.



SECTION 2: GENERAL PEDIATRICS

Pediatricians focus on the physical, emotional, and social health of infants, children, adolescents, and young adults from birth to 21 years. Developmentally oriented and trained in skilled assessment, their patient-care lens is focused on prevention, detection, and management of physical, behavioral, developmental, and social problems that affect children.



Pediatricians diagnose and treat infections, injuries, and many types of organic disease and dysfunction. They work to reduce infant and child mortality, foster healthy lifestyles, and ease the day-to-day difficulties of those with chronic conditions. With structured evaluation and early intervention, pediatricians identify and address developmental and behavioral problems that result from exposure to psychosocial stressors. They appreciate the vulnerability of childhood and adolescence, and actively advocate for measures to protect their health and safety.

The ability to communicate effectively with patients, families, teachers, and social service

professionals is a key to effective pediatric care. Pediatricians collaborate with pediatric subspecialists and other medical and surgical specialists in the treatment of complex diseases and disorders. They work closely with other health professionals concerned with the emotional needs of children. They advise educators and child care professionals. They are major advocates for access to care and a medical home for all children.

Pediatrics is a highly flexible specialty offering an extraordinary number of career options. Pediatricians are free to choose one or more practice settings and styles; they may pursue a wide variety of interests. Pediatrics is also the specialty with the highest proportion of members (26%) who have elected part-time practice at some point in their careers.¹

General pediatrics is a multifaceted primary care specialty. The general pediatrician's responsibilities include²

- Management of serious and life-threatening illnesses
- Referral of more complex conditions as needed
- Consultative partnerships with other care providers, such as family practitioners, nurse practitioners, and surgeons
- Health supervision (health promotion and disease prevention activities to enable each child to reach full potential)
- Anticipatory guidance (advice and education for patients and parents regarding appropriate preparation for predictable developmental challenges)
- Monitoring physical and psychosocial growth and development
- Age-appropriate screening
- Diagnosis and treatment of acute and chronic disorders
- Community-based activities in sports medicine, school health, and public health

SECTION 3: SUBSPECIALTY PEDIATRICS

Many pediatricians choose to focus on a particular aspect of child health. They may subspecialize exclusively or as a part of their general pediatric practice. Those who subspecialize in pediatric critical care have intensivist training to manage pediatric patients with life-threatening medical problems. Adolescent medicine physicians, for example, are pediatricians who have additional training and expertise in working with adolescents and young adults.

Other pediatric subspecialists elect to focus on care of pediatric patients after completing training in their respective disciplines. A pediatric surgeon, for example, is a surgeon trained to conduct procedures on pediatric surgical patients. A pediatric radiologist is a radiologist with special skill in interpreting diagnostic tests in young patients.

Most of the pediatric subspecialties have a “section” of their own within the American Academy of Pediatrics (AAP), which provides a forum for education and dialogue. For a quick overview of pediatric medical and surgical subspecialty options, scan the list of section home pages on the AAP Web site (<http://www.aap.org/sections/shome.htm>). Several offer detailed descriptions of the scope and nature of their training and practice.



SECTION 4: THE PREMED YEARS

The premed years are the time to think about your motivation, weigh your strengths, and find your perspective. Choosing a career is a developmental process; it takes time and it doesn't happen in a vacuum. Talk to people in the field and get hands-on experience working or volunteering in a medical environment.

One former director of medical education (also known as a clerkship director) urges that students thinking about medical school give serious thought to their motivation. "When I interviewed college students, the ones I worried about were those who had chosen medicine because they thought it was a good profession to 'make money,'" she says. "I think if you choose a career in medicine you have to have a passion for the care of people. There has to be a passion there to drive you, because medical school is not all that fun. It's a lot of hours and you're working hard. Sometimes people get all the way to medical school and then find out that they don't really want to be there."

Find a Health Professions Advisor

A health professions advisor is an excellent resource for those exploring a medical career. Most colleges and universities in the United States designate someone in their advising office to focus on health professions.³ If you are a high school student, or someone who has been working for a few years and is no longer on campus, contact the National Association for Advisors for the Health Professions (<http://www.naahp.org/advisors.html>). These people are the experts in your corner!

Research Medical Schools

Most medical schools have a Web site, which will describe the size of their program, its faculty, and its strengths. Spend some time on a few of these sites to pick up some indicators to help discriminate among these schools.

Stay Interesting!

While premed students need to meet curriculum requirements for medical school admission, medical schools are interested in well-rounded individuals. The student who is fluent in Spanish, for example, will more easily establish a rapport in a culturally diverse community. "You need science and math, but you also need to have other interests," one pediatrician advises. "If a summer of research is what you want, that's great, but if you'd rather go to Brazil on a volunteer medical team, that will separate you from the crowd of applicants more effectively than a summer in research."

TIP

Some medical schools do not accept "AP" (advanced placement) course credit. (These are classes taken in high school by eligible students, who then "test out" of the college class.) Students planning to apply to medical school may need to take these classes again during their undergraduate years.

SECTION 4: THE PREMED YEARS

A Word About Combined BS/MD Degree Programs

A few medical colleges offer combined degrees for highly qualified students—a BS/MD degree program that enables students to bypass the Medical College Admission Test (MCAT) and proceed directly from college to medical school. These programs require certain commitments early in a student's career, but have huge benefits for the right candidates.

Many successful people, including some with postdoctoral degrees, decide to pursue a medical career later in life. Experience and maturity are valuable assets, and it would be unwise to discount a career in medicine if that is what you truly want. Instead, talk to knowledgeable advisors about ways to combine your expertise with a medical career, sometimes shortening the training required in certain postdoctoral programs down the road.

TIP

Because there are 125 allopathic medical schools in the United States and Canada, and 20 colleges of osteopathic medicine, this guide focuses on allopathic medical training. Although most of the information is equally pertinent to osteopathic training, there are important distinctions. To learn about those distinctions and to locate schools of osteopathy in the United States, go to the Web site of the American Association of Colleges of Osteopathic Medicine at <http://www.aacom.org>.



SECTION 4: THE PREMED YEARS



Online Resources

Three excellent resources for premed students are available online. Although there may be some duplication, each has unique benefits.

From the **Association of American Medical Colleges**

- Advice for those beginning to think about a medical career, on the *Careers in Medicine* overview page: <http://www.aamc.org/students/considering/careers.htm>
- Cues to selecting a good undergraduate school and an introduction to the medical school experience on the *Making the Decision* Web page: <http://www.aamc.org/students/considering/decision.htm>
- A list of the 30 universities that offer a combined degree program (BS/MD) on the *Curriculum Directory* page: <http://www.aamc.org/redirects/combineddegree.htm>

From the **American Medical Students Association (AMSA)**

- The *AMSA Map for Success*: <http://www.amsa.org/premed/premedguide/intro.cfm>

- Year-by-year advice for college students: <http://www.amsa.org/premed/premedguide/throughtheyears.cfm>
- A timeline for college students that outlines dates to schedule course work and request applications, register for the MCAT, etc: <http://www.amsa.org/premed/premedguide/timeline.cfm>
- Advice for nontraditional students—those who have returned to school or come from outside the United States to attend medical school: <http://www.amsa.org/premed/premedguide/nontraditional.cfm>
- Advice for minority students, including tips on interviewing and applying for financial aid: <http://www.amsa.org/premed/premedguide/minorities.cfm>
- Discussion of considerations and concerns of medical students with disabilities: <http://www.amsa.org/premed/premedguide/disabilities.cfm>
- Considerations for lesbian, gay, and bisexual applicants: <http://www.amsa.org/premed/premedguide/lgbpm.cfm>
- Resources for applicants, with links to major medical and service organizations: <http://www.amsa.org/premed/premedguide/resources.cfm>

From the **American Medical Association**

- *Becoming an MD*, which offers an overview of physician education in the United States, along with many useful links (eg, accredited US medical schools and medical specialty medical boards): <http://www.ama-assn.org/ama/pub/printcat/2320.html>
- A *medical glossary* with common terms that medical students will need to know: <http://www.ama-assn.org/ama/pub/printcat/2376.html>
- *Frequently asked questions* about pursuit of a medical career: <http://www.ama-assn.org/ama/pub/printcat/3627.html>

SECTION 5: GETTING INTO MEDICAL SCHOOL

The Association of American Medical Colleges (AAMC) estimates that only about one half of those who apply to medical school are accepted.⁴ This is an average; some programs are substantially more competitive.

Most applicants take the Medical College Admission Test (MCAT) about 18 months before they plan to enter medical school; generally in April of their junior year of college. The MCAT is administered by the AAMC, which develops test content in cooperation with US medical schools.

Six components determine the candidate's eligibility for medical school admission⁴

- Undergraduate course work
- Grade point average
- Performance on the MCAT
- Extracurricular activities
- Letters of recommendation
- Interviews with medical school admissions committees

Medical school admissions for nearly all medical schools are coordinated by the American Medical College Application Service (AMCAS®). Applications are submitted in the summer, and medical schools interview promising candidates between October and February of the students' senior year.

Online Resources

From the **AAMC**

- *Admission to US Medical Schools* with links to information about how to order the *Medical School Admission Requirements* and background on the MCAT: <http://www.aamc.org/students/applying/about/start.htm>
- *Getting into Medical School*, with frequently asked questions about the application process: <http://www.aamc.org/students/considering/gettingin.htm>

- Links to all accredited US and Canadian medical school admissions offices: <http://www.aamc.org/meded/medschls/admissions.htm>
- The annual AAMC *Tuition and Student Fees Reports* compare tuition and fee ranges, medians, and averages for all US medical schools: <http://www.aamc.org/members/msmr/compdata.htm>

From the **American Medical Student Association (AMSA)**

- A description of the MCAT and brief discussion of preparation strategies: <http://www.amsa.org/premed/premedguide/mcat.cfm>
- A dissection of the process of selecting and applying to medical schools, including tips on how to request letters of recommendation and other subtleties: <http://www.amsa.org/premed/premedguide/applying.cfm>
- A candidate's guide to the medical school admission interview: <http://www.amsa.org/premed/premedguide/interviewing.cfm>
- The AMSA *Medical School Survey*, which collects and reports candid comments from medical students about their schools: <http://www.amsa.org/resource/cardev/medresults.cfm>
- A discussion of different ways to respond to a negative result from the application process: <http://www.amsa.org/premed/premedguide/reapplying.cfm>

TIP

When you schedule your interview, request a session with a financial aid officer. Find out how the process works at that school and learn what you can about options and procedures for paying for school.

SECTION 6: MEDICAL SCHOOL

The academic pressure in medical school is consistently intense. It is important to find a balance between study and personal life; your lifestyle will be different from that in college, but the workload is manageable.

Most medical schools devote the first 2 years to classroom and laboratory instruction in the basic sciences. Many provide clinical rotations and/or teach the basic sciences (anatomy, physiology, biochemistry, histology, pathology, and pharmacology) with a strong clinical correlation. Students also learn how to take a patient history, conduct a physical examination, and make a diagnosis. They become familiar with the art of the patient interview and study psychosocial aspects of medicine.

The third year of medical school consists of the core rotations (or clerkships), in the hospital and in ambulatory settings, which give most students their first direct patient care experiences. There is some variation (eg, some schools begin clerkships in the second year), but most schools structure rotations in 6 areas

- ~Psychiatry
- ~Pediatrics
- ~Obstetrics and gynecology
- ~Internal medicine
- ~Family medicine
- ~Surgery

During the fourth year of medical school, students complete senior clerkships and subinternships, where they have more responsibility for patient care and are permitted to take more electives. Some pursue experiences in research, work with underserved cultural groups, and international child health. Most US schools require that students successfully complete parts 1 and 2 of the national boards to graduate.

After successful completion of a 4-year medical school program, students choose a specialty area and enter residency training. The length of residency varies by specialty; primary care residency in pediatrics is 3 years.



SECTION 7: CHOOSING A MEDICAL SPECIALTY

“**D**uring the ophthalmology rotation, I’d go in and look at adult eyes in the morning and not really enjoy it,” said a resident who plans to specialize in pediatric ophthalmology. “Then in the afternoon I’d look at kids’ eyes and my mouth would be hurting from smiling for three hours. It was the same stuff in adults and kids but I was having a blast doing it with the kids.”

The best general resource on medical specialties is the American Board of Medical Specialties (ABMS), an umbrella organization that represents the 24 approved medical specialty boards in the United States. Medical students looking to learn more about a specialty can locate and contact the board for that specialty through the ABMS Web site (<http://www.abms.org>).

Medical students work with their advisors and with pediatric clerkship directors to examine inclinations and strengths before selecting their medical specialty. It is also at this time—generally the third year of medical school—that students decide on their career focus. This could include a career in academic medicine at a medical school or a medical school-affiliated hospital, or in an office- or hospital-based clinical practice. Each scenario offers opportunities for subspecialty concentration, teaching, and research.

While it is useful to be knowledgeable about compensation and market demand for a given specialty, this is only part of the picture. Specialty choice requires a long-term perspective. “My belief is that you have to do what will make you happy,” said one pediatric infectious disease subspecialist. “It’s hard to know what the job market is going to be ten years out, and even if it’s going to be tight, you’ve got to do what you’re most interested in.”

Students are sometimes overwhelmed by medical school debt, and make a specialty choice based primarily on income, he added. “Debt drives a lot of decisions,” he said.

“I think a choice that is based on economics alone has the wrong motivation. Some specialties pay more than others, but all provide a good living. Students need to ask themselves, ‘Am I going to be intellectually stimulated enough with whatever choice I’m contemplating? Am I going to be happy two or three years down the road? Or am I doing this for the wrong reasons?’”

Current data regarding specialties is available on the Association of American Medical Colleges (AAMC) Web site. The feature *Careers in Medicine: Specialty Information* can be accessed at <http://www.aamc.org/students/cim/specialties.htm>.

To Choose or Not to Choose: Combined Training Programs

The American Board of Pediatrics (ABP) has cooperative arrangements with several other specialty boards for combined training. These are rigorous programs. Students who successfully complete these programs and pass certification examinations administered by all boards involved are said to be “double boarded” or “triple boarded.” Specifics vary and can be pursued with the ABP and the other individual specialty boards (linked to the ABP Web site at <http://www.abp.org>). Options for combined training include⁵

- Internal medicine-pediatrics (med-peds) (4 years)
- Pediatrics/dermatology (5 years)
- Pediatrics/emergency medicine (5 years)
- Pediatrics/medical genetics (5 years)
- Pediatrics/physical medicine and rehabilitation (5 years)
- Pediatrics/psychiatry/child and adolescent psychiatry (5 years)

SECTION 7: CHOOSING A MEDICAL SPECIALTY

A Few Words About Med-Peds

The ABP reported that combined internal medicine and pediatrics residency programs were the fastest growing segment of pediatric training in 1995.⁶ While the rate of growth has since stabilized (med-peds accounted for 19% of pediatric residents in training in 20017), it continues to be a very popular combined training option.

Med-peds (an abbreviation for “combined internal medicine and pediatrics”) is a rigorous 4-year residency program, with 2 years in pediatrics and 2 years in internal medicine. Those who complete a med-peds residency are eligible to sit for board certification in internal medicine and pediatrics, and to pursue a fellowship in either specialty.⁸

“Med-peds enables me to appreciate the continuity of the disease process,” says one resident. “Disease processes don’t end with childhood. I wanted more broad training than I would be getting in pediatrics, the ability to treat patients with varying diseases at varying ages. From here I can go into hospital practice, subspecialty fellowship, private practice with primary care physicians, or a multispecialty practice.

In a multispecialty practice I could just be the utility man who can cover for everyone else.”

Online Resources

From the **ABMS**

- *Which Medical Specialist for You*, a layman’s guide to medical specialties and subspecialties: <http://www.abms.org> (Click on “Publications,” then search the list of brochures, handbooks, and directories.)
- *Relationship of ABMS With Other Organizations*, a concise overview of the “alphabet soup” of boards and societies with responsibilities in medical education, licensure, and certification: <http://www.abms.org/allied.asp>
- Links and contact information to reach approved member boards, which can provide more detailed information about training in their specialties: <http://www.abms.org> (Click on “Member Boards.”)

From the **American Medical Association (AMA)**

- *Choosing a Medical Specialty*, with links to career planning resources and also the 102 specialty societies represented in the AMA House of Delegates: <http://www.ama-assn.org/ama/pub/category/7247.html>
- *Medical Specialties*, quick glossary of the 8 most frequently entered specialties: <http://www.ama-assn.org/ama/pub/printcat/2375.html>



SECTION 7: CHOOSING A MEDICAL SPECIALTY



From the **AAMC**

- The *Careers in Medicine* Web site, which features online decision-making tools to choose a specialty, review career information about specialties, and finally, select and apply for a residency: <http://www.aamc.org/students/cim/start.htm>
- *Career Planning Resources*, a collection of links to career advice, specialty boards, and practical tools for students and residents: <http://www.aamc.org/students/cim/careerplanning.htm>

From the **American Academy of Pediatrics**

- The *Section on Medicine-Pediatrics* Web page features more than 50 frequently asked questions on everything from starting a job search to contract negotiation: <http://www.aap.org/sections/med-peds/jobsearchfaq.htm>

From the **National MedPeds Residents' Association**

- The *Medical Student Guide to Combined Internal Medicine and Pediatrics Residency Training* and other information about combined training in medicine and pediatrics: <http://www.medpeds.org/guide.htm>

SECTION 8: FINDING THE RIGHT PEDIATRIC RESIDENCY

So you've signed on for a future in pediatrics. Good plan! Your next step is to secure training that fits your needs and temperament.

The search for a pediatric residency program requires research, networking, and persistence. Medical students work with their clerkship directors and other mentors for this purpose. Residency program directors can also be extremely helpful. To identify and contact a program director, consult the program directors' roster on the Web site for the Association of Pediatric Program Directors (<http://www.appd.org/>).

"If your ultimate goal is to do something highly specialized, look for a residency where you can get some hands-on exposure in that discipline," one clerkship director advises. "If you're interested in cardiology, talk to a pediatric cardiologist about the best training programs. Call the pediatric program directors at schools you're interested in and ask about opportunities to pursue your subspecialty interest while in training."

As medical students take core rotations in the third year of medical school, they begin to refine their career goals and investigate residency opportunities. Key information can be found at

- The *Accreditation Council for Graduate Medical Education (ACGME)* Web site, which provides detailed information on accredited GME residency programs. To search, go to <http://www.acgme.org/> and click on "Accreditation Data System."
- The *Graduate Medical Education Directory* and its companion piece, the *GMED Companion*, which provide detailed information on accredited GME residency programs. Consult your medical library or contact the American Medical Association (AMA) at <http://www.ama-assn.org/ama/pub/printcat/4094.html>.

- *FREIDA Online* (Fellowship and Residency Electronic Interactive Database), also from the AMA, which covers accredited specialty, subspecialty, and combined training programs (<http://www.ama-assn.org/ama/pub/category/2997.html>).

In evaluating a residency program, give weight to a clear commitment to resident education; the number, quality, and diversity of the faculty; the volume, variety, and complexity of medical problems encountered; and the program's overall educational philosophy. These factors are readily investigated. Talk to faculty mentors about your research. For example

- Consider program size. Do you want a tight, close-knit cadre of people or do you want a really huge program? How big is too big? How small is too small?
- Consider patient volume. Will the number of patients you see provide adequate exposure and experience and also sufficient time to rest and digest? Perhaps the first inclination is to go to a big program for the volume, but how many patients who have diarrhea and dehydration do you need to see in 1 day to know how to manage it? Examine the emphasis on primary versus subspecialty exposure. Find out how well their "continuity clinic" succeeds in providing longitudinal care for pediatric patients.

SECTION 8: FINDING THE RIGHT PEDIATRIC RESIDENCY

- Try to give weighted values to program strengths. For example, a program that “looks” less prestigious because it offers relatively little research opportunity may be a powerhouse in the advocacy department. Which is important to you?
- Do you think you might eventually be looking to a fellowship or research opportunity? Talk to mentors about how that might influence residency program choice.

The Application Process

Most residency applications are submitted electronically. Students develop a curriculum vitae (resume), personal statement, and letter of application. Letters of recommendation from the dean and others are included with the application, along with medical transcripts and other credentials. Students work closely with their advisors’ and deans’ offices to ensure that all necessary materials are secured and prepared well in advance of the deadline.

Most allopathic medical residency programs use the Electronic Residency Application Service (ERAS[®]) to process residency applications. ERAS is a service that transmits applications to residency programs over the Internet. (The service is not available for non-ACGME accredited programs, or fellowship or osteopathic programs.) Candidates participate with ERAS through their deans’ offices.

Medical students are generally advised to apply to all programs in which they are interested.

The Interview

Programs typically review application materials, then offer an interview opportunity to those who seem to be the best “fit.”

Students should work closely with their clerkship directors and other mentors to prepare for the residency interviews. For example, it is useful to read the requirements for accredited residency programs (available at <http://www.acgme.org/>) and ask about possible discrepancies. Plan a few essential questions.

- You will be meeting with faculty and current residents. Ask about the strengths and weaknesses of the program. Ask how shortcomings are compensated. Ask about program flexibility, call schedules, and the willingness of the program to make accommodations for the residents when they have family and personal matters that may require changes in their schedules.
- What are the policies on sick leave, maternity leave, medical liability coverage, insurance benefits, and family leave? Applicants planning to start a family might ask whether there is enough flexibility in the training program to schedule people to elective months when they will be taking their maternity leave so it doesn’t impact negatively on other members of the program.

Interview preparation with mentors and advisors should include how questions such as these are best addressed.

SECTION 8: FINDING THE RIGHT PEDIATRIC RESIDENCY

After Interviews, the Match

Early in the summer of senior year, students enroll in the **National Resident Matching Program (NRMP)**, which provides uniform dates of appointment to residency programs in the United States. The NRMP is sponsored by national medical organizations and managed by the Association of American Medical Colleges (AAMC).

The Match, which occurs each March, uses an algorithm to partner applicants' program rankings with programs that have ranked them. The NRMP also offers a couples algorithm, which allows 2 people to enroll in the Match as a unit.⁹ Part of the drama is the "scramble," which takes place 48 hours before results are announced. In a flurry of exchanges, medical school deans collaborate to secure positions for those who did not match.

Online Resources

Internet links relevant to the residency search include the following:

From the **AMA**

- *Transitioning to Residency: What Medical Students Need to Know*, a series of articles by the AMA Minority Affairs Consortium. Although targeted to minority students, much of the content is of interest to all applicants: <http://www.ama-assn.org/ama/pub/category/6672.html>
- *Information on Selecting and Applying for a Residency*: <http://www.ama-assn.org/ama/pub/category/5030.html>

From the **AAMC**

- *Careers in Medicine*, which features online decision-making tools to choose a specialty, review career information about specialties, and select and apply for a residency: <http://www.aamc.org/students/cim/start.htm>
- *Career Planning Resources*, a collection of links to career advice, specialty boards, and practical tools for students and residents: <http://www.aamc.org/students/cim/careerplanning.htm>
- Facts about ERAS: <http://www.aamc.org/students/eras/start.htm>

From the **NRMP**

- General information and links: <http://www.nrmp.org>
- *How the Matching Algorithm Works*: <http://www.nrmp.org/fellow/algorithm.html>



SECTION 9: RESIDENCY TRAINING IN GENERAL PEDIATRICS

Pediatric residency training is a 3-year program of core pediatric experiences and elective rotations that follows successful completion of medical school. Residents must complete training in an accredited pediatric residency to be eligible to sit for the certification examination administered by the American Board of Pediatrics.

Pediatric residents provide comprehensive, coordinated care to a broad range of patients. The scope of training confers substantial experience with acute and chronic medical conditions seen in inpatient and ambulatory pediatric settings.¹⁰

Guidelines regarding the scope of training are established by the Residency Review Committee for Pediatrics of the Accreditation Council for Graduate Medical Education, which sets the requirements for accredited programs.¹⁰ In all programs

- Residents provide general and subspecialty inpatient and outpatient care for patients from infancy through young adulthood.
- Part of the training experience is devoted to the spectrum of outpatient experiences as well as emergency and acute illness experience.
- Each resident takes responsibility for the continuing care of a group of patients throughout training in a “continuity clinic” setting.
- Part of the training experience is devoted to normal/term newborn care as well as community experience.

Pediatric training programs are structured to ensure that trainees have opportunities to supervise the health of normal children and participate in care of patients with major trauma, minor illnesses, chronic conditions, and diseases that are life-threatening. Programs must enable residents to care for a sufficient number of patients and

a diversity of problems. During training, residents also supervise medical students and participate in regularly scheduled attending rounds and conferences. Newer regulations are making hours and time off after call more standardized.

Training takes place in university hospitals, children’s hospitals, military hospitals, and community hospitals. In the United States, there are 207 approved programs. Two or more institutions may provide varying components of a curriculum. Some programs have different tracks that may emphasize primary care training or may focus on goals for training in academic medicine or research.

“We work 80 hours a week,” said one resident, who plans post-residency training in critical care pediatrics. “That sounds like a lot, and there are horrible months, but for the most part you have one or two weekends off a month, and you try to use that time with family and friends.”

Pediatric residency confers the knowledge, skills, and attitudes required for comprehensive, longitudinal, and child-centered health care. Pediatric residents learn to consider behavioral, psychosocial, environmental, and family-unit correlates of disease. They learn to care for children who are chronically ill and manage acute events. Because pediatric residents work with so many professionals in health care and social services, and see such a unique assortment of conditions and disorders, they are prepared and inclined to consult and collaborate.

TIP

The American Board of Pediatrics offers 2 special routes for pediatrician scientists who are qualified to shorten pediatric training by 1 year or combine research with their residency training.⁵ More information on these opportunities, the Pediatric Research Pathway and the Special Alternative Pathway, is available from the American Board of Pediatrics.

SECTION 10: LICENSURE AND BOARD CERTIFICATION

The National Board of Medical Examiners® (NBME®) and the Federation of State Medical Boards (FSMB) sponsor the United States Medical Licensing Examination (USMLE™).

Students and graduates of medical schools in the United States and Canada that are accredited by the Liaison Committee on Medical Education or the American Osteopathic Association Bureau of Professional Education register for the USMLE with the NBME.

Students and graduates of medical schools outside the United States and Canada register for the USMLE with the Educational Commission for Foreign Medical Graduates.

Medical students take the 3-part examination during medical school and residency. After passing all 3 parts, they are eligible to apply for their medical license.

According to the USMLE, most medical students take Step 1 of the in-training examination after the second year of medical school, Step 2 during the fourth year of medical school, and Step 3 during the first or second year of residency.

Medical licenses are granted by state boards of medical examiners. Medical students who plan to practice in another state are advised to apply for a medical license with that state's licensing board as early as possible (generally early in the third year of residency). Links to individual state boards are on the American Medical Association (AMA) Web site (<http://www.ama-assn.org/ama/pub/category/2543.html>).

This is also the time to apply for a federal Drug Enforcement Administration number, which permits physicians to prescribe controlled substances.

Certification by the American Board of Pediatrics (ABP)

In 2001, the 72% certification rate for pediatricians exceeded the national average as well as the rate of certification among internal medicine physicians (69%) and family practitioners (71%).¹¹

According to the ABP, physicians must complete the following steps to sit for the board certification examination¹²:

1. Graduate from an accredited medical school in the United States or Canada or a foreign medical school recognized by the World Health Organization.
2. Complete 3 years of training in pediatrics in an accredited residency program.
3. Verify satisfactory completion of residency training.
4. Acquire a valid, unrestricted state license to practice medicine.
5. Pass the 2-day written examination for certification.

Board certification in pediatrics may be renewed every 7 years by successfully completing the program for maintenance of certification in pediatrics, which includes passing a recertification examination.

SECTION 10: LICENSURE AND BOARD CERTIFICATION

Online Resources

From the **American Academy of Pediatrics**

- **PREP: Pediatrics Review and Education Program** contact information:
<http://www.aap.org/profed/prep.htm>
- *Career Planning: How to Prepare for the Boards*, dates for scheduled board review courses, information about audio courses and books: <http://www.aap.org/sections/resident/prepareboards.htm>

From the **AMA**

- *Getting a License—The Basics*, an article by the FSMB that sketches out considerations for those applying for a medical license; related links provide information about guides to state licensure requirements and links to national organizations:
<http://www.ama-assn.org/ama/pub/category/2644.html>

From the **USMLE™**

- Web site: <http://www.usmle.org/>

From the **ABP**

- Prerequisites to board certification:
<http://www.abp.org/frbdcert.htm>
- A description of the ABP and the subspecialty certificates it awards:
<http://www.abp.org/frabpinfo.htm>
- A description of subspecialty certificates awarded in conjunction with other certifying boards, with contact information:
<http://www.abp.org/frsubpol.htm>



SECTION 11: FINANCING YOUR MEDICAL EDUCATION

The annual American Association of Medical Colleges (AAMC) Medical Student Graduation Questionnaire showed that average debt of medical students graduating in 2002 was \$103,855, a 5% increase over the previous year. More than 21% of students finished school owing \$150,000 or more.¹³ The AAMC estimates that about 81% of medical students carry some education debt.¹⁴

According to the AAMC annual report on tuition and student fees,¹⁵ public school tuition and fees increased by an average of 12.4% for residents and 9.8% for nonresidents between the 2000 to 2001 and 2002 to 2003 academic years. The average increase for private schools was 4.9% for residents and 4.6% for nonresidents during the same period.

Medical students who plan to seek financial assistance should contact their college financial aid office as early as possible—ideally at the time of the admissions interview.

A Word of Caution

It is critically important to obtain qualified advice before entering into any loan repayment employment agreement.

Government programs are many and varied. A firm understanding of what commitments are made and what promises have been secured is essential. Look closely at the source of funding and the fine print, and consult mentors on your faculty and in your student affairs office before entering into any commitments.

Online Resources

Please note: The links below provide general information as a starting point for research. Consult with your college financial aid officer and other qualified advisors before committing to any financial arrangement.

From the American Academy of Pediatrics Resident Section

- *Career Planning: How to Manage Your Large Debts*, links to several solid articles: <http://www.aap.org/sections/resident/managedebt.htm>
- *The Resident Scholarship Program*: <http://www.aap.org/sections/resident/resscholarship.htm>

From the AAMC

- *The Layman's Guide to Educational Debt Management for Residents*: <http://www.aamc.org/students/financing/debthelp/laymansguide>
- *(MD)²: Monetary Decisions for Medical Doctors*: <http://www.aamc.org/students/financing/md2/start.htm>
- A database of state and other loan repayment/forgiveness and scholarship programs with an interactive guide to information from state health departments, medical schools, federal programs, and military agencies: <http://www.aamc.org/students/financing/repayment>
- A chart showing tuition and student fees for first-year medical school students, 2002 to 2003: <https://services.aamc.org/tsf>

SECTION 11: FINANCING YOUR MEDICAL EDUCATION

From the **National Institutes of Health (NIH)**

- *NIH Extramural Loan Repayment Program Regarding Pediatric Researchers*, information about the PR-LRP, a new opportunity for pediatric researchers offering repayment of up to \$35,000 of principal and interest of educational loans, including federal taxes, in exchange for a commitment of 2 years of research in pediatrics: <http://grants2.nih.gov/grants/guide> (Search on PR-LRP.)

From the **American Medical Student Association**

- *Charting a Course to Medical School: Financial Aid*, a sobering look at financial aid options: <http://www.amsa.org/premed/premedguide/financialaid.cfm>
- *Education Loan Consolidation: A Compendium on Student Loan Consolidation and More*, information on loan consolidation programs: http://easnetwork.com/eas/Consolidation_Compendium.asp

From the **US Department of Health and Human Services**, loan repayment programs for service in underserved communities

- *National Health Service Corps*, information about loan repayment programs for service in underserved communities: <http://nhsc.bhpr.hrsa.gov>
- *Indian Health Service Loan Repayment Program Service Center*: <http://www.ihs.gov/JobCareerDevelop/DHPS/LRP/index.asp>



SECTION 12: POST-RESIDENCY TRAINING

For most post-residency physicians, “further training” means an area of concentration approved by the American Board of Medical Specialties (ABMS). If that physician is a pediatrician, she may be thinking of the 16 pediatric subspecialties governed by the American Board of Pediatrics (ABP), or another subspecialty supervised under the ABMS, such as genetics, allergy and immunology, or neurology. On the other hand, she might also be thinking about a preceptorship in child advocacy, a fellowship in health policy development or health services research, a research grant, or a degree in public health. Pediatrics accommodates a multitude of opportunities.

“Every step is about understanding how to make the connections,” says a fellow in forensic pediatrics whose plans include a research fellowship that offers loan repayment at the National Institutes of Health. “It’s scary and daunting to take on a \$100,000 debt, but there are still ways to do what you want to do with your life and have somebody else pay off your loans,” she said. “If you can’t get the answer, you shouldn’t give up.”

Pediatric subspecialists provide patient care, teach, and conduct research. Some concentrate in single-disease comprehensive care while others focus on children with special health needs. Subspecialty pediatricians (other than neonatologists) most often practice in an academic setting; 75% are practicing at least part-time academics.¹⁶

Some subspecialists do not practice clinically in their field full time because fewer children than adults have highly complex diseases that require their expertise. Subspecialists also play important roles as teachers, administrators, and researchers. Some have a part-time general pediatric practice.

TIP

One of the richest resources for post-residency options is the Web site of the University of Chicago Children’s Hospital (<http://peds-www.bsd.uchicago.edu/residency/CareerPlanning.html>).

SECTION 12: POST-RESIDENCY TRAINING

Subspecialty and Surgical Specialty Snapshots

The scope and flexibility of general pediatrics is mirrored in the subspecialty choices available to those who elect further training. Market demand is inconsistent across subspecialties. For many subspecialists, the intellectual and personal rewards of their work offer incomparable compensations. The following are a couple of examples:

“There can be tremendous satisfaction in caring for children who have chronic problems, and there is something very special about taking care of children who are developmentally disabled and whose milestones of development are so delayed,” one *pediatric neurologist* observed. “I remember at one point a child I had followed for 6 years walked into my office for the first time. I just burst into tears. The mother had worked so hard with her and she had had multiple operations for spasticity, and it worked. The child learned to walk. It was so exciting. That kind of thing is very hard to explain to a young intern who is all caught up in the glamour and excitement of the emergency room. You go day by day, you and the family, and you do see problems progress. There’s a very special kind of satisfaction that comes from taking care of children like this.”

Teamwork and shared excitement of new discoveries are what one retired *hematologist/oncologist* remembers most. “The psychosocial implications of dealing with these diseases are enormous,” he said. “You have to be ready and willing and able to become emotionally involved and yet not let that interfere with your decision making. The joy was in the fact that although this was emotionally very draining you could share it, and most important for me was that our successes by the end of my career far outnumbered the failures. People say to me, ‘Wasn’t it awful, dealing with all these kids with cancer and their families?’ Sure it was, but at the end of the day you knew you were doing good.

I was privileged to be there when the first drugs came out to treat leukemia,” he said. “Then it was uniformly fatal and now, in some categories of childhood leukemia, 100% are now being cured. It’s been a very exciting career and one I wouldn’t trade with anyone. The wonderful thing about pediatrics is how resilient kids are,” he said. “I’ve seen colleagues use one drug after another in various adult cancers and nothing worked,” he said, “but we were dealing with very resilient patients. We would try one thing and it would work out, and then we’d try the next thing and it was better than the one before. We’ve been lucky.”



SECTION 12: POST-RESIDENCY TRAINING

Other Pediatric Subspecialty and Specialty Paths

While most pediatric subspecialists are board-certified general pediatricians who are subspecialty boarded through the ABP, some physicians first achieve board certification in another discipline, then seek out additional training to apply their skills in the care of pediatric patients.

National specialty boards for surgery, pathology, and radiology offer certification for pediatric subspecialists in their respective disciplines.

Pediatric neurologists may be certified in pediatrics/neurology after completing 2 years' training in general pediatrics and meeting the training requirements of the American Board of Psychiatry and Neurology for certification in neurology with special qualification in child neurology.⁵

Surgeons in other disciplines (such as anesthesiology and pain medicine, neurological surgery, ophthalmology, otolaryngology/bronchoesophagology, orthopedics, plastic surgery, and urology) often complete additional training to specialize in care of pediatric patients.

To learn more about these options, consult the American Academy of Pediatrics Surgical Advisory Panel brochure "What is a Pediatric Surgical Specialist?" (<http://www.aap.org/sections/sap/he3002.pdf>).



SECTION 12: POST-RESIDENCY TRAINING



Online Resources

From the Accreditation Council for Graduate Medical Education

- Program requirements for subspecialty training in pediatrics: http://www.acgme.org/req/PedSub_pr700.asp

From the *Journal of Pediatrics*

- Fellowship opportunities are published each year in the January issue, which provides application deadlines, duration of the fellowship, training requirements, and a contact person: <http://www.mosby.com/jped> (Click on “List of Fellowships.”)

From the American Medical Association

- *FREIDA Online* (Fellowship and Residency Electronic Interactive Database), covers accredited specialty, subspecialty, and combined training programs by institution or medical school: <http://www.ama-assn.org/ama/pub/category/2997.html>

From the National Resident Matching Program (NRMP)

- The NRMP conducts matches for advanced residency or fellowship programs throughout the year in 6 pediatric areas (cardiology, critical care, emergency medicine, hematology/oncology, surgery, and pediatric radiology): <http://www.nrmp.org/fellow/index.html>

SECTION 13: ISSUES IN CONTEMPORARY PEDIATRICS

Many of the issues of concern to pediatricians relate to access for underserved children, particularly children who live in physician shortage areas and minority children.

Rural Practice

In 1997, 51 million Americans (or one fifth of the population) lived in nonmetropolitan areas, while less than 11% of US physicians practiced in these locations. Two in 3 physician shortage areas in the United States are in rural communities.¹⁷

Despite these facts, 73% of pediatricians working in rural areas reported that they were “very satisfied” with their decision to practice in a rural area, and would make the same decision again, according to an American Academy of Pediatrics (AAP) survey. A total of 93% said they planned to continue in rural pediatrics, citing lifestyle, variety, and the opportunity for community connection as positives about rural practice.¹⁸

“When you’re the only pediatrician in the community, you get involved in a lot of things,” one rural pediatrician said. “I work with local people on school issues, Head Start, and community programs to educate kids about dating violence and domestic violence. I find myself interacting with a lot of social service agencies because I’m the only pediatrician. In rural areas you work with a lot of the same people on a lot of different issues because there are only so many people in public health.”

The AAP has advocated for financial incentives at the state and national levels to attract and retain pediatricians in underserved areas.

Culturally Effective Pediatric Care

Health status indicators for minority children are generally less favorable than they are for white children. In making that observation, the AAP Committee on Pediatric Workforce stated barriers to health services for minority children include poverty, geographic factors, lack of cultural sensitivity, racism, and other forms of prejudice. The committee pointed out that because ethnic minorities are underrepresented in the health professions, there are often cultural differences that interfere with communication.¹⁹

There is evidence that increasing the numbers of minority pediatricians will help improve access to care for minority children. The AAP has called for measures to increase the diversity of the pediatrician population by encouraging more minority medical students to choose pediatrics as a career.²⁰

SECTION 13: ISSUES IN CONTEMPORARY PEDIATRICS

Online Resources

From the AAP

- Division of Graduate Medical Education and Pediatric Workforce:
<http://www.aap.org/gme>
- Committee on Pediatric Workforce:
<http://www.aap.org/workforce>
- The Future of Pediatric Education II:
<http://www.aap.org/profed/fope1.htm>
- *Pediatric Workforce Statement*:
<http://www.aap.org/policy/re9750.html>
- *Culturally Effective Pediatric Care: Education and Training Issues*:
<http://www.aap.org/policy/re9753.html>

From the **Federal Office of Rural Health Policy**

- *Facts about...Rural Physicians*. Health Resources and Services Administration, US Department of Health and Human Services:
http://www.shepscenter.unc.edu/research_programs/Rural_Program/phy.html



SECTION 14: PHYSICIAN AS ADVOCATE

Members of the American Academy of Pediatrics (AAP) have access to an excellent bank of advocacy tools. The scope of topics addressed by AAP public education initiatives includes immunization awareness, child passenger safety, violence prevention, media savvy, and poison prevention.

Ongoing AAP advocacy programs include

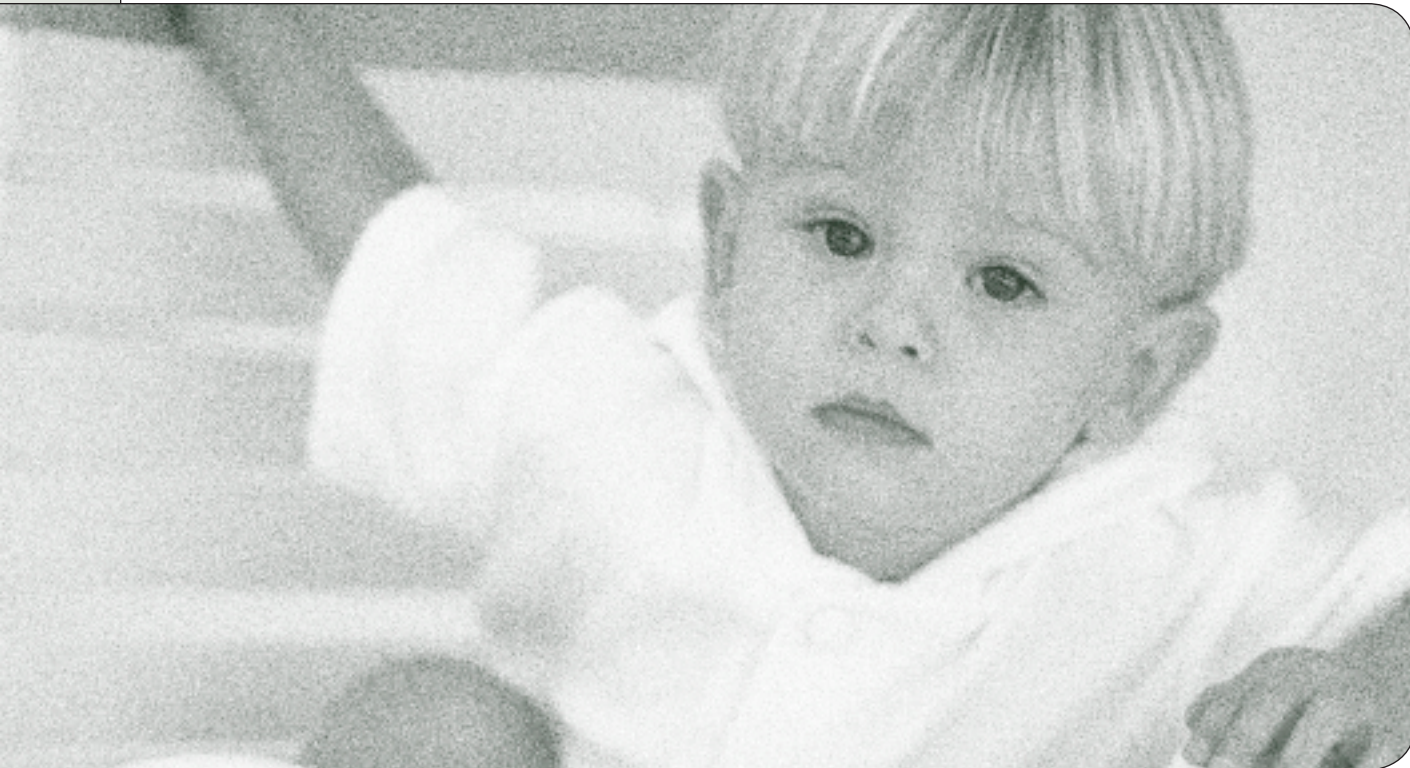
- An international travel grant program to give pediatric residents opportunities to provide care in the developing world during residency
- Community Access to Child Health (CATCH), which provides planning funds to develop proposals for innovative, community-based child health projects
- Programs in community pediatrics and emergency preparedness for children with special health care needs
- Advocating for testing of new drugs to ensure that they are safe for use in children

Child advocacy may be the best-known activity of the AAP, but the scope of member benefits and services extends into other areas as well. Ongoing member benefits include continuing medical education, excellent publications, and opportunities to learn and grow through participation in interest-based AAP sections and committees. Membership in the AAP is open to board-certified pediatricians and members of other groups. To learn more about becoming a member of the AAP, go to <http://www.aap.org/member>.

Online Resource

From the AAP

- American Academy of Pediatrics Advocacy: <http://www.aap.org/advocacy>



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The recommendations in this publication are provided as a source of information. Variations, taking into account individual circumstances, may be appropriate.

Please note: Inclusion in this publication does not imply an endorsement by the American Academy of Pediatrics (AAP). The AAP is not responsible for the content of the resources mentioned. Addresses, phone numbers, and Web site addresses are as current as possible, but may change at any time.

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NOTES



QUICK FACTS TABLE 1

Specialty Choice

According to data from the American Medical Association, primary care specialists and subspecialists in the United States are distributed as follows:

Internal medicine: 42.1%
 Family practice: 22.1%
 Pediatrics: 19.6%
 Obstetrics and gynecology: 12.1%
 General practice: 4.2%

Source: American Medical Association. *Physician Characteristics and Distribution in the US, 2003–2004 Edition*. Chicago, IL: American Medical Association; 2003:283

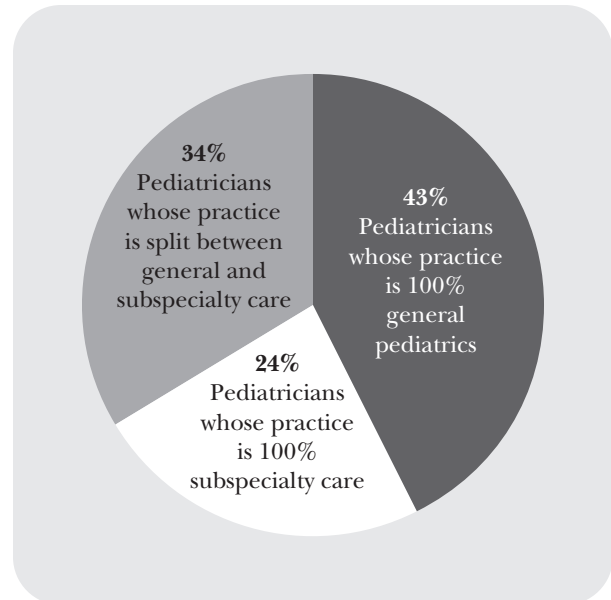
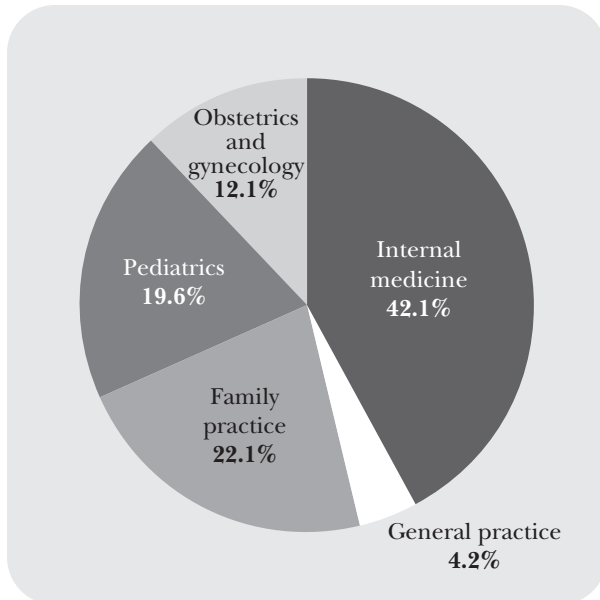
Weekly General/Subspecialty Time Estimates

Pediatricians whose practice is 100% general pediatrics: 43%

Pediatricians whose practice is 100% subspecialty care: 24%

Pediatricians whose practice time is split between general and subspecialty care: 34%

Source: American Academy of Pediatrics. Socioeconomic survey of pediatricians: part 1. Pediatricians' practice and personal characteristics. Comparison findings from periodic surveys 43, 33, and 21. AAP Web site. Available at: <http://www.aap.org/research/ps43soci.htm>. Accessed March 18, 2003



QUICK FACTS TABLE 2

Duty Hours and Compensation for Pediatric Residents and Fellows

Average hours per week in 2000, pediatric residents: 75*

Average hours per week in 2000, pediatric post-residency training fellows: 64*

Average first-year pediatric resident compensation, academic year 2001: \$36,699†

Sources

* American Academy of Pediatrics. Socioeconomic survey of pediatricians: part 1. Pediatricians' practice and personal characteristics. Comparison of findings from periodic surveys 43, 33, and 21. AAP Web site. Available at: <http://www.aap.org/research/ps43soci.htm>. Accessed March 18, 2003

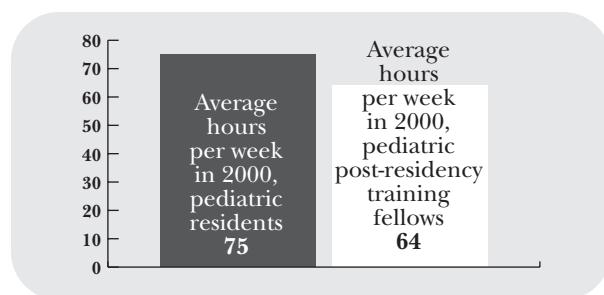
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Duty Hours

The following changes in resident duty hours will take effect July 1, 2003:

- Duty hours must be limited to 80 hours per week, averaged over a 4-week period, inclusive of in-house call activities and in-house moonlighting.
- Residents must be provided with 1 (continuous 24-hour) day in 7 free from all educational, clinical, and administrative responsibilities, averaged over a 4-week period, inclusive of in-house call.
- Residents must have 10 hours for rest and personal activities between all daily duty periods and after in-house call.
- In-house call must occur no more often than every third night, averaged over a 4-week period.
- Continuous on-site duty, including in-house call, must not exceed 24 consecutive hours, although residents may remain on duty for up to 6 additional hours to participate in didactic activities, maintain continuity of medical and surgical care, transfer care of patients, or conduct outpatient continuity clinics. No new patients may be accepted after 24 hours of continuous duty. Additional language about at-home call (pager call) can be obtained from the source below.

Source: Accreditation Council for Graduate Medical Education. Proposed resident duty hours language memorandum. ACGME Web site. Available at: <http://www.acgme.org>. Accessed March 18, 2003



QUICK FACTS TABLE 3

Training Programs in Categorical Pediatrics and Med-Peds, Academic Year 2002–2003

Number of accredited training programs in general pediatrics: 207

Number of participating residents: 7,696

Length of training: 3 years

Number of accredited training programs in internal medicine/pediatrics: 108

Number of participating residents: 1,534

Length of training: 4 years

Source: Accreditation Council for Graduate Medical Education. Number of all programs for a specific academic year (including combined programs). (Ending 6/30/2003). ACGME Web site. Available at: http://www.acgme.org/adspublic/reports/accredited_programs_all.asp. Accessed March 18, 2003

Curriculum Guidelines for 36-Month Residency in General Pediatrics

- 50% of clinical training should be devoted to ambulatory experiences
- 5 months general inpatient pediatrics
- 4 months emergency and acute illness
- 1 half-day per week in continuity experience
- Equivalent of at least 1 month in care of normal/term newborns
- Community experiences in child advocacy
- 4 months (maximum 6 months) intensive care experience
- 1 month block rotation in adolescent medicine
- 1 month block rotation in developmental/behavioral pediatrics

- 6 months (but no single rotation longer than 3 months) in 1-month block rotations in at least 4 of the following:

- ~ Allergy/immunology
- ~ Gastroenterology
- ~ Infectious disease
- ~ Genetics
- ~ Cardiology
- ~ Hematology/oncology
- ~ Nephrology
- ~ Pulmonology
- ~ Endocrinology/metabolism
- ~ Rheumatology
- ~ Neurology

- Additional subspecialty experiences in the following:

- ~ Child psychiatry
- ~ Otolaryngology
- ~ Dermatology
- ~ Pediatric radiology
- ~ Ophthalmology
- ~ Pediatric surgery
- ~ Orthopedics
- ~ Sports medicine

For additional curricular requirements, see source below.

Source: Accreditation Council for Graduate Medical Education. Program requirements for residency education in pediatrics. ACGME Web site. Available at: <http://www.acgme.org/req/320pr701.asp>. Accessed March 18, 2003

QUICK FACTS TABLE 4

Board Certification

Board certification is accomplished through the American Board of Pediatrics (ABP) after completion of 3 years of training in an accredited residency program and successful completion of a comprehensive written examination. Evidence of maintenance of certification is required every 7 years.

New applicant registration to take the certifying examination in general pediatrics in 2003 is \$1,220.*

* American Board of Pediatrics. Application, registration and fees. ABP Web site. Available at: <http://www.abp.org/certinfo/genpedsgpproc.htm>. Accessed March 18, 2003

Increases in Number of Board-Certified General Pediatricians

Number certified in 1970: 788*

Number certified in 1988: 2,121*

Number certified in 1997: 2,754†

Number certified in 1998: 2,760†

Number certified in 1999: 2,877†

Number certified in 2000: 2,586†

Sources

* DeAngelis C, Feigin R, DeWitt T, et al. Final report of the FOPE II pediatric workforce workgroup. *Pediatrics*. 2000;106(suppl):1245–1255

† American Board of Medical Specialties. ABMS member boards: general certificates issues 1991–2000. ABMS Web site. Available at: <http://www.abms.org/downloads/statistics/table2.pdf>. Accessed March 18, 2003

Subspecialty Board Certification

Subspecialty certification by the ABP

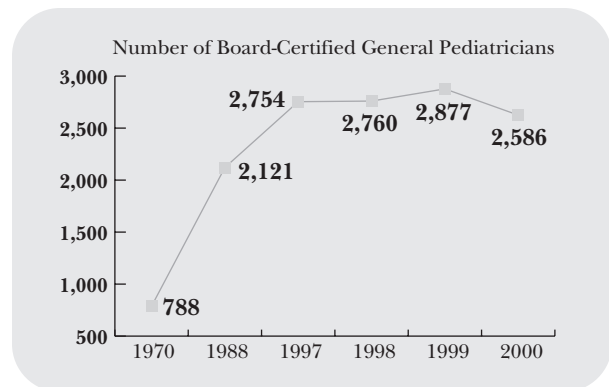
Certificates of special qualifications require 3 more years of training after completion of a general pediatric residency. These subspecialty certificates are available in

- Adolescent medicine
- Developmental/behavioral pediatrics
- Pediatric cardiology
- Pediatric critical care medicine
- Pediatric emergency medicine
- Pediatric endocrinology
- Pediatric gastroenterology
- Pediatric hematology/oncology
- Pediatric infectious diseases
- Neonatal/perinatal medicine
- Pediatric nephrology
- Pediatric pulmonology
- Pediatric rheumatology

Certificates of added qualifications are issued by the ABP in conjunction with another certifying board. These subspecialty certificates are available in

- Clinical and laboratory immunology
- Medical toxicology
- Neurodevelopmental disabilities
- Sports medicine

Source: American Board of Pediatrics. Certification in the pediatric subspecialties. ABP Web site. Available at: <http://www.abp.org/frsubpol.htm>. Accessed March 18, 2003



QUICK FACTS TABLE 5

Employment Settings

Those responding to the 2000 Periodic Survey of Fellows spent the following average percentages of time in these employment settings:

Pediatric group practice: 25.8%

Medical school or parent university: 15.4%

Multispecialty group: 11.7%

Other (freestanding ambulatory care, surgical, or emergency care center, nonprofit community health center, other patient care and non-patient care settings): 11%

Nongovernment hospital: 10.7%

Self-employed solo practice: 9.8%

Two-physician practice: 5.5%

City/county or state government hospital or clinic: 4.5%

Staff-model health maintenance organization: 2.7%

US government hospital or clinic: 2.6%

Source: American Academy of Pediatrics.

Socioeconomic survey of pediatricians: part 1.

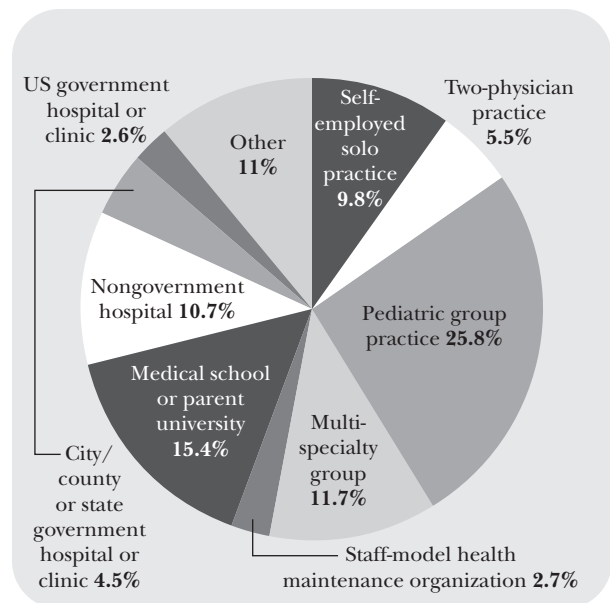
Pediatricians' practice and personal characteristics.

Comparison of findings from periodic surveys

43, 33, and 21. AAP Web site. Available at:

<http://www.aap.org/research/ps43soci.htm>.

Accessed March 18, 2003



QUICK FACTS TABLE 6

Practice Settings: Pediatricians Who Are Employees

A total of 47% of pediatricians were self-employed in 1999, while 51% were employees and 2% were independent contractors. Those who were employees practiced in a variety of settings

Health maintenance organization: 8.1%

Group practice freestanding center: 18.6%

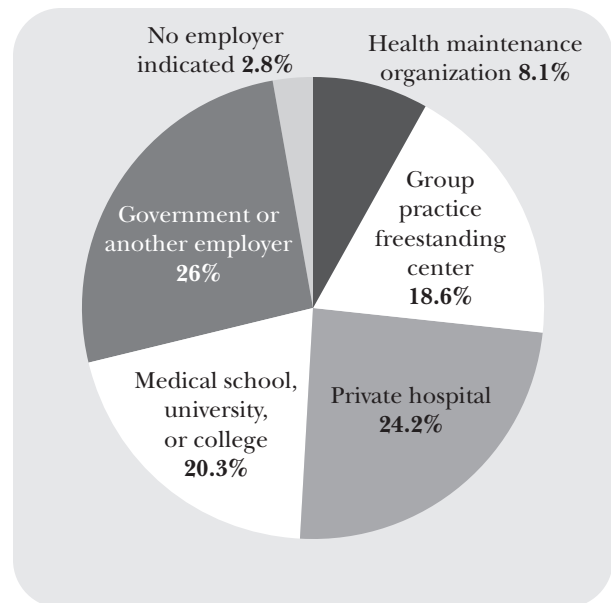
Private hospital: 24.2%

Medical school, university, or college: 20.3%

Government or another employer: 26%

No employer indicated: 2.8%

Source: American Medical Association. *Physician Socioeconomic Statistics 2000–2002 Edition*. Center for Health Policy Research, American Medical Association; 2002

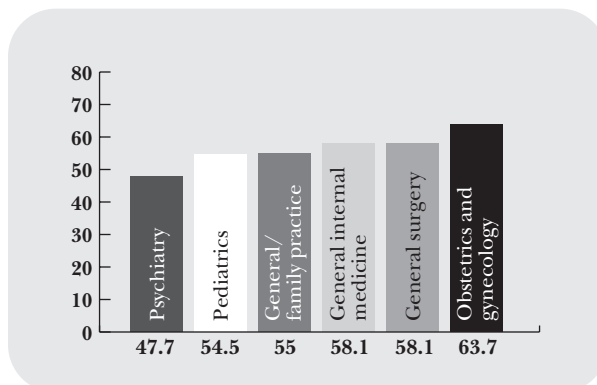


QUICK FACTS TABLE 7

Primary Care Physicians' Average Work Week, 1999

Psychiatry: 47.7 hours
 Pediatrics: 54.5 hours
 General/family practice: 55 hours
 General internal medicine: 58.1 hours
 General surgery: 58.1 hours
 Obstetrics and gynecology: 63.7 hours

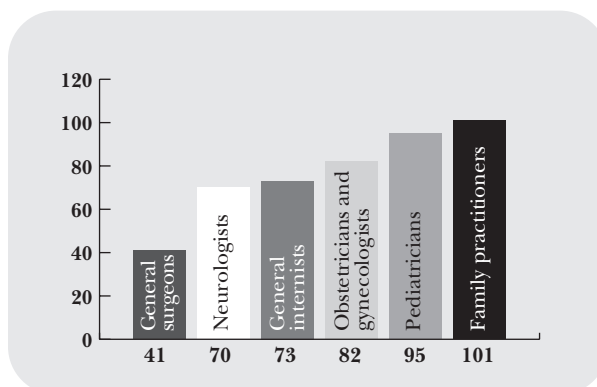
Source: American Medical Association. *Physician Socioeconomic Statistics 2000–2002 Edition*. Center for Health Policy Research, American Medical Association; 2002. Table 182. Covers nonfederal patient care physicians only



Average Office Visits Per Week, 1999

General surgeons: 41
 Neurologists: 70
 General internists: 73
 Obstetricians and gynecologists: 82
 Pediatricians: 95
 Family practitioners: 101

Source: American Medical Association. *Physician Socioeconomic Statistics 2000–2002 Edition*. Center for Health Policy Research, American Medical Association; 2002

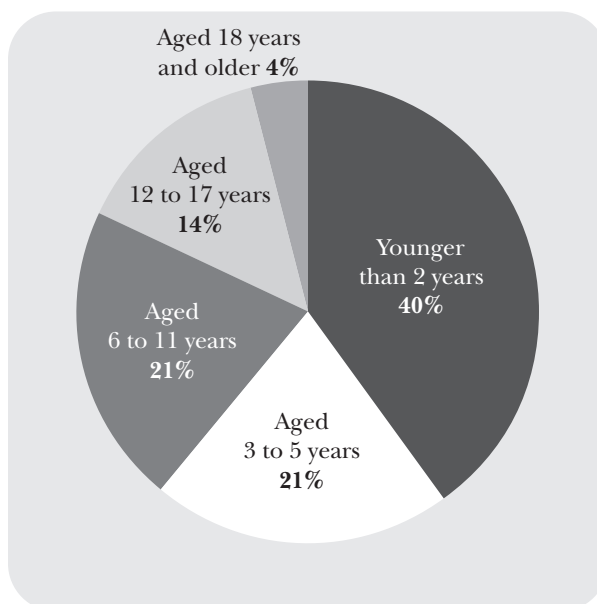


Patient Time By Age Group

Office- and clinic-based pediatricians with an average of 94 patient visits per week divided those visits as follows:

Younger than 2 years: 40%
 Aged 3 to 5 years: 21%
 Aged 6 to 11 years: 21%
 Aged 12 to 17 years: 14%
 Aged 18 years and older: 4%

Source: American Academy of Pediatrics. Socioeconomic survey of pediatricians: part 1. Pediatricians' practice and personal characteristics. Comparison of findings from periodic surveys 43, 33, and 21. AAP Web site. Available at: <http://www.aap.org/research/ps43soci.htm>. Accessed March 18, 2003



QUICK FACTS TABLE 8

Physician Demographics: Age

Pediatrics has a higher proportion of physicians younger than 35 years than any other specialty.

Proportion of US physicians younger than 35 years: 17%

Proportion of US pediatricians younger than 35 years: 25%

Proportion of US pediatricians younger than 45 years: 54%

Source: American Medical Association. *Physician Characteristics and Distribution in the US, 2003–2004 Edition*. Chicago, IL: American Medical Association; 2003:vi, 9

Pediatrician Demographics: Gender

Number of female pediatricians, 2001: 32,698*

Proportion of pediatricians who are female, 2001: 49%*

Proportion of categorical pediatric residents who are female, 2001: 66%†

Sources

* American Medical Association. *Physician Characteristics and Distribution in the US, 2003–2004 Edition*. Chicago, IL: American Medical Association; 2003:9, 11

† American Board of Pediatrics. 2001 general pediatrics resident tracking: categorical pediatrics by gender and medical school. ABP Web site. Available at: <http://www.abp.org/stats/wrkfrc/cpgms.htm>. Accessed March 18, 2003

QUICK FACTS TABLE 9

How Pediatricians Divide Their Time

Practicing pediatricians responding to the year 2000 periodic survey of fellows reported that they worked an average of 52 hours per week.

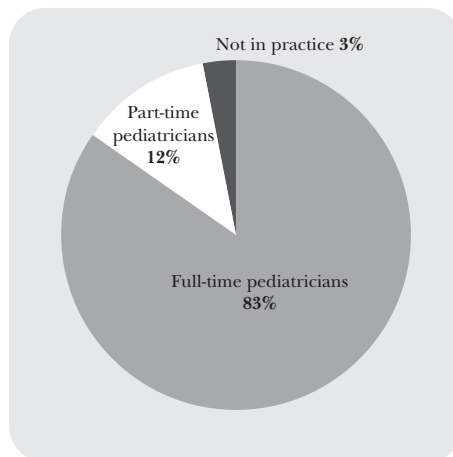
Direct patient care: 41 hours
 Nonpractice administrative time: 3.5 hours
 Teaching: 3.5 hours
 Research: 1.5 hours
 Volunteer community service: 2.5 hours

Source: American Academy of Pediatrics. Socioeconomic survey of pediatricians: part 1. Pediatricians' practice and personal characteristics. Comparison of findings from periodic surveys 43, 33, and 21. AAP Web site. Available at: <http://www.aap.org/research/ps43soci.htm>. Accessed March 18, 2003

Full-time/Part-time Pediatricians, 2000

Full-time pediatricians: 83%
 Part-time pediatricians: 12%
 Not in practice: 3%
 Proportion of male pediatricians who work part time: 4%
 Proportion of female pediatricians who work part time: 28%

Source: American Academy of Pediatrics. Socioeconomic survey of pediatricians: part 1. Pediatricians' practice and personal characteristics. Comparison of findings from periodic surveys 43, 33, and 21. AAP Web site. Available at: <http://www.aap.org/research/ps43soci.htm>. Accessed March 18, 2003

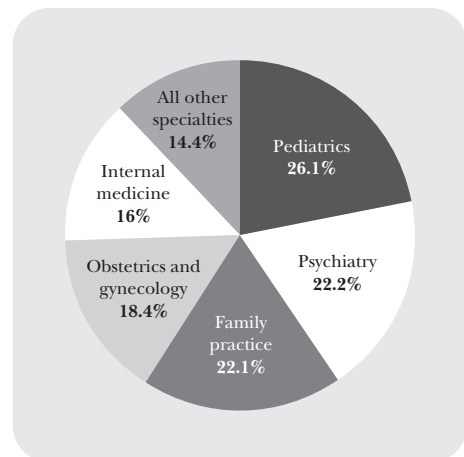
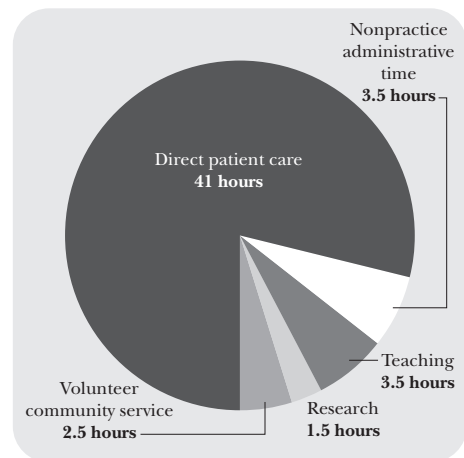


Physicians With Part-time Experience by Specialty

Proportion of physicians in a specialty who report having practiced part-time at some point in their careers

Pediatrics: 26.1%
 Psychiatry: 22.2%
 Family practice: 22.1%
 Obstetrics and gynecology: 18.4%
 Internal medicine: 16%
 All other specialties: 14.4%

Source: American Academy of Pediatrics Department of Health Policy Research. Pediatrics leads specialties in number of part-time physicians. *AAP News*. 2002;21(3)126



QUICK FACTS TABLE 10

Practice Location, 2000

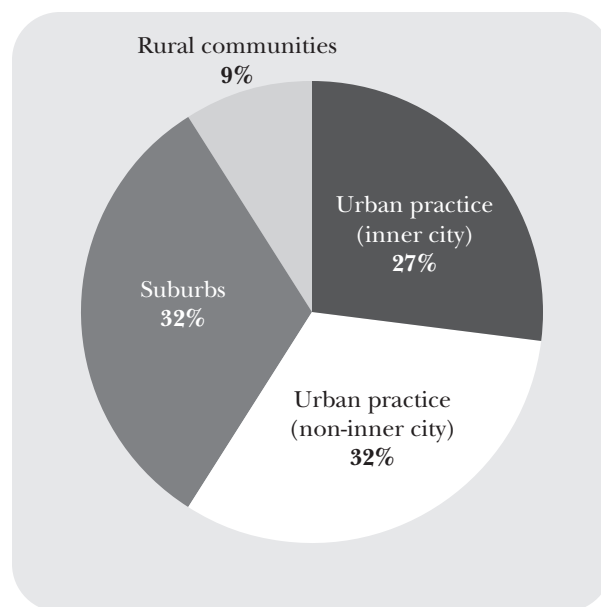
Urban practice (inner city): 27%

Urban practice (non-inner city): 32%

Suburbs: 32%

Rural communities: 9%

Source: American Academy of Pediatrics.
Socioeconomic survey of pediatricians: part I.
Pediatricians' practice and personal characteristics.
Comparison of findings from periodic surveys
43, 33, and 21. AAP Web site. Available at:
<http://www.aap.org/research/ps43soci.htm>.
Accessed March 18, 2003



QUICK FACTS TABLE 11

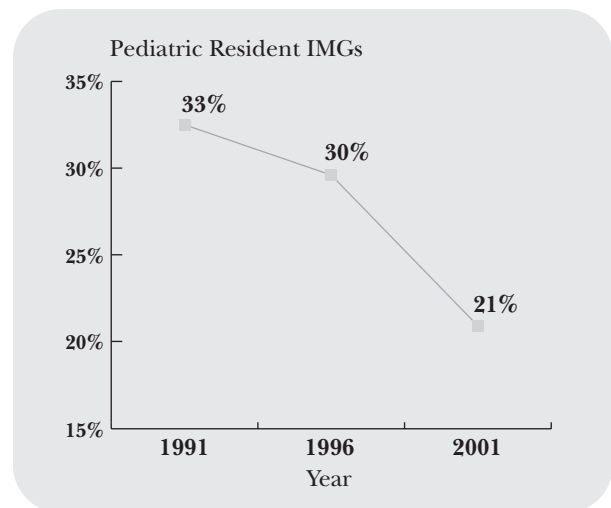
International Medical Graduates (IMGs)

Proportion of first-year categorical pediatrics residents who were IMGs, 1991: 33%

Proportion of first-year categorical pediatrics residents who were IMGs, 1996: 30%

Proportion of first-year categorical pediatrics residents who were IMGs, 2001: 21%

Source: American Board of Pediatrics. 2001 general pediatrics resident tracking: categorical pediatrics by gender and medical school. ABP Web site. Available at: <http://www.abp.org/stats/wrkfr/cpgms.htm>. Accessed March 18, 2003



QUICK FACTS TABLE 12

Compensation

Mean Net Income

Nonfederal Primary Care Physicians in Patient Care (after expenses and before taxes), 1998

Pediatricians: \$139,600

General/family physicians: \$142,500

General internists: \$157,900

All physicians: \$194,400

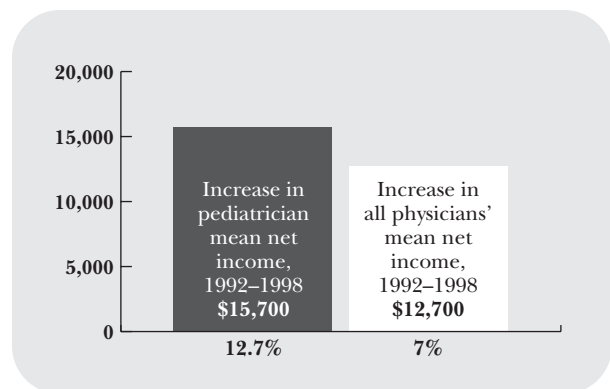
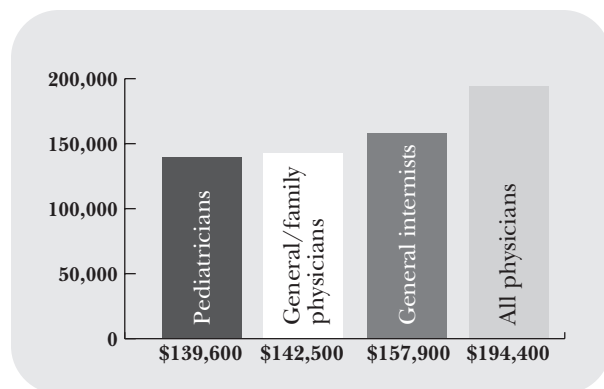
Source: American Medical Association. *Physician Socioeconomic Statistics 2000–2002 Edition*. Center for Health Policy Research, American Medical Association; 2002:231

Relative Increase in Mean Net Income

Increase in pediatrician mean net income, 1992–1998: \$15,700 (12.7%)

Increase in all physicians' mean net income, 1992–1998: \$12,700 (7%)

Source: American Medical Association. *Physician Socioeconomic Statistics 2000–2002 Edition*. Center for Health Policy Research, American Medical Association; 2002:231



QUICK FACTS TABLE 13

2000 Birthrate Statistics: Birthrate Trends Upward

Fertility increased for all age groups except teens for the second year in a row.

Average number of children born to an American woman over a lifetime: 2.1

Approximate number of babies born each year in the United States: 4 million

Increase in birth rate in 2000: 3%

Population aged 19 years and younger in the year 2000: 80.5 million*

The good news is that teen births have dropped dramatically.†

Record high natality rate for females aged 15–19 years, recorded in 1991: 62.1 per 1,000 females

Decline in natality rate for females aged 15–19 years, 1991–2000: 22%

Sources

* US Census Bureau. Profile of general demographic characteristics: 2000.

US Census Bureau Web site. Available at: <http://factfinder.census.gov>

† National Center for Health Statistics. Women are having more children, new report shows teen births continue to decline. NCHS Web site. Available at: <http://www.cdc.gov/nchs/releases/02news/womenbirths.htm>. Accessed March 18, 2003