Recognizing the changing health care needs of children and the current and proposed changes in health care financing, the American Academy of Pediatrics (AAP) Executive Committee appointed a task force to develop a report on the future role of the pediatrician in the delivery of child health care. Members of the task force included practicing pediatricians from urban and rural areas and academic pediatric subspecialists. Demographic, medical, social, and environmental trends that could affect the delivery of health care to children were considered in the development of this report.

The pediatrician is defined in this article as a medical specialist who has training sufficient for board certification in pediatrics.

Societal changes have brought about significant changes in the delivery of health care in the United States. Growing urbanization, increasing numbers of children living in poverty, geographic separation of young families from their nuclear support systems, nontraditional or alternative family structures, and new methods of health care financing have had a pervasive impact on the delivery of child health care. Technical advances in medicine, increasing subspecialization, emergence of urgent care centers, increasing use of hospital emergency department services, increasing numbers of children and adolescents with psychosocial disorders, and the prevalence of chronic disabilities have also contributed to changes in child health care. An issue of major importance to all pediatricians is the role that the pediatrician and the pediatric subspecialist will play in the health care of children, now and in the future.

Pediatrics developed as a medical specialty in the late 1800s with infant feeding and management of infectious disease as major parts of pediatric practice. A focus on growth and development was established rapidly, and it was recognized that a child's health was influenced greatly by family attitudes, environment, and socioeconomic class. Because most pediatricians provided first contact, continuous, and comprehensive care, pediatrics was recognized as a primary care specialty. The introduction of antibiotics in the 1940s, and new and improved vaccines in the 50s and 60s have had a profound effect on child health care. Pediatric practice has also been influenced by the rapid growth of medical knowledge and technology, creating a need for subspecialization in pediatrics. The following eight pediatric subspecialties are recognized in 1990 by the American Board of Pediatrics: neonatal/perinatal medicine, cardiology, critical care, endocrinology, gastroenterology, hematology/oncology, nephrology, and pulmonology. Boards are being considered for several other pediatric subspecialties.

In 1974, Haggerty identified birthrate, culture, attitude of the population, state of knowledge and technology, professional manpower mix, financing and organization of health care, and the education and personality of physicians as major factors in determining what the pediatrician did or would do in the delivery of health care. These factors continue to be major influences today.
TABLE 1. Projected Census Estimates

<table>
<thead>
<tr>
<th>Age Group</th>
<th>Estimated Population</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1990</td>
</tr>
<tr>
<td>&lt;5 y</td>
<td>18 408 000</td>
</tr>
<tr>
<td>5–17 y</td>
<td>45 630 000</td>
</tr>
<tr>
<td>18–24 y</td>
<td>26 140 000</td>
</tr>
<tr>
<td>Total</td>
<td>90 178 000</td>
</tr>
</tbody>
</table>


CURRENT DEMOGRAPHICS

Based on the assumption that the fertility rate will continue to be 1.8 births per woman, the US Bureau of the Census projects a 0.4% decrease in the number of people younger than 24 years of age by the year 2010 (see Table 1).²

At the same time, there will be an increase in the number of pediatricians being trained. If the growth in the number of pediatric residents continues as it has in the past decade, there will be 9509 pediatric residents in training by the year 2000 (see Table 2).³–⁶

The American Medical Association (AMA) has constructed a model that predicts the number of pediatricians that will be available for patient care by the year 2010. In 1986, there were 38 361 pediatricians listed in the AMA files (this included boarded and self-designated pediatricians, pediatric allergists, pediatric cardiologists, and residents in pediatric training programs). Of these, 28,900 were providing direct patient care. By 2010, the AMA predicts the total number of pediatricians will be 59 000 with 46 529 available for patient care.⁷ Projections by the Bureau of Health Professions are very similar to those of the AMA.⁸

A 24% increase in total patient contacts with pediatricians between 1985 and 2000 is predicted because the percentage of children cared for by pediatricians is increasing (see Table 3).⁹ However, because of the increase in the number of pediatricians delivering patient care, there could be fewer patient contacts per pediatrician by the year 2000.

A variable that must be taken into account is the number of children receiving either inadequate or no care. Currently in this country, there are 12 million children younger than 22 years of age who are uninsured.¹⁰ Uninsured families tend to underrate medical services.¹¹ If future funding provides for universal access to care, patient contacts with pediatricians likely will exceed the percentage increase projected by the AMA study.

There is an uneven distribution of pediatricians in this country. In comparison with the child population, pediatricians are overrepresented in large metropolitan areas, including suburbs (see Table 4).¹² Because of the need for pediatric services in smaller communities and the increasing supply of pediatricians, it is likely that more pediatricians will be establishing practices in these currently underserved areas.

It is likely that an increasing number of women will choose pediatrics as a career. In 1989 to 1990, 49% of third-year, 52% of second-year, and 53% of first-year pediatric residents were women.⁹ Interest in pediatrics among male students has declined steadily.¹³ If medical school sex ratios remain constant, there will be more women than men in pediatrics. Female US medical graduates are more likely to practice general pediatrics,¹⁴ to select careers in managed health care systems,¹⁵ and to work fewer hours.⁷ They are also less likely to join professional organizations. Those who hold membership in organizations are as involved in educational activities as are men, but they participate less organizationally.¹⁶
TABLE 3. Office-Based Pediatrician Market Share Parameters

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of pediatricians</td>
<td>13 340</td>
<td>20 104</td>
<td>22 084</td>
<td>22 945†</td>
<td>5.3</td>
<td>3.9</td>
</tr>
<tr>
<td>No. of children in age group</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0–2 y</td>
<td>9 277</td>
<td>10 717</td>
<td>10 828</td>
<td>11 025</td>
<td>1.7</td>
<td>1.8</td>
</tr>
<tr>
<td>3–9 y</td>
<td>23 912</td>
<td>23 947</td>
<td>24 332</td>
<td>24 892</td>
<td>0.4</td>
<td>2.3</td>
</tr>
<tr>
<td>10–19 y</td>
<td>41 129</td>
<td>36 034</td>
<td>35 412</td>
<td>34 942</td>
<td>−1.5</td>
<td>−1.3</td>
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<tr>
<td>Total</td>
<td>74 128</td>
<td>70 698</td>
<td>70 572</td>
<td>70 859</td>
<td>−0.5</td>
<td>0.4</td>
</tr>
<tr>
<td>No. of pediatric patient visits in age group</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0–2 y</td>
<td>43 172</td>
<td>57 818</td>
<td>61 046</td>
<td>65 410</td>
<td>4.0</td>
<td>7.1</td>
</tr>
<tr>
<td>3–9 y</td>
<td>33 150</td>
<td>39 092</td>
<td>41 475</td>
<td>43 617</td>
<td>2.7</td>
<td>5.2</td>
</tr>
<tr>
<td>10–19 y</td>
<td>16 647</td>
<td>21 142</td>
<td>20 613</td>
<td>23 460</td>
<td>3.3</td>
<td>13.8</td>
</tr>
<tr>
<td>Total</td>
<td>92 969</td>
<td>118 052</td>
<td>123 134</td>
<td>132 487</td>
<td>3.4</td>
<td>7.5</td>
</tr>
<tr>
<td>No. of patient visits per pediatrician in age group</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0–2 y</td>
<td>3 236</td>
<td>2 876</td>
<td>2 764</td>
<td>2 851</td>
<td>−1.2</td>
<td>3.1</td>
</tr>
<tr>
<td>3–9 y</td>
<td>2 485</td>
<td>1 944</td>
<td>1 878</td>
<td>1 901</td>
<td>−2.4</td>
<td>1.2</td>
</tr>
<tr>
<td>10–19 y</td>
<td>1 248</td>
<td>1 052</td>
<td>933</td>
<td>1 022</td>
<td>−1.9</td>
<td>9.5</td>
</tr>
<tr>
<td>Total</td>
<td>6 969</td>
<td>5 872</td>
<td>5 577</td>
<td>5 774</td>
<td>−1.8</td>
<td>3.6</td>
</tr>
<tr>
<td>No. of pediatric visits per 100 children in age group</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0–2 y</td>
<td>465</td>
<td>539</td>
<td>564</td>
<td>593</td>
<td>2.3</td>
<td>5.1</td>
</tr>
<tr>
<td>3–9 y</td>
<td>139</td>
<td>163</td>
<td>170</td>
<td>175</td>
<td>2.2</td>
<td>2.9</td>
</tr>
<tr>
<td>10–19 y</td>
<td>40</td>
<td>59</td>
<td>58</td>
<td>67</td>
<td>5.0</td>
<td>15.4</td>
</tr>
<tr>
<td>Total</td>
<td>125</td>
<td>167</td>
<td>174</td>
<td>187</td>
<td>3.9</td>
<td>7.5</td>
</tr>
<tr>
<td>Pediatrician market share (%) in age group</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0–2 y</td>
<td>65.0</td>
<td>67.8</td>
<td>68.8</td>
<td>71.8</td>
<td>1.0</td>
<td>4.7</td>
</tr>
<tr>
<td>3–9 y</td>
<td>47.4</td>
<td>52.4</td>
<td>52.8</td>
<td>55.4</td>
<td>1.5</td>
<td>4.9</td>
</tr>
<tr>
<td>10–19 y</td>
<td>15.6</td>
<td>21.3</td>
<td>20.9</td>
<td>24.4</td>
<td>4.4</td>
<td>16.7</td>
</tr>
<tr>
<td>Total</td>
<td>38.3</td>
<td>45.5</td>
<td>46.3</td>
<td>49.8</td>
<td>2.5</td>
<td>7.6</td>
</tr>
</tbody>
</table>

* Average during a 2-year period.
† Provided by the American Medical Association.
§ Pediatric market share equals the number of office-based pediatrician patient visits divided by the total number of all patient visits (children seeking primary medical care from physicians in any specialty; not shown in this table).
Source: Martinez GA, Ryan AS. The pediatric market place. AJDC. 1989;143:924–928.

TABLE 4. Percentage of Children and Pediatricians by County Population

<table>
<thead>
<tr>
<th>County Population</th>
<th>Percentage of Children*</th>
<th>Percentage of Direct Patient Care Pediatricians†</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;50 000</td>
<td>18.0</td>
<td>4.6</td>
</tr>
<tr>
<td>50 000–499 999</td>
<td>30.5</td>
<td>23.8</td>
</tr>
<tr>
<td>500 000–1 000 000</td>
<td>12.1</td>
<td>14.1</td>
</tr>
<tr>
<td>&gt;1 000 000</td>
<td>39.5</td>
<td>57.5</td>
</tr>
</tbody>
</table>

* Percentage does not total 100% because of rounding.
† Residents included.

FINANCING OF CHILD HEALTH CARE

In 1978, an AAP survey revealed that only 17% of private practice revenues came from third-party payors (9% came from private insurance and 8% from Medicaid). Since then, a major change has occurred in the methods of payment for pediatric care. Independent Practice Association (IPA) and Preferred Provider Organization (PPO) contracts are common. Managed care through these contracts and managed indemnity insurance provide economic incentives for cost control by capitation, preauthorization for hospitalization, concurrent review, second surgical opinions, utilization review, diagnosis-related groups, and other mechanisms. An AAP Periodic Survey completed in winter 1989...
revealed that 71% of pediatricians in direct patient care have patients in managed care systems, such as IPAs, PPOs, and Health Maintenance Organizations (HMOs). Of these pediatricians, 47% participate in prepaid capitated systems, and 46% participate in discounted fee-for-service payment systems. The staff model HMO enjoyed considerable growth in the late 1970s, in part because of subsidies by the federal government. Recent data show very little growth in HMOs staffed by salaried physicians. 

The number of insurance plans covering child health supervision has increased, particularly during the past 5 years. Ninety-seven percent of HMOs, 62% of PPOs, and 45% of fee-for-service indemnity plans now cover some child health supervision services. Medicaid accounts for more than 12% of the care children receive from physicians and currently finances care for nearly 11 million children. Eligibility for the program has expanded in recent years, and further increases are expected. However, participation by pediatricians has decreased as a result of low reimbursement levels, denial of payments, delayed payments, limited benefits, and excessive paperwork.

The federal government’s adoption of a Resource-Based Relative value Scale (RBRvS) for payment of services under Medicare should reduce the disparity between compensation for procedures and cognitive (evaluation/management) services. If implemented by Medicaid and accepted by private insurers, this change will increase payment for pediatric services.

Stricter controls on child health services are likely, along with an increased demand by insurers for accountability and an increase in the rationing of care. The public will require assurance that child health care is of the highest quality and that there will be more adherence to established guidelines for care and a lessened degree of physician autonomy in the practice of medicine.

THE CHANGING NEEDS OF PATIENTS

Divorce, separation, and remarriage have become common events in the lives of children. Of children born in the 1980s, 60% will live for a time with one parent. If the current trend continues, two thirds of American families in the 1990s will be either one-parent or reconstituted families. In our modern, mobile society, grandparents and other relatives are less available to provide support for young parents.

Mortality and morbidity from infectious diseases is declining. Currently, common problems of children are intentional and unintentional injuries; chronic disease; and developmental, behavioral, social, and educational disorders. Family crises and health-damaging behaviors are becoming more frequent child health problems. Pediatricians in practice care for children from a more diverse ethnic and cultural background than in the past. The incidences of teen pregnancy, sexually transmitted diseases, depression, and eating disorders are increasing. Advances in technology and enhanced medical knowledge have resulted in a decreased infant mortality rate. New populations of children with chronic diseases have evolved, including those with disorders such as bronchopulmonary dysplasia, retinopathy of prematurity, and partially corrected congenital heart disease. Children with congenital and inherited problems, such as spina bifida, cystic fibrosis, and sickle cell anemia, now live to be young adults.

THE PEDIATRICIAN AS A SPECIALIST

The pediatrician must continue to be recognized as the medical specialist best trained to deliver quality health care to infants, children, adolescents, and young adults. Current pediatric residency programs are structured so that a graduate pediatrician is capable of treating 80% to 90% of pediatric health-related disorders. The pediatrician’s continuing medical education focuses on the care of infants, children, adolescents, and young adults. Experience in the care of patients in this age group adds to the skills of the pediatrician. Finally, the pediatrician has a clearly defined role as a child advocate.

The general concept of a pediatric medical home providing comprehensive, continuous care for children becomes increasingly important for young, single-parent families and for the increasing number of children with chronic diseases. The practicing pediatrician can be expected to provide the following care to children:

1. Health supervision and preventive health care
2. Diagnosis and treatment of acute illnesses and injuries
3. Diagnosis and management of chronic illnesses and disabilities
4. Management of behavioral and developmental disorders
5. Hospital care of well newborns and those cared for in Level II nurseries
6. Stabilization of seriously or critically ill newborns and children before transfer to tertiary care centers
7. Hospital care of infants, children, and adolescents
8. Consultation to other health professionals
9. Consultation to community agencies and schools.

Most child health care is delivered in the ambulatory setting; however, the pediatrician will continue to play a significant role in the care of hospitalized children, including the care of newborns in Level I and Level II nurseries. Children with illnesses that do not require complex diagnostic and therapeutic technology will often be treated by their pediatrician in general hospital pediatric units. The pediatrician will also serve as a consultant for other physicians and health care professionals caring for pediatric patients. When pediatric patients require additional ancillary professional services, the pediatrician will serve as the coordinator referring the patients to various community resources. These include special education programs, family service agencies, marriage counselors, child care centers, including those for the developmentally delayed, recreational programs for retarded children, respite centers, parent education programs, and self-help groups. Payment for case coordination services based upon the RBRvS should provide increased compensation for the time spent by the pediatrician in diagnosing, treating, and coordinating the necessary services for children with complex disorders.

The scope of services provided by the pediatrician will continue to vary with geographic location. In rural communities with less than 50,000 people, where almost 20% of the nation’s children live, changes are occurring that will enhance the practice of pediatrics. The latest in medical technology, including portable computed tomography scanners, magnetic resonance imaging, and telephone-linked electrocardiograms, is becoming more accessible.

The sense of isolation will diminish as communication with subspecialists in tertiary care centers is facilitated by telephone, facsimile machine, and computer. In most locations, transport services are now readily available. Tertiary centers are developing outreach clinics to provide specialty consultation for the pediatrician.

Continuing education is available by means of telephone conferences, computer programs and communications, audiovisual material, and television. Continued growth of group practices in smaller communities will allow pediatricians more control of their lifestyles and time off to attend scientific meetings.

Financial reimbursement for rural pediatricians will continue to improve with the implementation of the RBRvS. In some states, financial incentives may be extended to physicians who locate in medically underserved rural areas. Pediatricians in rural areas will continue to provide more intensive and complex services, particularly emergency care, Level II neonatal care, and care for children with chronic illness. They will stabilize critically ill and injured children and arrange transfer to tertiary care centers. They will continue to perform procedures (e.g., lumbar punctures, thoracentesis, and phlebotomies) that are often performed by emergency department physicians, pediatric residents, or specialists in urban and suburban settings. There will also be more opportunities for pediatricians to serve as consultants to family physicians as well as to community agencies.

The major role of the pediatrician in the urban and suburban setting will continue to be the delivery of the highest quality coordinated, comprehensive, and continuous care. The availability of pediatric subspecialty services in urban areas may decrease physician referrals to urban pediatricians, but urban areas offer opportunities for pediatricians to consult on community child health projects. Urban pediatricians should continue to participate in the care of their patients who are hospitalized in university or tertiary care centers. Their role will be to coordinate care, especially when multiple consultants are required, and to assume responsibility for care during the convalescent period. Participation in the care of hospitalized children facilitates follow-up management, enabling the practicing pediatrician to structure family-centered, community-based care for his/her patients with chronic diseases and disabilities.

Some urban and suburban pediatricians will continue to teach in university or tertiary care hospitals. Such teaching will often occur in an ambulatory setting where the pediatrician will not only oversee the care provided by students and house staff, but will also serve as a role model for those who are considering pediatric practice as a career. Some will share attending responsibilities on the inpatient service. Rotation of house staff in physicians’ offices may also extend the learning experience of pediatric residents. The health problems, opportunities for health supervision, expectations of parents, and utilization of community resources differ significantly from those in most hospital-based programs.

Some pediatricians will be hospital-based in tertiary care centers and will provide general evaluation, diagnosis, and coordination of the care of children with complex and serious illnesses. Pediatric residency training should include comprehensive primary care for healthy children as well as those with complex diseases.
PEDIATRIC SUBSPECIALIST

Research has had a profound impact on pediatric practice, including pediatric subspecialization (see Table 5). In contrast to internists, pediatricians with subspecialty certification represent a small percentage of board-certified pediatricians.

Subspecialists will continue to supervise and be responsible for tertiary care and special procedures, such as cardiac catheterization and endoscopy. Because tertiary subspecialty services often require sophisticated equipment and skilled personnel, most single-system subspecialists, such as cardiologists, endocrinologists, and hematologists-oncologists, will be based in or be affiliated with a university hospital or tertiary care center. Subspecialty tertiary care for children with complex diseases also may be delivered in inpatient or ambulatory settings.

Unlike adults, a small percentage of children have chronic or complex diseases requiring subspecialty consultation or care. For that reason, subspecialty practice will be largely confined to major population centers. Regionalization of care is cost efficient and, with adequate referral and consultation, it should enhance access to tertiary care services for all children. On completion of the subspecialty evaluation, initial treatment, and establishment of a plan for ongoing care, the patient should be returned to his/her medical home for continuing care. Transfer of care can be facilitated by the timely exchange of information between the pediatrician and the pediatric subspecialist both before and after the consultation. Children with chronic or complex diseases may need to be seen periodically by the subspecialist for reevaluation and change in treatment protocol, but it is in the best interest of the child to receive ongoing health supervision from the pediatrician.

**TABLE 5.** Number of Certified Pediatric Subspecialists

<table>
<thead>
<tr>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>General pediatrics</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>43,867</td>
</tr>
<tr>
<td>Cardiology</td>
<td></td>
<td>397</td>
<td>547</td>
<td>775</td>
<td>884</td>
</tr>
<tr>
<td>Hematology/oncology</td>
<td></td>
<td>211</td>
<td>565</td>
<td>730</td>
<td>842</td>
</tr>
<tr>
<td>Nephrology</td>
<td></td>
<td>120</td>
<td>260</td>
<td>350</td>
<td>382</td>
</tr>
<tr>
<td>Neonatology/perinatology</td>
<td></td>
<td>355</td>
<td>835</td>
<td>1,619</td>
<td>2,208</td>
</tr>
<tr>
<td>Endocrinology</td>
<td></td>
<td>279</td>
<td>384</td>
<td>569</td>
<td></td>
</tr>
<tr>
<td>Pulmonology</td>
<td></td>
<td>270</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Critical care</td>
<td></td>
<td>182</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Includes all subspecialists ever certified; attrition is unknown.
Source: The American Board of Pediatrics, unpublished data.

Pediatric subspecialists have an important role to play in the advancement of medical knowledge. Time for both bench and clinical research studies must be protected as faculty face increasing pressures to generate income from patient care.

Subspecialists will also continue to educate medical students, residents, and fellows and will play an important role in the continuing education of pediatricians. The requirements of the Pediatric Residency Review Committee include subspecialty service rotations in inpatient and ambulatory settings. Presentations by pediatric subspecialists at grand rounds, local and regional programs, national scientific meetings, and CME courses are also important sources of new information for the practicing pediatrician.

NEONATOLOGY

Neonatology has unique subspecialty characteristics. Initially, most neonatologists delivered care in university hospitals or other tertiary care centers, and regionalization resulted in seriously ill newborns being transferred from Level I and Level II nurseries to tertiary care centers via highly developed transport systems. While regionalization still functions in this manner in many parts of the country, the recruitment of neonatologists for positions in Level II and occasionally Level I nurseries has reduced the frequency of transport in some areas. Some practicing pediatricians welcome neonatologists in Level I and Level II nurseries to attend high-risk deliveries and oversee the management of sick newborns. Hospital administrators and obstetricians are supportive of neonatologists directing the neonatal services. Many more seriously ill neonates are now being cared for in Level II nurseries; and, in some institutions, neonatologists provide all hospital care for neonates. In other settings, pediatricians continue to provide care for newborns without abnormalities and some seriously ill neonates in Level II nurseries. It is difficult to predict the future of the perinatal regionalization program. Tertiary neonatal centers will continue to play an important role in the care of seriously ill newborns even though an increasing number of moderately ill neonates will likely be cared for in Level II nurseries. It should be recognized that pediatricians are well trained to render care to infants in Level I and Level II nursery settings.

OTHER MULTISYSTEM SUBSPECIALTIES

Other multisystem subspecialties include adolescent medicine, sports medicine, and behavior and development. The multisystem subspecialist has a role to play in research, education, and delivery of
health care to patients defined by age, activity, or disease. These subspecialists may be located in university hospitals, in tertiary care centers, or in the community as providers of Level II or Level III care. Some will also provide Level I primary care to a large number of patients, whereas others will be involved principally in Level II and Level III care and will serve as consultants to pediatricians and other physicians. In the consultative role, the subspecialist should manage the initial problem and return the patient to the referring physician for ongoing care. The multisystem subspecialist may also be called upon to serve as a consultant to community-based programs.

Adolescent medicine is a relatively new subspecialty and is growing in importance in pediatrics. Until recently, there has been little attention given to unique adolescent problems that require special knowledge and understanding. Because of the importance of adolescent care in pediatrics, adolescent subspecialists in university settings have an important role to play in educating medical students, pediatric residents, and pediatricians in the care of adolescents and young adults. Some adolescent subspecialists also serve as primary care providers for a defined group of adolescent patients, whereas others assume the role of consultant, accepting only adolescent patients with complex disorders referred by other physicians or community agencies. As pediatricians assume more responsibility for the care of adolescents, the need for subspecialists in adolescent medicine will also increase to accommodate referrals of adolescents with complex problems.

LEVELS OF CARE

The term “primary care” should be differentiated from the term “level of care.” The essential nature of primary care services includes first contact, continuity, comprehensiveness, and coordination of needed services. Level of care describes intensity of treatment, the need for technological support, and specially trained support personnel. Pediatrics is a primary care specialty that encompasses all levels of care. Pediatricians are exceptionally well trained to render care at all levels and must not be designated as only Level I health care professionals. Level I care includes health supervision, detection of health problems, management of acute episodes of illness, laboratory testing, treatment of minor injuries, telephone advice, immunizations, and ongoing allergy immunotherapy and is usually delivered in an office or ambulatory setting. Health supervision visits, during which attention is given to child development and behavior, account for a large segment of this care. Well-functioning families usually require only Level I health supervision, whereas dysfunctional families often require more complex Level II or Level III care. Physician assistants, pediatric nurse practitioners, and other ancillary health personnel may play a role in providing Level I services under the supervision of pediatricians. As extenders and enhancers of pediatric services, they may provide support to new mothers, counseling for some behavioral disorders, developmental screening, telephone advice, and in some states, diagnosis and treatment of minor illnesses.

Although Level I care may be provided in alternate sites, such as community health clinics, child care centers, Head Start programs, Migrant Health Centers, shelters for the homeless, juvenile detention centers, and institutions for dependent or developmentally disabled children, this care should ideally be provided in the child’s medical home. In underserved areas, school-based health clinics have been established to provide Level I health care, screening, and health promotion. Episodic illnesses are treated in these clinics, and special attention is given to the prevention and early treatment of alcohol and drug abuse, risk-taking behaviors, emotional disorders, violence, sexually transmitted diseases, and pregnancy. Involvement by pediatricians is needed in these clinics to insure the highest quality of care.

Level II care includes care of children with complex, acute illnesses; chronic illnesses; long-term disabilities; learning disorders; developmental disabilities; behavioral disorders; and problems arising from dysfunctional family structure due to inadequate resources or inappropriate parent-child interaction.

Level III care is that provided for children with complex diseases. This type of care often requires a multidisciplinary team and high technology diagnostic treatment centers. Children who are critically ill require Level III care in intensive care units where constant observation by pediatric subspecialists and specially trained personnel can be provided. Others require this same level of care in ambulatory settings to provide ongoing evaluation and therapy for chronic diseases and complex diseases that are not immediately life threatening. Coordination of this segment of care with basic health maintenance should be done by the pediatrician. Stabilization of critically ill children before transfers and follow-up care after discharge from tertiary care centers is an example of Level III care provided by the pediatrician.

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SUMMARY

The pediatrician now and in the future should be recognized as the specialist specifically trained to provide comprehensive, coordinated health care to infants, children, adolescents, and young adults throughout growth and development. This care, which can be described as primary care, encompasses problems of Level I, II, and III complexity. Although the majority of the pediatrician’s practice time will be devoted to Level I and Level II services, the actual mix of a pediatrician’s practice will be influenced by practice location, individual training, competency, interest, and the financial structure of the pediatric practice. The pediatrician will work with multiprofessional teams to coordinate and supervise comprehensive family-centered care for the child with multiple handicaps. The pediatrician should provide consultation to other physicians and various community child care programs.

The trend toward group practice will continue. The increasing number of women in pediatrics and the desire of almost all physicians for a more balanced lifestyle will enhance group practice (part-time and shared). Pediatrics lends itself especially well to this type of care. Shared overhead and expenses will decrease costs and may allow for specialized care by individuals within the group—a development that will enhance the competency of the group as a whole and individual practice satisfaction.

To ensure access of sophisticated medical knowledge and technology to all children, the number of pediatric subspecialists will continue to increase. Because of continued emphasis on education and research, most subspecialists will be located in tertiary care teaching centers, although multisystem subspecialists may also work in primary care settings. Pediatric subspecialists should diagnose and treat patients with complex illnesses and, after developing an ongoing therapeutic plan, return them to their pediatricians for ongoing care. A significant portion of the subspecialist’s time should be spent in research. Enhanced networks of patient referral and regionalization of tertiary care should be encouraged to provide cost-effective care to the relatively small number of pediatric patients with complex diseases. New patterns of coordinated health care delivery for children should be considered.

Currently, there is a debate about whether or not we are training too many or too few pediatricians to meet the health needs of children in the United States. The following facts should be considered:

A. A large number of American children receive no health care. With better access to care, there will be an increased demand for practicing pediatricians.

B. The management of increasingly complex biomedical and psychosocial disorders by pediatricians requires extended professional time and knowledge.

C. An increasing number of adolescents will be seen by pediatricians.

D. Increased knowledge and technological support for diagnosis and treatment of complex pediatric diseases will require the services of pediatric subspecialists in addition to pediatricians providing primary care.

E. The increasing demand for a healthier lifestyle for both men and women will result in more realistic working hours for pediatricians.

Consideration of these factors leads to the conclusion that there will be a need for increasing numbers of pediatricians involved in pediatric care in the next decade.

Pediatricians and pediatric subspecialists have a common interest in the health and welfare of children. This should be the basis for further discussion by all pediatricians about child health needs and the type of delivery system that will provide quality health care to all children. Professional organizations interested in child health, such as the American Academy of Pediatrics and the pediatric research societies, should continue to monitor all issues related to children’s access to health care, the quality of care, and the practice of pediatrics. With such monitoring and evaluation, rational decisions can be made about the number of pediatricians and subspecialists needed to provide comprehensive, quality health care. Dialogue must continue between practicing pediatricians and the academic community to ensure the relevancy of pediatric training programs in preparing pediatricians to deliver high-quality care to all children. Ongoing evaluation and research will be needed to define the role of the pediatrician and pediatric subspecialist further in meeting the future health needs of children of this nation.

TASK FORCE ON THE FUTURE ROLE OF THE PEDIATRICIAN IN THE DELIVERY OF HEALTH CARE
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