

intensity of patching that was prescribed and not to the actual amount of patching that occurred. Additional work, however, is needed to determine whether these regimens can attain maximum improvement in visual acuity that is sustained when treatment is discontinued.

ON BEHALF OF THE PEDIATRIC EYE DISEASE
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Primary Care Pediatrics: 2004 and Beyond

Changes in medicine domestically and globally are transforming primary care in the United States. Many have suggested that primary care is in crisis or at least at a crossroads in the United States. The *Annals of Internal Medicine* recently devoted much of one issue to this topic.¹ Primary care for children and adolescents, however, was not addressed specifically. This article focuses on pediatrics and identifies potential roles and new models for primary care pediatrics. The Institute of Medicine has defined primary care as "the provision of integrated, accessible health care services by clinicians who are accountable for addressing a large majority of personal health care needs, developing a sustained partnership with patients, and practicing in the context of family and community."² Starfield³ has defined 4 attributes of primary care including first-contact care, longitudinality, comprehensiveness, and coordination. September 11, 2001, the anthrax scare, and emerging threats such as severe acute respiratory syndrome (SARS) have brought a new focus on the importance of individual-level contacts in addressing population-level threats. Before these world events, however, primary care pediatrics was already grappling with its identity and responding to significant changes in medical systems, science, and family needs. The pace and scope of these changes are such that primary care pediatricians of the future will not be performing the same role as today.

Historically, American medicine has tended to be reactive rather than proactive in defining its roles in society. However, dynamic change demands collective reflection; it is time to be proactive in assessing the needs of patients, exploring potential roles as health care providers, and developing the mechanisms to redefine the primary care pediatrician of the future.

HISTORICAL PERSPECTIVE

Projecting future trends requires reflection on the history of the profession of preventive pediatrics. In the 1800s, few physicians in the United States routinely treated children; mothers were responsible for treating pediatric illnesses at home. Influential phy-

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sicians sought to address the needs of this underserved population of children. Some credit social feminism and women physicians such as Elizabeth Blackwell, who established infant hospitals in the 1850s, and S. Josephine Baker, who on a wide scale implemented maternal education on health issues by nurses and established a network of infant welfare stations that included physical examinations and anticipatory guidance.⁴ Others recognize Nathan Straus, who in the late 1890s initiated a free-milk program and child-weighing stations seeking to combat mortality from diarrheal disease and monitor child health.⁵ Primary care pediatrics in the United States originated with a strong emphasis on prevention, public health, and advocacy. The advent of vaccines and toxoids in the 1930s and antimicrobials in the 1940s and 1950s expanded the role of primary care. Since then, the history and physical examination, a variety of other screening tests, and numerous immunizations have been added to the repertoire of the primary care pediatrician.

In the 1970s, psychosocial issues were termed the "new morbidity."⁶ Attention to these psychosocial issues affecting child and adolescent health have further expanded the role of pediatricians in prevention through screening and anticipatory guidance on behavioral issues. The American Academy of Pediatrics published "The Pediatrician and the 'New Morbidity'"⁷ in 1993 and "The New Morbidity Revisited: A Renewed Commitment to the Psychosocial Aspects of Pediatric Care"⁸ in 2001. Although this new morbidity is not particularly new, the breadth of pediatric primary care has broadened, with the provider increasingly called on to address an array of social problems during the 15-minute office visit. As the range of preventive roles has widened, pediatricians have become increasingly grounded in public health efforts and population-level goals, even as individual-level contacts have remained the central focus of health care delivery.

Evolution in the role of the primary care pediatrician has occurred in concert with the changing organization and financing of health services. Although current changes seem especially tumultuous and difficult to negotiate, it has been almost 2 decades since Green⁹ noted that organizational and funding changes, despite their regressive character, offered an opportunity to promote a "new prevention." That opportunity continues to exist.

INTERNATIONAL PERSPECTIVE

As with a historical perspective, understanding the role of primary care pediatricians in other countries can offer a broader view of pediatric primary care in the United States. In fact, the United States is among a minority of countries that utilize highly trained pediatricians as providers of first-contact care and well-child care.⁴ In Canada and Britain, primary care of children is largely provided by general practitioners and public health units, with pediatrician involvement concentrated in more complicated cases and hospital-based care. In many nonindustrialized countries, first-contact care typically is provided by public health workers, with

pediatricians providing specialized Western medical care in combination with traditional medical modalities.

The United States is unique also in integrating well care and acute care into the primary care system (although such integration is far more complete for affluent Americans than for the poor). The concept of the medical home led by a pediatrician that provides primary, secondary, and tertiary preventive care has been endorsed by the American Academy of Pediatrics.^{10,11} In many other countries, preventive services are offered by public health workers in a setting separate from those dedicated to illness care. The growth of pediatric nurse practitioners and other primary care providers may begin a trend in which US primary care pediatrics will become a "specialty" similar to international models.

Internationally, many view the United States as already having a specialty orientation with underdevelopment of a primary care health system.^{12,13} Although many look abroad when discussing models of health care financing and the appropriate balance between private and public sector involvement, Starfield reflects that "little of the debate centers on the value of the systems as reflected by indicators of health that are amenable by medical care."¹³ Starfield compared 10 Western industrialized nations on their extent of primary health service, health indicators (eg, infant mortality, life expectancy, and death rates), and satisfaction in relation to overall costs of the health system. Primary health services correlated with better health and public satisfaction in 9 of the 10 countries. In the cross-national comparison, the United States ranked low in the extent of primary health service, health indicators, and public satisfaction. Within the US, states with more primary care physicians had better health indicators.¹⁴ International, national, and individual patient studies have shown that continuity of relationships and primary care improve health.

CURRENT US PERSPECTIVE

In "Crossing the Quality Chasm: A New Health System for the 21st Century," the Institute of Medicine states that "the American health care delivery system is in need of fundamental change...the frustration levels of both patients and clinicians have probably never been higher."¹⁵ Whether this is a sober or alarmist assessment is debatable, but it highlights the need to create a vision for the future of primary care pediatrics. Such reflection begins with acknowledgment of a few clear trends. One is the rise of nonpediatrician providers. Currently, general pediatricians provide the bulk of primary health care to children. Data from the National Ambulatory Medical Care Survey show that >60% of office visits to primary care physicians are to general pediatricians, with remaining visits to family practitioners, general practitioners, or other providers,¹⁶ and this percentage has increased in the last 20 years.¹⁷ A growing number of pediatric nurse practitioners and other nonphysician providers has begun working alongside primary care pediatricians. There are ~10 000 pediatric nurse practitioners in the United States,¹⁸

with the majority involved in the delivery of primary care services. More than 60% of the 6700 members of the National Association of Pediatric Nurse Associates and Practitioners work in urban areas with populations of >100 000, increasing access for many poor, underserved families.¹⁹ Telephone pediatrics once provided by primary care pediatricians is increasingly provided by nurse call systems.

Many managed care plans initially were reluctant to use midlevel professionals such as pediatric nurse providers or child health associates (pediatric physician assistants) to provide pediatric primary care services because of a concern that these practitioners would be perceived as providing inferior care.²⁰ However, it has been shown that they can meet the majority of children's primary care needs as currently conceived, and it is likely that there will be an increasing reliance on midlevel providers.²¹⁻²⁴ Pediatricians Pizzo and Lovejoy have asserted that "... routine well child care and some aspects of acute care management in otherwise healthy children should be increasingly delivered by the nurse clinician and family practitioner who are working in collaboration with the pediatric generalist."²⁵

A second trend is the increasing bureaucratization of health care. It was hoped that managed care would promote the status of the primary care provider by allowing them to control the coordination and referral of patients. Instead, the role of the "gatekeeper" has become mired in paperwork and bureaucracy and viewed negatively by patients. The rise of managed care and capitation has challenged the productivity and financial management of outpatient pediatrics. Malpractice insurance costs have risen dramatically. Increasing numbers of primary care pediatricians are dissatisfied,²⁶ and some are opting out of managed care or out of medicine altogether because of increased stress and financial concerns. Some have predicted a tiering of providers with the rich using non-managed care providers and those unable to afford it staying in managed care.²⁷

A third trend on the inpatient side is the growth of hospitalist systems in pediatrics. In many locales, hospitalists have replaced primary care pediatricians on the general inpatient ward. In 1996 the term "hospitalist" was coined to describe physicians primarily dedicated to care of hospitalized patients.²⁸ Eight years later the movement has grown dramatically. Although it has been argued that the cost²⁹ and efficiency of inpatient care can be improved with full-time hospitalists without harmful effects on quality or patient satisfaction,²⁸ there are challenges to continuity of care, the doctor-patient relationship, financial reimbursement,^{30,31} and communication among multiple providers, institutions, and systems.

A fourth trend related to the hospitalist trend is growing specialization.³² The numbers of primary care pediatricians who regularly attend deliveries and are involved in the care of critically ill newborns are declining. With the rise of neonatology as a specialty, this role has diminished. Some pediatric specialists have been performing primary care services or have defined specialty areas that were previously in the domain of primary care (eg, neonatology, ad-

olescent medicine, and developmental-behavioral pediatrics). Faced with a growing list of primary care needs (eg, new morbidities), some primary care pediatricians perceive less time to handle complicated medical issues and to interface with subspecialists. Growing financial pressures have sometimes pitted generalists and specialists against each other despite a shared goal of quality child health.

PRESENT AND FUTURE NICHES FOR PRIMARY CARE PEDIATRICS

Challenges to primary care pediatrics are many. However, amid challenges and crises there are opportunities. What are the core values of the primary care pediatrician, and are they salient today? What is the niche for the primary care pediatrician of the future? Some present and future niches may include the following.

The Pediatrician as Continuity Provider

A central tenet of primary care is the long-term, trusting relationship between patient and provider. Americans want this continuity. In a survey of patients, 94% valued having a primary care physician who knew all their medical problems; most wanted initial care for common problems to come from their primary physician.³³ Another study found that 92% of US patients valued continuity with a doctor, compared with 71% of patients from the United Kingdom.³⁴ Unfortunately, there is much evidence that the quality of primary care relationships has eroded over the years.^{35,36}

Considerable research demonstrates that characteristics of primary care are linked to health outcomes. Patient trust in the physician and physician knowledge of the patient increase the likelihood of patient adherence to a physician's advice and are correlated with satisfaction and improved health status.³⁷ A continuous relationship with a primary care health provider has been linked to a wide range of positive outcomes: higher trust between patient and physician,³⁴ improved chronic disease management,³⁸ fewer hospitalizations and emergency department visits,^{39,40} healthy behaviors,⁴¹ and fewer lawsuits.⁴²⁻⁴⁴ In pediatrics, continuity has been associated with timely immunization,⁴⁵ parent report of higher quality of care,⁴⁶ and better care coordination.⁴⁷

Primary care pediatricians of the future will continue to carry the banner of continuity, although the sites and methods of contact may change. With the rise of hospitalist systems, disruption in continuity during hospitalization will be a challenge. Primary care providers will need to adopt new mechanisms to enhance communication among care team members and families (ie, information technology communication systems), advocate for systems and reimbursement for the integrating role, and embrace opportunities for additional integration of health services in the community.

The Pediatrician as Genomic Interpreter

Recent unprecedented advances in genetics, including the sequencing of the entire human genome,

are having a profound impact on our understanding of disease and the function of the medical system. In the book *Genetic Medicine*,⁴⁸ Childs emphasizes that genetics is not simply a subspecialty of pediatrics like organ system subspecialties (eg, cardiology, pulmonology, and nephrology) but is the biological basis of our species and a starting point for understanding disease and health. He predicts that, as the list of human genes and mutants expands, prevention and family-centered care will attain a position of primacy in medical thinking, led by primary care providers. Because genetic patterns are likely to be assessed in utero or soon after birth, pediatricians may be central players in assisting families in genomic interpretation and disease prevention.

Incorporating genetics into primary care involves a shift of paradigm in medical thinking. It is not simply the “dermatologic approach” of matching physical characteristics to syndromes in a book or diagnosing disease through identification of a gene mutation. It involves thinking about the genetic makeup of each individual in every encounter to develop differential diagnoses for disease or for preventive counseling. In this scenario, child health providers will need to incorporate a new approach to primary care, with emphasis on certain skills, and also will need to be reeducated and updated on new knowledge in genetics. Some skills requiring emphasis include interviewing and communication skills, risk assessment, behavior and environmental change to moderate expression of a genetic predisposition, and ethics. The genomic revolution will also introduce new diagnoses and prognoses, new tests, new therapies, even possible individualized drug regimens based on a person’s genetic makeup. The primary care provider will be on the front line answering questions and introducing some of these new developments. Mechanisms to update primary care providers efficiently and effectively on new knowledge and its application to practice need to be developed. It is unlikely that geneticists can define the educational goals and the new role of primary care physicians as genomic interpreters. Primary care providers must lead this paradigm shift and define the knowledge and skills needed to address genetic medicine.

The Pediatrician as New Morbidity Manager and Community Collaborator

Although genetics helps to identify children that are biologically at risk, new morbidities direct us to identify and intervene with children who are environmentally at risk in the psychosocial or physical environment. Preventive genomics may place greater emphasis on the need to address risks that allow gene expression, including health behavior and social inequality. Reviewing mortality of children and adolescents in the United States, causes related to injury, mental health, and other psychosocial issues are at the top of the list. Healthy People 2010, the nation’s health promotion and disease prevention objectives for the coming decade, stressed the need to address these new morbidities proac-

tively, with primary care access and primary care providers playing a central role.⁴⁹

Addressing child health needs in the context of the family and community clearly requires continual assessment of needs from the perspective of the families and communities served. Effectively addressing barriers to care and new morbidities requires multidisciplinary approaches that go beyond the pediatric office but address child health in the context of family and community and integrate with schools, child care centers, community centers, and other sites. Kalishman⁵⁰ has suggested that thinking about well-child care should shift to well-children care, moving the focus from single children in a family to groups of children in a community. This shift requires a commitment to develop interdisciplinary processes and communication infrastructure to support an expanded collaborative model of health care. Developing systems of care beyond the pediatrician’s office with real integration of health, education, and social services is essential to address the health and well being of children, adolescents, and families.

The Pediatrician as Public Health Coordinator

Historically and today, pediatricians have been implementers of public health efforts. Primary care pediatricians have a long history of involvement in public health and population-based approaches to health in areas of immunization and screening. The events of September 11, 2001, the anthrax scare, and emerging threats such as sudden acute respiratory syndrome have brought a new focus on the importance of this role. Although the legacy and impact of September 11th on health systems is yet to be determined, primary care providers were thrust into the role of “public health coordinator” and played an important role in the public health aftermath. As first-contact providers, primary care pediatricians were the front line for questions about smallpox vaccine, need for ciprofloxacin prophylaxis, and how to talk to children about terrorism and war. With globalization, new infectious diseases, environmental health threats, and other emerging threats to public health, a strong primary care system to support public health efforts is more important than ever.

The Pediatrician as Web Interpreter and Consultant

Patients of the future will be increasingly Web savvy. Growing up in the virtual era may result in increased self-care and “virtual doctors.” Some have even suggested that physicians in the future will have a diminished role as patients seek less in-person medical advice and self-diagnose and manage problems with the aid of accessible information sources or telemedicine.^{51,52} New information technology is likely to affect not only the mechanism of communication but also the content and quality of discussion between the doctor and patient.⁵³

Computer technology has influenced the practice of medicine in the method and rapidity with which information is accessed and has changed communication among physicians, patients, and other team members. In addition, technologic advances have provided opportunities for distance education and

support for patients in remote and underserved areas. The media and Internet have generated an explosion of information and misinformation available to physicians and their patients. The education of primary care clinicians must include training in the informatics of health care, privacy and regulatory issues in exchange of information, and the potential promise and problems inherent in technologic change. Clinicians must acquire skills on how to access, assess, and use medical information. In addition, physicians must keep up with vast amounts of information and have the communication skills to help families make health decisions.

The Pediatrician as Head of Household in the Medical Home or Team Player

Multidisciplinary teamwork in caring for children and adolescents is likely to grow in the future. This team may include generalist clinicians, subspecialists, nurses, nurse practitioners, physician assistants, nutritionists, social workers, mental health providers, physical therapists, occupational therapists, speech therapists, developmentalists, and other child health professionals. The contribution of interdisciplinary care allows more comprehensive and holistic health delivery. The Institute of Medicine reports that a major challenge in transitioning the health care system is preparing the workforce to acquire new skills and adopting new ways of relating to patients and to each other.¹⁵

Although the primary care pediatrician may be the "orchestrator" of an interdisciplinary team as suggested by the American Academy of Pediatrics,⁵⁴ the role of the pediatrician may evolve to be one of many "team players." For example, with the growing popularity of complementary and alternative medicine, the pediatrician may not be the "medical" provider of choice. Primary care physicians may be one health advisor among other equally valued health advisors from other paradigms. As discussed above, the team is likely to expand not only to other health disciplines but to include collaboration and partnership with providers of human services and education. Redefinition of roles and innovation in team models and teamwork are important to address family health needs.

The Pediatrician as Chronic Care Coordinators

As chronic conditions have come to affect a larger proportion of the population, primary care pediatricians have taken on a larger role in coordinating care for patients with chronic disease. Although primary care pediatricians have and will continue to manage the more common chronic illnesses of high frequency (recurrent otitis media, eczema, asthma, attention-deficit/hyperactivity disorder), pediatricians also will coordinate care for more complex and rare chronic illnesses. In pediatrics, the growing number of survivors of previously fatal diseases requires coordination with other health professionals, schools, rehabilitation facilities, and community organizations.

The role of chronic care coordinator requires knowledge and skill in the management of specific conditions and an approach to coordinated, compre-

hensive care. An American Academy of Pediatrics statement, "Care Coordination: Integrating Health and Related Systems of Care for Children With Special Health Care Needs," discusses 4 goals of care coordination: 1) gain access to and integrate services and resources; 2) link service systems with the family; 3) avoid duplication and unnecessary cost; and 4) advocate for improved individual outcomes.⁵⁵ This coordination must occur in multiple settings with multidisciplinary staff. Primary care practitioners must be skilled in accessing community resources, advocating for the patient in the multiple systems, helping families face transitions (eg, from hospital to home, home to school, school to career, and pediatrician to internist), addressing family health issues, managing multiple interrelated medical issues, communication and collaboration with subspecialists and family members, and enhancing child development. Primary care pediatricians will need to keep up with new treatments for diseases and new models of comprehensive care.

The Pediatrician as Hospitalist or Hospital Consultant

The US health care system is among a minority of nations with highly specialized physicians (pediatricians) providing well care. In many other countries, pediatricians are consultants for illness care and provide hospital care. In the United States, however, many primary care pediatricians are no longer in the business of providing hospital care, especially with the growth of the hospitalist movement. It is acknowledged also that using hospitalists may result in more discontinuity of care, and there are concerns that hospitalist systems may create "a larger gulf between primary care physicians and in-hospital physicians."⁵⁶ The challenge will be to bridge this gulf and preserve the core values of primary care practice across inpatient and outpatient settings. A proposed option is the establishment and reimbursement of hospital-based "continuity visits" by outpatient primary care physicians.⁵⁷ Additional research on the impact of hospitalists and (dis)continuity on patient outcomes is needed.

The Pediatrician as Health Care Quality and Systems Researchers and Scholars

As future roles evolve, study of health care quality and systems and their impact on patient outcomes is critical. The development of a diverse and highly trained workforce of primary care and health services research scientists is essential to evaluate and improve the quality of care. The Boyer and Glasick⁵⁸⁻⁶⁰ areas of scholarship (scholarship of discovery, scholarship of integration, scholarship of application, and scholarship of teaching) are an appropriate framework for the types of scholarship needed to further primary care. Discovery of new knowledge has been the research standard. Scholarship of integration studies connections between discoveries from different approaches or disciplines and develops new models of care. Scholarship of application bridges theory and practice to test the feasibility and effectiveness of these approaches and models. Translational research that integrates knowl-

edge and discoveries from bench to bedside and to communities is needed, including study of methods to enhance this translation in practice. Finally, the importance of the scholarship of teaching cannot be underestimated. This scholarship encompasses communication and dissemination of new knowledge to students, patients, and the community.

ADVOCATING FOR NEW ROLES FOR PRIMARY CARE PEDIATRICIANS

The Future of Pediatric Education II (FOPE II)⁶¹ report discussed future roles of the pediatrician, and this article expands on some of these. FOPE II delineated a model of inputs that defines roles for pediatricians of the future. The 3 inputs included: 1) child and adolescent health needs in the context of the family and community; 2) changes in the health care system organization and financing; and 3) advances in biomedical and psychosocial sciences.⁶² As child health advocates, the central role of primary care pediatricians is to address the first input: child and adolescent health needs in the context of the family and community. Primary care core values include quality care, continuity of care, and comprehensive and coordinated care in a medical home. Primary care pediatricians must continue to promote these values as new systems of care are proposed and evolve. Characteristics of present and future primary care are presented in Table 1.

Advocating for new roles in primary care requires a concerted approach. In business terms the product must be redefined, a market niche must be developed, and the product must be marketed to consumers. In pediatrics, patient and community responsiveness guarantee a market niche. Increasing public awareness about the importance of primary care and the expanded roles of providers are an important advocacy strategy. For instance, studies have found that parents often do not bring up psychosocial concerns, because they do not believe it is in the purview of the primary care pediatrician or they do not believe that providers are interested.⁶³ Changing parent expectations of the role of the pediatrician may allow pediatricians to market and deliver our product more effectively and improve health outcomes. The roles described above are not meant to be exhaustive but are to stimulate thought and action.

As new roles evolve, educational programs to prepare current and future pediatricians must be developed to incorporate new roles into training. Education on the implementation of effective screening and risk-assessment mechanisms, brief behavioral interventions, genetic counseling, and system approaches is essential. Studies predicting pediatrician counsel-

ing behavior using a social cognitive theory construct have suggested that physician self-efficacy or comfort in counseling and their outcome expectation (feeling that their efforts may make a difference) were most important in predicting their behavior.⁶⁴ Knowing and responding to learners' needs are not new concepts but will be even more important in an environment of expanding information and discovery. Educators will need to define core content in training and emphasize techniques on accessing evidence-based information for life-long learning. Just as translational research from bench to bedside is important, education must be translational in integrating concepts spanning from the genes, to organs, to persons, to communities.

Today, in nearly every issue of a pediatric journal articles conclude that the primary care provider should address or do more to address a neglected medical or psychosocial issue of significance. Primary care practitioners are increasingly asked to see more patients and screen for and intervene on a long list of biological and social ills. Morrison and Smith have termed this "hamster health care," in which providers are on a treadmill working faster just to stay in place.⁶⁵ With limited time and increasing financial pressures, new models are needed to effectively address the critical issues facing children and families. New models must enhance practice and extend the reach of primary care into the community integrated with other education and human service systems. Enhancing practice may include brief interventions of proven effectiveness implemented by pediatricians or their staff (eg, Reach Out and Read Program), expanded methods of delivering care (eg, group well-child care,⁵² day care⁶⁶), or increasing the comprehensiveness of services (eg, Healthy Steps developmental services,⁶⁷ legal advocacy programs). Support is needed for the developing, testing, and implementation of community models such as school-based health centers for physical and mental health, home visitation programs, case management programs for children with special health needs, or other initiatives integrating multiple services and disciplines. Organizations dedicated to the welfare of children, adolescents, and families must envision future needs and collaboratively develop the policies, programs, and infrastructure to address these needs.

More than a decade ago, in "Primary Care: The Future for Pediatric Education,"⁶⁸ Alpert concluded that "pediatricians face many problems. In developing solutions, the profession must never lose sight of the fact that pediatrics is a helping and caring discipline. Being an advocate for the poor, for children and their communities is a large job. But the chal-

TABLE 1. Characteristics of Primary Care Now and in the Future

	Current	Future
Who	Primarily doctors and nurse practitioners	Interdisciplinary teams
What	Individual patient oriented Organ based	Individual patient and public health oriented Integration of genes to organs to persons to communities
When	Child health maintenance and acute care	Child health maintenance, acute care, visits with other team members, group visits, other sites
Where	Office focused	Community based and community integrated
How	Continuity through visits and phone	Continuity through visits, phone, and other information technology

lence is real, and pediatricians have little time to be timid." Although written in this journal in 1990, the values and sentiment endure today and must accompany pediatrics into the future.

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Understanding Toilet Training Difficulties

Toileting skills are acquired through 2 simultaneous, reciprocal processes: toilet training (what parents do to help their child toward socially appropriate, self-sufficient toileting) and toilet learning (what a child thinks and does while learning the mores of elimination behavior, how to recognize sensory signals, how to choose whether to void, and how to control anal and urethral sphincters in implementing that choice). This learning process

can be derailed, resulting in functional disorders of elimination.

In this issue of *Pediatrics*, Schonwald et al¹ infer that toilet training difficulties are associated with difficult temperament traits. Although constipation was more prevalent in their patients than in their normal control group, constipation nevertheless affected 55% of the latter. This result begged the question: Does constipation also contribute to toilet training difficulties, or is it a secondary epiphenomenon? In this month's *Pediatrics Electronic Pages*, Blum et al² confirm that constipation is contributory to the type of difficulty referred to as stool toileting refusal rather than a result of it.

Although constipation is an important element in the pathogenesis of stool toileting refusal, not every young child with painful defecation becomes averse to the toilet, and not every child who is averse to the toilet has experienced painful defecation.³ Other factors such as anxiety may interfere with toilet learning.⁴ Its sources may include fear of anticipated pain, conflict with parents around toileting, and emotional traumas.⁵ Toileting anxiety may cause pelvic floor dyssynergia,^{6,7} which impedes relaxation of the pelvic floor necessary for efficient voiding of stool and/or urine.

Another factor predisposing a child to toileting anxiety is the animism of early childhood.^{8,9} Piaget¹⁰ discovered that young children believe that inanimate objects (eg, formed stools) are alive and willful. If a 2½-year-old has never experienced anal pain or fear related to defecation, the child and his or her bowel movements “get along”; the child doesn't feel threatened, and toilet learning is easy. By contrast, if that child passes a hard stool that causes an otherwise insignificant anal fissure, he or she suddenly feels unexpected pain in a part of the body that cannot be seen during a bodily function that is not felt to be entirely under his or her control. From the child's point of view, “poo-poops” can be nice or scary. This animistic fear may make a child unwilling to try a new way of defecating, who will instead promptly request diapers so that he or she can stool in a way that is familiar rather than having to attempt something new. An empathic appreciation of the child's way of thinking is important, because only the child can feel the urge to stool and effect defecation: no one else can do it for him or her.

Parents need to understand that toilet training differs from training in most other areas of behavior, because they cannot oblige their child to perform bodily functions their way.

Voiding and eating are bodily functions that are controlled by the child. If frustrated parents' demands are met with their child's mounting stubbornness, the chances of getting the child to cooperate diminish, and the possibility for abuse increases. Therefore, leadership by the parent or clinician (whether it's applied during normal toilet training or during management of toileting difficulties) is probably most effective if it is noncoercive and based on an appreciation of the child's feelings and cognitive level. We cannot cure functional disorders of elimination; only the child can do that. Our task is to

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