CHILD DEVELOPMENT AND PEDIATRICS FOR THE 21ST CENTURY: THE HEALTHY STEPS APPROACH

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A Healthy Steps Specialist from a pediatrician's office, making a routine 6-week phone call to a new mother, finds the mother of two frustrated and showing signs of distress. The mother has tried everything and yet can neither calm her toddler nor stop her 6-week-old baby from crying. The Healthy Steps Specialist senses that the mother is at her wit's end and very anxious. The Specialist offers immediate help and support. While still on the phone, she tells the mother to put the infant in the crib and to put the toddler in his room, with toys, and to close the door to the toddler's room so that both children are safe. The Specialist helps the mother calm down with breathing exercises, then begins to talk with her. The mother reveals that she had been on antianxiety medication prior to the birth of her baby, and that she feels isolated because she has to take care of two crying children all day by herself. The Healthy Steps Specialist suggests ways for the mother to discuss these feelings with her husband, encourages her to speak with her doctor about resuming the medication, and suggests parent groups that the mother could join. The Specialist shares ideas with the mother about consoling her baby and offers strategies for setting limits with the toddler.

At the 2-month office visit, the mother and babies are doing well. The mother has successfully created strategies with her husband, and he will take over some of the care of the two children and help more with household tasks. She also has spoken with her physician about the possibility of resuming her antianxiety medication and has been using strategies that the Healthy Steps Specialist taught her to manage her anxiety issues and to feel more competent in her daily child rearing.*

At the birth of a new baby, the infant and family are in such a dynamic state of flux that parents are receptive to professional information, guidance, and

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*M. Yellowitz and P. Garza, personal communication with Healthy Steps Specialist, 1998.

services to help cope with the demands of parenthood. Traditionally, the health system is the first institution that parents encounter with their newborn, and over the course of the child's first years, the pediatric clinician is often the only professional who has consistent and frequent contact with the family. The American Academy of Pediatrics recommends 10 visits before the age of three,¹ and in the context of an ongoing relationship, pediatric clinicians are ideally poised to provide information and guidance on child rearing and family well-being—the kind of information that the mother discussed above seriously needed.

Traditionally, too, information from the pediatrician has been designed to deal with a limited view of child health, focusing largely on accident prevention and general health issues. However, as we approach the 21st century, a convergence of four forces will mandate that pediatric clinicians adopt a broader view about how to support families and young children, especially including more support and advice about promoting children's development and behavior. These forces include a changing world, financial strains, new morbidities, and the importance of early experiences.

Families are raising children in a changing world. Successful parenting takes time: time to get to know the child, time to learn and understand signals, time to respond, and time to master the parenting role and feel confident in it. Yet, pressures on both parents to work mean that infants and toddlers have less time with their parents. Over half (56%) of mothers with children under 3 years are in the paid workforce, and 57% of all parents would like to spend more time with their young children.²

Beyond basic tasks and the time necessary to care for and rear young children, parents often are insecure and troubled about raising their children and helping them to grow up in a world that little resembles the world of their own childhood. Should they raise a child who is focused on making friends, or would it be more advantageous to raise a child who is fiercely competitive? Should they foster their child's cognitive development, or is emotional development more important?

Many young children live in poverty or in families struggling to provide the basics. One in four children under 3 years is living in poverty,* a higher percentage than for any other age group. The links between poverty and child health and development are profound; these children find themselves in "double jeopardy." They encounter manifold risks in their lives, such as medical illnesses, family

*According to the *March 1996 Current Population Survey*, US Bureau of the Census, compiled by the National Center for Children in Poverty.

stress, parental depression, and inadequate social support. More serious consequences arise from these risks for children in poverty than for children from higher socioeconomic levels. This double jeopardy of increased exposure and more-serious consequences lays the groundwork for children living in poverty to have an increased likelihood of developmental delays and subsequent problems in school.³

Budgets also are particularly tight for low-income and moderate-income families who are working to make ends meet. Nearly one-quarter of young children in families with incomes between \$20,000 and \$40,000 have parents who have difficulty paying for their young child's medical expenses and basic needs. Parents report problems paying for basic items such as formula, food, diapers, clothes, and shoes (Figure).

New morbidities threaten child health and development. The development of new immunizations and effective treatments for many childhood disorders has decreased selective causes of childhood morbidity and mortality. This change means that parental health (health behaviors, as well as parental mental and reproductive health issues) will become relatively more common as causes of children's health and development problems. For example, parental cigarette smoke is associated with respiratory, learning, and behavior problems in children.⁴ Unintended pregnancies can be associated with child abuse and behavior problems.

FIGURE Difficulty in paying for basics, by family income. Source: *The Commonwealth Fund Survey of Parents with Young Children*. Princeton Survey Research Associates/DataStat, Inc., 1996.

Parental mental health problems, especially depression, are associated with a myriad of child behavior and learning problems and childhood injuries. In a 1996 national survey of mothers and fathers with children under 3 years, 9% of mothers and 4% of fathers reported experiencing three to five depressive symptoms (e.g., feeling depressed, sad, or not finding life enjoyable) at least some of the time during the week prior to the survey.² Those parents who experienced these depressive symptoms were less likely to be able to cope with the demands of child rearing than were parents who reported no depressive symptoms. Parents were significantly more likely to be frustrated with their child's behavior or to yell at their child and were less likely to engage in positive child-rearing behaviors such as reading, singing, playing, cuddling, and establishing daily routines (Table I).

Advances in neuroscience document the importance of a child's early experiences. Unlike other organs, such as the heart, the brain is not fully developed at birth. While researchers still agree that children are born with a certain genetic makeup, they now believe that there is much more plasticity in the child's developing brain than was previously recognized.^{5,6} Positron emission tomography scans and magnetic resonance imaging studies and counting synaptic density show that, in humans, the full complement of neurons is formed before the third trimester of pregnancy, but the connections or synapses among these neurons occur largely after birth. The structure or architecture of the adult brain to a significant degree is shaped by the young child's environment and early experiences—both positive and negative. The excessive synaptogenesis and later "pruning" processes that occur in a child's developing brain are socially constructed to a large degree in these early years.

TABLE I Depressive Symptoms and Daily Child Rearing*

Practice	No Depressive Symptoms in Past Week, %	More than Three Depressive Symptoms in Past Week, %
Frustrated more than two times	21	44
Yell sometimes/often	34	51
Read to child	43	27
Sing or play music	61	54
Play	87	72
Hug and cuddle	90	80
Daily routines (naps, meals, bedtime)	58	31

*From *The Commonwealth Fund Survey of Parents with Young Children*.²

The quality of the everyday interactions of parents—talking, cuddling, reading, singing, smiling, and being responsive to the infant—actually shapes the wiring or the intricate circuitry of the child's developing brain.⁵ These experiences to a large measure influence a child's future abilities and character, yet many parents do not understand fully how their daily interactions with babies and toddlers affect child development and learning. Many parents erroneously believe that the more stimulation a baby receives, the better off the baby will be, and the more caregivers a baby has, the better that child will be at adapting and coping with change.⁷

WHAT PARENTS WANT FROM THEIR CHILD'S PEDIATRIC CLINICIAN

Since the mid-1960s, reports from pediatricians' offices indicated that almost half of all mothers were more concerned about child development and behavior than other medical issues.⁸ By the 1980s, parenting issues were often parents' primary concern in pediatric practices. One study reported that psychosocial issues comprised 81% of the questions parents had for pediatric clinicians.⁹ Another study reported that, for 70% of the mothers, child behavior or parenting questions were their primary concern.¹⁰

Yet, studies indicate that, while parents are full of questions, opportunities are being missed to address these concerns. Only 28% of mothers report having discussed their concerns with their child's pediatrician, and in 60% of the routine well-child visits, the physician ignored the concern or provided no information or guidance.¹⁰ It has been reported that pediatricians frequently spend less than 1½ minutes on anticipatory guidance during a routine visit with a young child.¹¹

Parents are interested in child development and parenting information. The *Commonwealth Fund Survey of Parents with Young Children*, conducted in 1996, provides the most up-to-date information about the child-rearing concerns of mothers and fathers and the types of information and services they receive or would like to receive from a child's pediatric practice/physician.^{2,12} The survey is based on 25-minute in-depth structured telephone interviews with a representative sample of 2,017 parents with children younger than 3 years.

According to the survey, while parents use multiple sources, including books, magazines, television, and parenting classes, for information on child rearing, a majority of parents with infants and toddlers still desire expert information and guidance on common areas of child-rearing issues—newborn care, sleep patterns, response to a crying baby, discipline, and encouragement of children's learning. Nearly four of five parents (79%) state they could use more information in one area, and over half (53%) say they could use help in at least three areas. Surpris-

ingly, parents were most interested in information on how to encourage their young child to learn, with over half of the parents requesting help in this area. Four of 10 parents stated that they could use more information on how to discipline their child and how to toilet train their child (Table II).

While nearly two-thirds of parents who were surveyed talked with their child's doctor or nurse about newborn care, few parents actually discussed other common child-rearing concerns. Fewer than one-quarter of parents actually talked with the pediatric clinician about how to help their child learn or how to discipline their child, and fewer than one-third talked with their child's clinician about toilet training. In sum, the two topics—early learning and discipline—that parents most desire information about were the topics least likely to be addressed in the context of a pediatric visit. As pediatric clinicians approach the 21st century, now may be the time to reconfigure the agenda for routine health maintenance to address better the new priority concerns of mothers and fathers.¹²

Parents also reported that, if their child's pediatric clinician discussed child-rearing concerns with them, it could affect parental behavior positively. When the clinician encouraged the mother to breast-feed, she was more likely to do so than if she did not receive encouragement (74% vs. 45%, $P < .001$). Likewise, when the clinician discussed how to encourage early learning, parents were more likely to read to their child on a daily basis than those parents who did not have the opportunity to discuss learning (47% vs. 37%, $P < .001$). The authority and voice of pediatric clinicians still has clout with parents, and the trustful encouragement and advice of pediatric clinicians seems to leave its mark on parents' behavior. So, too, the silence presents a missed opportunity to help families with young children.

TABLE II Common Child-Rearing Concerns*

Topic	Parents Who Want More Specific Information, %	Parents Who Have Discussed with Health Professional, %
Newborn care	19	62
Crying	23	35
Sleep patterns	30	41
Toilet training	41	29
How to discipline	42	23
How to encourage learning	54	23

*From *The Commonwealth Fund Survey of Parents with Young Children*.²

Parents value enhanced pediatric services. As reported by parents in the Commonwealth Fund survey, nearly all infants and toddlers (88%) had a regular source of health care, and more than three of four (76%) young children were reported to be in excellent health. Two-thirds of parents felt that their child's regular physician did an excellent job of providing overall pediatric care, listening carefully, and answering questions. However, mothers and fathers were less satisfied about other aspects of their child's pediatric care. Only slightly more than half of parents felt that the physician provided guidance on how to care for their child, helped them understand their child's growth and development, and was easily accessible by telephone (Table III).

The survey findings revealed that enhanced pediatric services, such as home visits, developmental assessments, a child development telephone information line, and records to chronicle the child's health and development were valued by a large majority of parents. Yet, most parents are not receiving these services. For example, despite short hospital stays after the birth of a baby, only one in five mothers received a home visit in the newborn period, and only a third of parents had access to a telephone information line to answer their child-rearing questions. Yet, two-thirds of parents who received a home visit found it very useful, and over four in five parents reported having access to a child development telephone line was very useful (Table IV).

The survey also revealed that parents who received these enhanced services reported significantly higher levels of satisfaction with their child's pediatric clinician. When parents received three or more of these services, compared to parents who received none of them, they were more likely to rate their child's pediatric clinicians as excellent in providing good health care, child development guidance, and help in understanding how their child was growing and developing (Table V).

The majority of parents who did not receive enhanced pediatric services also

TABLE III Parents' Satisfaction with Child's Pediatric Clinician*

Parent Rating for	Excellent, %	Good, %	Fair/Poor, %
Providing good overall pediatric care	69	28	3
Listening carefully to questions	66	29	5
Helping understand child's growth and development	58	35	6
How to care for the child	56	37	5
Reaching child's physicians by telephone	54	32	12

*From *The Commonwealth Fund Survey of Parents with Young Children*.²

TABLE IV Enhanced Pediatric Services*

Service	Parents Received Services, %	Parents Found Services Very Useful, %
Packet of information on newborn	89	54
Booklet to track health status	66	83
Checkup reminder system	42	85
Telephone advice line	32	87
Home visit	20	67

*From *The Commonwealth Fund Survey of Parents with Young Children*.²

believed that such services would have been helpful. More than half stated that they felt the following additional pediatric services would be very useful: a packet of information on newborn care (73%), a home visit by a nurse (67%), a special telephone advice line (87%), a reminder service (85%), and a booklet to keep track of their child's health information (83%).² Regardless of whether parents received the aforementioned services, nearly two-thirds (62%) of all parents reported that they would be willing to pay a modest monthly fee for the opportunity to receive all of these services and this kind of child development information from their child's pediatric clinician.

According to the Commonwealth Fund survey, parents clearly are interested in receiving enhanced pediatric services. In sum, parents are eager for guidance and seek information; health providers who offer parents information and support can make a positive difference; and parents are more satisfied with health providers who offer supportive services.

THE HEALTHY STEPS APPROACH: MEETING PARENTS' NEEDS

"Babies definitely bring stress to the family," says a Healthy Steps physician, "but Healthy Steps is bringing back joy into parenting. I know the families in Healthy Steps not only tolerate the difficult early stages of adjusting to parenthood, but also are actually enjoying

TABLE V Pediatric Care Professionals Rated "Excellent" by Parents*

	No Special Services Received, %	Three or More Special Services Received, %
Provided good health care	49	71
Helped understand child's growth	42	63
Provided guidance	35	61

*From *The Commonwealth Fund Survey of Parents with Young Children*.²

them. This means that parents are better adjusted, the children are happier and stress has been reduced.”*

Responding to both the circumstances facing families today and the survey findings, which suggest the strong need for a new breed of pediatrics as we approach the 21st century, is the Healthy Steps for Young Children Program. The Healthy Steps program was initiated in late 1994 by the Commonwealth Fund in partnership with some 60 foundations and health providers. The program is cosponsored by the American Academy of Pediatrics and is currently operating in 24 pediatric and family practices across the country.

Healthy Steps is an innovative approach to pediatric primary care for families with infants and toddlers. It aims to enhance a pediatric practice’s ability to meet the desires of mothers and fathers for information and to help provide pediatric clinicians with additional tools to improve the health and well-being of young children. The program is based on three premises:

1. Promoting the physical, emotional, and intellectual development of young children from birth to age 3.
2. Promoting the knowledge, skills, and confidence of parents in their child-rearing abilities.
3. Expanding the clinical capacity and effectiveness of pediatric primary care to meet the needs of families with young children.

These premises emphasize a two-generation approach to pediatric care and appreciate that many of the issues that infants and toddlers face are strongly intertwined with parental issues and behaviors. Healthy Steps aims to implement the *Bright Futures* health supervision guidelines for infants and toddlers and is based on seven key components that, as a package, augment traditional pediatric primary care.^{13,14} The components of Healthy Steps include

- *Enhanced well-child office visits.* A pediatric clinician and a Healthy Steps Specialist conduct visits either jointly or consecutively. The visits are designed to answer questions about infants’ or toddlers’ upcoming developmental stages, as well as to administer physical examinations and developmental assessments and to encourage early reading activities as part of the Reach Out and Read program. Pediatric clinicians and Healthy Steps Specialists are trained to take advantage of “teachable moments” to help parents understand their child’s temperament and development through

*R. Gould, Vignettes and Views on Healthy Steps, unpublished manuscript, 1998.

shared experiences in the office. In addition, health risks, such as maternal depression, household smoking, safety, and substance abuse, are identified.¹⁵

- *Home visits by Healthy Steps Specialists.* A sequence of seven home visits—or more if needed—is offered to parents over 3 years at predictable junctures of the child’s development. Mothers and fathers are more comfortable in their own home and often will share concerns about their child’s development that they may be hesitant to bring up initially in a doctor’s office. In addition, the Healthy Steps Specialist is able to observe the home for safety and other anticipatory guidance issues.
- *A child development telephone information line.* Healthy Steps Specialists staff a child development information line, which complements a medical information or emergency line. Parents call with questions about their child’s behavior, such as crying, sleeping difficulties, discipline, and other common child-rearing concerns.
- *Parent groups.* These monthly group sessions are both learning sessions and opportunities for social support from other parents in their communities. Sessions are run by the Healthy Steps Specialists, at times in collaboration with a local parenting group. Frequently, group sessions include discussions of topics such as infant temperament, cardiopulmonary resuscitation, play, and toilet training.
- *Child development assessments.* Assessments or “checkups” begin at 6 months of age. The assessments detect early signs of developmental or behavioral problems and provide teachable moment opportunities to discuss the child’s learning and coping style, as well as the child’s pattern of development, including language, temperament, and social/emotional behavior.
- *Written informational materials for parents that emphasize prevention.* Parents receive a variety of materials—all emphasizing prevention or teaching about what to expect at the next developmental milestone. Each parent receives “LINKletters” two weeks before a scheduled well-child visit to address questions frequently asked during visits; handouts on a variety of medical, developmental, and practical topics; and a Healthy Steps Child Health and Development Record to chronicle immunizations, physical growth, developmental milestones, parental concerns, and accidents through age 18.
- *Links to community resources.* The Healthy Steps Specialists compile a book that lists community resources, and they develop a parent-to-parent bulletin board in the office that contains an assortment of information, from child care resources and public programs to baby equipment sales.

A key aspect of Healthy Steps is the addition of a new professional to the pediatric practice: the Healthy Steps Specialist. Most Healthy Steps Specialists are trained in early childhood education, nursing, or social work. The Specialist becomes the primary resource for this new model of pediatric care and collaborates with the pediatric clinician to provide the seven components of the program. The Healthy Steps Specialist does the following:

- Makes home visits to the family, starting in the child's newborn period
- Performs child development assessments on all children at targeted times
- Meets with the parents before, during, and after a well-child visit to discuss behavioral and developmental issues further
- Is available through a special telephone line to answer parents' questions about development or behavior
- Leads parent group sessions
- Ensures that the pediatric practice has made all of its requisite community linkages for families so that referrals are made in a seamless and timely way
- Aids in early detection of family stresses such as depression, substance abuse, or domestic violence¹⁶

Views from Healthy Steps Physicians.

According to one physician involved in the Healthy Steps program, "The Healthy Steps Specialists free me up from having to spend 30 minutes digging out the nature of a family's problem. The Specialists come to me with a summary, giving me a sound basis for a medical decision. In a high-volume practice, this will be important and certainly cost effective. Healthy Steps Specialists have the time that doctors don't have to handle certain behavioral and developmental problems. You just can't rush those things." Another physician says that the extra attention for families "bonds them with the practice. We noticed that, to a certain extent, parents find talking to the doctor somewhat intimidating. The Healthy Steps Specialists create an important bridge between families and physicians."*

The addition of the Healthy Steps Specialist allows the pediatric practice to emphasize a team approach to care that is tailored to the needs and issues of each specific family.

ACTIONS OF A HEALTHY STEPS PRACTICE

The Healthy Steps system of pediatric primary care expands and enhances the practices' ability to focus on child-rearing and parenting skills that often get overlooked in the confines of a well-child visit. It is a challenge for a pediatric clinician to have the time in a 15–20-minute visit to give appropriate attention to medical issues and still to have time to encourage positive parenting skills with each family. Healthy Steps practices are able to solve this problem using a

*Ibid.

team approach to care with an additional member of the team who has the skill, time, and interest to help parents promote their children's development.¹⁶ The Healthy Steps practice promotes child development, identifies problems, provides parental support, promotes early learning, assists in securing the basics, and practices a two-generation approach to child health.

PROMOTION OF CHILD DEVELOPMENT

Healthy Steps provides opportunities to promote child development. Parents often bring anxieties, questions, concerns, and vulnerabilities about their children and themselves to the pediatric office. Such concerns often result in a heightened sensitivity to input from the pediatric clinician and the Healthy Steps specialist, making the pediatric visit a special opportunity to help parents be more successful in their child-rearing roles.

A view from a Healthy Steps Specialist.

According to one Healthy Steps Specialist, parents learn through interactions with their Specialist that "you don't just feed babies, change their diapers and put them to sleep. You play with them right from birth. We teach parents a balance between stimulation and a baby's need for quiet time. Taking care of infants means more than caretaking; it means nurturing them too. That's our message to parents."^{*}

The time that is spent with the pediatric clinician and Healthy Steps Specialist is an opportunity to equip parents better to understand their child's behavior and development through shared experiences in the office—teachable moments. The young child's behaviors in the pediatric office offer a view for parents and pediatric clinicians about the child's development. Observing these actions with parents enables a conversation that promotes understanding and confidence in parenting.¹⁶

A view from a family.

When the Healthy Steps Specialist performed a section of the Brazelton Neonatal Behavioral Assessment Scale (NBAS) during the newborn visit, a new mother learned that her newborn really did know her. The Healthy Steps Specialist held the baby and asked the mother to speak in one ear and the Healthy Steps Specialist spoke in the other—the infant recognized the mother's gentle voice and turned. This led to a discussion of the infant's auditory capacities and emerging ability to think. This enabled the mother to really understand that newborns do have the ability to hear, discriminate sounds and recognize a familiar voice. This teachable moment helps promote the mother's bond with her newborn and sets the foundation for forming a relationship of trust with her baby. By observing the infant's behavior in the office at the same time together, this shared experience becomes a springboard for facilitating parental understanding and confidence about their infant.*

*Ibid.

PROBLEM IDENTIFICATION

Developmental and behavioral surveillance provide opportunities for teachable moments and identification of potential problems. A vital component of enhancing infant development is detecting such delays at an early stage and instituting prompt and appropriate diagnostic and therapeutic measures. Recently, pediatricians have stressed the importance and efficacy of developmental surveillance (as opposed to screening) in young infants.¹⁷ Parental concerns about children's development, presence of risk factors associated with developmental problems, and skilled clinical observation of development provide a reasonably sensitive and specific first cut. If parents are concerned or milestones are delayed, then the chances of a developmental problem are much greater. In such a situation, the child may need to be referred for a complete developmental evaluation and/or be followed closely.

Observation of the interactions and the developing relationship between parent and child during clinical visits may detect possible emotional and attachment issues. Is there warmth and affection evident throughout the examination? Are the parents reassuring and soothing? Do the parents respond appropriately to the child's behavioral cues? Is there mutual eye contact, smiling, and regard? In some cases, most of the exam may be spent talking about the parent's feelings about how things are going with the child. As the only professional seeing both parent and child, it is the pediatric clinician and/or Healthy Steps Specialist who is best poised to detect an early poor fit, for example, between a child with a difficult temperament and an insecure parent. If such a mismatch is detected early, targeted interventions by the pediatric clinician or Healthy Steps Specialist, or referral for counseling, can serve to prevent later problems.

Developmental delays in children usually are apparent in the first two years of life, with language delays being the most common. Some delays may be caused by preventable environmental factors, such as elevated levels of household smoking or such psychological or social factors as parental isolation and/or depression. For instance, household smoke could lead to repeated ear infections, hearing loss, and subsequent language delays. A critical element of the Healthy Steps program is detecting these potential delays at an early stage and problem solving with the parents to find prompt solutions. This translates not only into improved child health and development, but also into money saved on future health care and social services.

A view from a Healthy Steps Specialist.

A Healthy Steps Specialist performed her first home visit for a newly enrolled Healthy Steps family. During the visit she observed that the entire extended family, all living in

the same home as the infant, smoked in the home and around the newborn. The Healthy Steps Specialist mentioned to the mother that the smoke could make her baby sick and that not smoking around the baby could prevent frequent respiratory infections. The Healthy Steps Specialist held off from the “hard sell” until she began to form a trusting relationship with the mother. Concurrently, although the baby was developing normally, he began to develop frequent respiratory problems. The Healthy Steps Specialist, in concert with the pediatric clinician, began a campaign to teach this mother what the smoking was doing to her baby. This enabled the mother to understand that she could prevent some of these illnesses now and the potential for increased problems later, which could include language delays and learning problems. The Healthy Steps Specialist counseled her on how to approach the rest of her family about only smoking outside. The mother has now successfully quit and the family smokes only outside—and the baby is healthier and at a decreased risk for later problems.*

PROVISION OF PARENTAL SUPPORT

Many new parents feel unsure about the quality of their parenting and the decisions they make regarding their new baby. According to Dr. T. Berry Brazelton, “Parents are passionate for the answers to two questions when they come for their child’s check up: ‘How am I doing as a parent?’ and ‘How is my baby doing?’ Unless they get some answer, they leave the visit seriously disappointed.”¹⁸

A view from a Healthy Steps parent.

“Everyone thinks I should know what to do because we have two other children, but what I really need is some positive feedback to know I am doing things right,” stated a mother of three who is concerned about her newborn baby’s slow weight gain. Using the team approach, the Healthy Steps Specialist and the baby’s pediatrician offer that feedback and support. During a recent office visit, the Healthy Steps Specialist reassures the mother by telling her, “It takes time to learn about each new baby, to figure out their signals.” The Healthy Steps Specialist leans over the exam table, talking and cooing as the baby squirms. The 2-week-old baby brightens, turning to the Specialist’s voice. “You see how she responds,” the Specialist tells the mother. “Her development looks good. When the doctor comes in we’ll ask about her feeding schedule.”

The physician confirms that the baby is healthy, but he advises more frequent bottles, even if it means waking her from a peaceful sleep. He asks for a feeding demonstration. Nestled in her mother’s lap, the baby takes a few gulps and then rears her head. The Healthy Steps Specialist offers her expertise in child behavior. “You see how she arches her back to get away from that bottle. The nipple probably drips too fast, and the baby is having trouble coordinating her breathing, sucking and swallowing. She is doing a good job of giving you those signals, but it’s wearing her out to work so hard.”

The mother verifies that the baby tends to “conk out” after feeding, sleeping long hours until the next bottle. That explains why the baby has not gained weight. The Healthy Steps Specialist holds the bottle upside down over the table to confirm the too quick succession of drips. Even though this nipple is labeled for newborns, it does not suit the baby. The Healthy Steps Specialist offers a slower nipple and the baby seems much happier—so does her mom.

“The doctor and Healthy Steps Specialist are doing such a great job helping me,” says the mother, the relief visible on her face. “I should have called with the feeding questions. I’ll make more use of that Healthy Steps service now.”*

*Ibid.

The short amount of time allotted in a traditional pediatric visit likely will allow little time for parents to ask nonmedical questions and to receive support. The extra time and emotional support from members of the Healthy Steps team is often invaluable and underestimated.

PROMOTION OF EARLY LEARNING

Many parents are not aware that talking and reading to their young children are meaningful activities that promote their child's readiness to learn and language development.¹⁶ Looking at books gives children a pleasurable and positive way to elicit parental attention. Although many parents know that reading aloud to children is important, some are not sure how to proceed. Many do not realize that they should support their child's learning in infancy.

Healthy Steps promotes early reading activities through the Reach Out and Read program, which starts when the infant is 6 months of age.¹⁹ During scheduled well-child visits, the pediatric clinician gives the child a book, comments on the child's response to the book in the examination room, and offers information on the child's cognitive development. The child then is given the book to take home. For many parents, the very fact that the book comes from a pediatric clinician communicates the importance of reading more effectively than any amount of explanation would do.

Researchers agree that children's early literacy environment is critical to their later reading success.¹⁹ By starting early, pediatric clinicians are able to capitalize on a mother's and father's desire to have a "smart child" who does well in school. The emphasis that reading to infants and young children not only can enhance language, skills, and interest in learning, but also can lead to a closer attachment between the parent and child is a powerful and not-often-heard message from a physician. At 6 months, the infant will begin to be interested in a book with pictures of other babies or common objects. However, it is the emotional closeness of this reading or book-sharing interaction that can facilitate the attachment process even as it sets the stage for later interest in reading. In fact, the case could be made that reading to a child is the perfect activity to "promote early brain development." All of the senses are engaged by the warmth from the parent's body, tactile stimulation from being held, vestibular stimulation from being rocked, emotional closeness, contingent responses to the child, cognitive stimulation, and a great deal of language and shared attention.¹⁶

A view from Healthy Steps pediatric clinicians.

One pediatric clinician was surprised at the relative lack of reading he observed parents doing with their children, even though the people he saw in his practice were a fairly

educated population. "Healthy Steps made us realize that one-fifth of all families do not read to their children. By offering developmentally-appropriate books, we can teach parents about the importance of early reading and give those children a head start in preparing them for learning."*

ASSISTANCE IN SECURING THE BASICS

It is difficult, often impossible, for families to use health or child development information if they lack the bare necessities of life—adequate housing, heat, food, and health insurance. For many disadvantaged families, the pediatric clinician may be the only professional who is aware of their plight and its effects on their children. This may mean asking questions that do not come easily to many clinicians: Do you ever run out of food? How many people are living in your house? Do you have enough money to pay your bills?

Serving as an advocate for parents in helping to provide these basics is the first layer of promoting infant health development for many families. For some practices, this means easy access to a social worker, case manager, or family advocate and an exhaustive understanding of local and governmental resources and entitlements such as WIC (supplemental food program for Women, Infants, and Children). The advocacy efforts by individuals who are part of a pediatric system of care can be extremely compelling in forcing the appropriate agency to respond to help provide the basics and can serve as a base for other health and development efforts.

A view from a Healthy Steps pediatric clinician.

A young girl with severe asthma was a patient in the Healthy Steps program. She was on steroids to control the attacks and was not doing well—and frequently ended up in the emergency room. The mother followed our recommendations in terms of alterations to her home to the best of her ability, but the rental apartment was damp due to a leak in the pipes and had musty wall-to-wall carpeting. As the young girl continued to do poorly, the mother spoke to the Healthy Steps team about her current situation, and the fact that she had repeatedly discussed the problem with her landlord, to no avail. The Healthy Steps Specialist suggested that the mother speak with a legal aid lawyer affiliated with the practice. The lawyer contacted the landlord and was able to convince him to fix the leak and remove the carpet. Not surprisingly, the young girl's health is significantly better, she is off the steroids, and emergency room services are no longer necessary.*

A TWO-GENERATION APPROACH TO CHILD HEALTH

The best way of helping children is to help their parents, and the best way of reaching parents is through their children.¹⁶ The relationship between parental and child health has received inadequate attention in the past. New and effective treatment of some important adult health problems has become available recently. These findings suggest the need for a two-generation approach to child health

*Ibid.

that uses the pediatric visit to enhance parents' health (especially health behaviors and mental health) by identifying problems and by referring parents to primary care or to a specialist to address a specific problem. After pregnancy, the pediatric primary care system may represent the only health system in which parents are involved consistently, and it affords a window of opportunity to provide health promotion interventions.

A view from a family.

A mother was experiencing symptoms of post-partum depression after her second child was born. Feeling desperate, the father called the Healthy Steps Specialist and asked her to come to speak with his wife. The Healthy Steps Specialist was present when the two-year-old toddler stood by his mother's bed as she stared into space, and asked, "Mommy, are you mad at me?" This sad exchange enabled a door to open toward the healing process. The Healthy Steps Specialist helped the mom understand her older child's feelings. In turn, the mom began to trust the Healthy Steps Specialist, and spoke about her feelings of depression. The Healthy Steps Specialist visited her twice a week for several weeks and then referred her to a post-partum support group. She is subsequently doing very well—and is emotionally available for her family. According to this Healthy Steps Specialist one of the priceless aspects of Healthy Steps "is the time we spend with families and the explanations we can give. Often they hear the words from the physicians but need time to figure it out, review it with us, anticipate what is coming up next. . . . They know what they can handle and what they can't and when to ask for help."^{*}

Many parental problems can and should be identified by the clinicians in a Healthy Steps practice. Mental health problems, especially depression, among mothers occurs commonly and has well-documented adverse effects on children's health, including increased risk of low birth weight, behavior problems, poor growth, accidents, and affective illness.²⁰ Drug addiction, alcoholism, and smoking are common parental addictions that are troublesome as well. Pediatric clinicians within Healthy Steps practices can provide linkages with mental health professionals or specialists with training in problems of addiction.

**LOOKING TOWARD THE 21ST CENTURY: THE VALUE OF THE
HEALTHY STEPS APPROACH**

"By applying the principles of total health care in a systematic way, Healthy Steps offers a great boost to all of us. While some doctors have been using such methods in a less structured way for years, Healthy Steps offers validation. Because the program has developed consistent ways across the board to practice primary care pediatrics, we can deliver health care in a more efficient, cost effective way," says a chairman of the department of pediatrics in a major health system in the Midwest.*

As pediatric clinicians think about their practice of primary pediatric care in the 21st century, the old model of a solo practitioner trying to address a burgeoning agenda of medical and psychosocial issues of young children and families

*Ibid.

will need to change. Practices will need to be transformed into a team approach in which the pediatric clinician and Healthy Steps Specialist collaborate to meet the needs of families with young children better. The adoption of the Healthy Steps philosophy creates a marked change in a pediatric practice's daily routine. The successful integration of Healthy Steps requires a team approach to serving families, and building such a team takes time, planning, and patience. Logistical problems cause further challenges—for example, coordination of the schedules of the physicians and Healthy Steps Specialists and finding ample time and a place in high-demand room space to perform developmental assessments and follow-up with families about child-rearing concerns. The real world accounts by families, physicians, and Healthy Steps Specialists testify to the early and possible far-reaching benefits of the Healthy Steps approach. Physicians welcome the addition of the Healthy Steps Specialists to their pediatric teams. Healthy Steps Specialists enhance doctors' ability to communicate with families and help bond families to the practice while building parents' confidence in their mothering and fathering skills.

A view from a Healthy Steps physician.

"No question, Healthy Steps is a fantastic way to practice medicine. A lot of parents just take their child to the doctor for shots, but Healthy Steps turns our office into a place where they can learn about their child, develop a good relationship with them and properly stimulate and respond to them. As a result parents feel more comfortable in their role; they use medical services more judiciously. And the children are well nurtured. In the long run, they will be healthier both mentally and physically."^{*}

However, the dynamic world of managed care and health insurance places a growing emphasis on the services that make a difference and are cost effective. Healthy Steps is no exception, and as such, this multiyear initiative is being evaluated extensively at the 15 national evaluation and 9 affiliate sites by a team of researchers at Johns Hopkins University. Two major questions must be answered: Is Healthy Steps improving outcomes in children, parents, and pediatric practices? Is the Healthy Steps approach cost effective and generalizable? That is, in the era of managed care, will third-party payers and health care administrators provide financial support for a new professional in the pediatric practice? In an era of cost containment in health care, some may question recommending a new initiative that adds a professional member to the pediatric team—but the potential benefits, both with monetary and societal value, are being recognized by top management in health systems.

^{*}Ibid.

Views from a health care system.

An executive vice president of a large Midwestern insurance company says, "The prospect of lower long-term costs made our company want to support Healthy Steps. We spend millions each year covering illnesses and injury—it appears that Healthy Steps is a promising program in terms of prevention and worthy of investing in to see if the preventive features could lower costs over the long haul. And Healthy Steps offers a competitive advantage. Anytime a health plan manager can put in place programs that bond patients to the plan it is a plus."*

The director of the community benefits program for one of the larger integrated health care systems in the Northeast sees Healthy Steps as extremely valuable. "We believe Healthy Steps will make a measurable difference in parents' ability to use the health care system. Already they make better use of primary care, and avoid emergency room visits. Over a longer period of time we will be able to identify contributions Healthy Steps is making to children's readiness to succeed in school and the influence on making healthier choices in high risk situations such as drugs."*

It is widely recognized that the health system has the potential to address the multifaceted nature of a young child's development as an integral part of assuring child health. Health plans, pediatric clinicians, and Healthy Steps practices, in particular, are uniquely positioned to offer families high-quality, comprehensive health promotion and preventive services that enhance the ability of families to nurture and rear healthy children as we look toward the 21st century.

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