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SUPPLEMENT

History of Developmental-Behavioral Pediatrics

Robert J. Haggerty, M.D.
Stanford B. Friedman, M.D.
with the Research Assistance of Michele Calderoni, D.O.

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DEVELOPMENTAL AND BEHAVIORAL PEDIATRICS

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History of Developmental-Behavioral Pediatrics

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THE PROBLEM

The rise of the field of developmental-behavioral pediatrics occurred for several reasons. The first is the increase in the prevalence of psychosocial problems among children, as documented by Kelleher et al.[1] How much of this is the result of increased parental awareness and the increased diagnostic ability of physicians and teachers is not clear, but repeated samples have shown a doubling of reported psychosocial problems among children in the last 30 years. A second reason is the change in traditional medical problems among children. As one of the authors noted in 1975, calling psychosocial problems "the new mor-bidity," the problems were not new.[1a] However, because of the dramatic decrease in the frequency of traditional medical problems among children (as the result of effective antimicrobial treatments of infections and immunizations against so many previously severe illnesses), physicians and parents were made aware of other problems that were interfering with family happiness and children's functioning. A third reason is the general change in society and families. The changes in family work structure and the demand for more children to perform well in school, only in part caused by the increased technical demands of the workforce, probably played a role in increasing the recognition of these problems and perhaps their prevalence. Finally, the development of psychotropic medications in the 1960s and afterward made some of the conditions amenable to more traditional medical interventions for what, in the past, had been the province of "talking therapy," a time-intensive form of treatment less likely to be pursued by medical doctors other than psychiatrists. All these factors played a role in the rise of this field as a part of medicine. Pediatrics with its contact with children during their entire childhood from birth to adulthood, for preventive as well as curative care, was the natural specialty of medicine to see these problems first and try to manage them.

Experienced pediatricians have of necessity been concerned with the behavioral aspects of children. It is impossible to care for children effectively without such concern. Yancy, in his "Historical Notes" as "fillers" for the *Journal of Developmental and Behavioral Pediatrics,* (*JDBP*) noted several very early writings that emphasized the common interests of psychology, psychiatry, and pediatrics.[2] The first volume of the *Journal of the American Medical Association* mentioned problem behaviors such as enuresis and night terrors,[3] implying that these were problems of interest to physicians.

But scientific knowledge and skill in interacting with children showing problem behaviors were not well developed or taught to pediatricians, except by precept. With the emergence of the discipline of child psychiatry in the 1920s and 1930s, there were several calls for child psychiatrists to teach pediatricians their knowledge and skills. Many articles and books, authored largely by child psychiatrists, called for integration of the knowledge and skills of child psychiatry into pediatrics.[4,5] Some pediatricians went on to receive additional training as child psychiatrists,[6] a few with Commonwealth Fund support. In their review of the history of the Commonwealth Fund,[7] Harvey and Abrams acknowledge that there were requests from pediatric departments to support the training of pediatricians in child psychiatry, and a few were supported. A small number of the pediatricians so trained, such as Milton Senn, returned to pediatrics; indeed, Senn later chaired the Department of Pediatrics at Yale. The Commonwealth Fund support was considered unsuccessful, however, in that the goal had been to produce pediatricians more skilled in understanding children's behavior, but, in fact, most of these former pediatricians became full-time child psychiatrists.

The interaction between child psychiatry and pediatrics has often been difficult. Child psychiatry emerged from the community-based child guidance and juvenile justice systems, which were removed from mainstream medicine. The first such clinic was started by a Chicago physician, William Healy, in 1909 to deal with children exhibiting antisocial behavior.[8] It was the first effort to medicalize delinquency and to show that personality problems of delinquents lay behind much of their behavior, behavior that had previously been the province of the justice system. In the 1920s and 1930s, The Commonwealth Fund supported eight demonstration child-guidance clinics, emphasizing

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prevention and treatment of delinquents. By 1927 there were 200 such clinics, many of them locally funded. But pediatricians did not participate in these clinics, and the two disciplines of child psychiatry and pediatrics did not speak the same language.

By and large, pediatricians were atheoretical and used to dealing with acute illnesses with a short time course, whereas child psychiatry dealt with chronic problems with fewer cures and developed a number of theoretical bases for their work. Psychoanalytic theory was especially in vogue in the 1930s and 1940s and was never very well accepted by pediatricians. There was also considerable vocal resistance to child psychiatry among some pediatric leaders. The acerbic views of the noted pediatrician, Brenneman, were printed in an article provocatively titled "The Menace of Psychiatry."[9] By "menace" he meant to show his concern and ridicule for some of the then popular psychologic advice being given to parents, such as the need to withhold kissing or holding their children. He argued for common sense advice that he believed pediatricians had as a result of their working with families, rather than the theoretical advice being given by some psychologists. It is of note that he was more concerned with the advice given by psychologists than by psychiatrists. He also was concerned with the advocacy efforts that had been the hallmark of the early child psychiatrists who came out of the juvenile delinquency field, in which public policy was an essential aspect of addressing delinquency. He and most of his colleagues of the oldest pediatric society, The American Pediatric Society, held the view that they should pursue "science," not social policy, implying that the psychology of childhood could not be studied scientifically.

The more moderately toned book by the noted pediatric neurologist at Boston Children's Hospital, Bronson Crothers,[10] posited that ideally the pediatrician was in the best position to deal with children's behavior in the context of the family, with emphasis on prevention and early diagnosis. Whereas Brenneman acknowledged the pediatrician's lack of training to do this, Crothers was concerned that if child psychiatrists took over care of all children with mental problems, pediatricians would become even less competent in this area and would end up "dumping" patients on to psychiatrists. Crothers argued for more education of the pediatrician in problem behaviors and advocated building a team of psychiatrists, psychologists, educators, and social workers to deal with complex chronic physical disorders in childhood, especially neurologic ones. But he advocated that the pediatrician should be in control. It is hardly surprising that turf problems arose.

After World War II, several leaders in child psychiatry called for more teaching of pediatricians by child psychiatrists. These included Leo Kanner,[11] Milton Senn,[12] Leon Eisenberg,[13] Dane Prugh, and Beatrice Hamburg. Rarely noted was the potential for the reverse flow of knowledge, namely, the pediatrician's knowledge of physical disorders, biologic functions, and development of the child, which would be useful to child psychiatrists.

As a result of Crothers' concerns about child psychiatry stated previously, no child psychiatrists were appointed to the Boston Children's Hospital until after World War II, when under the leadership of the Chief of Pediatrics, Charles Janeway, the child psychiatrist Dane Prugh (who also had been trained as a pediatrician) was appointed in the early 1950s. One of Prugh's major contributions was a research study, using an experimental and control group, to evaluate the benefit of a playroom (now called the Child Life Program) on pediatric inpatient floors.[14] He also spent most of his time seeing children hospitalized on the pediatric floor, thus providing a highly regarded service and teaching by example. The model was adapted from the adult psychiatric liaison service pioneered by George Engel at Rochester.[15]

By the 1960s, several departments of psychiatry and pediatrics had developed a liaison type of service, but the model of the pediatrician being taught by a psychiatrist rather than by a pediatrician failed to provide a role model for pediatricians who wished to become more competent in child behavior. At this time, before the development of psychopharmacology, many child psychiatrists were psychoanalysts or psychoanalytic in their approach to patients, seeing few patients for long periods of time. Thus, child psychiatrists did not seem relevant to the needs of children cared for by pediatricians.

It should also be noted that many investigators in the past indicated in the pediatric literature the advantage pediatricians have in diagnosing and managing common behavioral problems, as well as in playing a critical role in the prevention of such problems. Their long-term knowledge of the family allows for interventions at appropriate times, in contrast with those in mental health professions who see the family only on referral and must then spend significant time obtaining background family history. Thus, properly trained pediatricians are cost-effective in managing many developmental and behavioral problems.

A more recent attempt to integrate pediatrics and child psychiatry is the "Triple Boarding" program, a 5-year program at six institutions, with approximately equal time spent during residency in pediatrics, adult psychiatry, and child psychiatry.[16] This was designed to provide more pediatric training for child psychiatrists and to address the problem of child psychiatrists needing to be fully trained in adult psychiatry before starting child and adolescent psychiatry training. In 1984, an oversight committee (Pediatric-Psychiatry-Child and Adolescent Psychiatry Joint Training Committee) was formed and selected six pilot programs: Albert Einstein College of Medicine, Brown University Program in Medicine, Mount Sinai School of Medicine, Tufts University School of Medicine, University of Kentucky College of Medicine, and the University of Utah School of Medicine. Funding from federal agencies, the American Board of Pediatrics (ABP), and the American Board of Psychiatry and Neurology enabled an evaluation process to be established. As of June 1995, 49 individuals in the "triple-board" training sites had completed training. Of the 49 graduates, 25 held faculty positions, four were in further training, 11 were in private practice, eight held primarily clinical positions in hospitals or community agencies, and one was unemployed by choice. Of the 25 in academic institutions, 24 had their primary appointment in child and adolescent psychiatry. The program has been judged "at least modestly successful," with trainees performing "reasonably well in pediatrics" and "superior in psychiatry," compared with their colleagues in the standard residency programs in pediatrics and psychiatry.[16] On the basis of ongoing evaluation, the program has been expanded with nine programs with a total of 85 positions listed in the *2002–2003 Graduate Medical Education Directory.*

The traditional training led to many child psychiatrists, once they entered practice, spending more time with adult patients (with whom reimbursement is more generous) and giving up child psychiatry. The shortage of child psychiatrists, exacerbated by this loss from the pool of those trained, has always been a problem. There are currently approximately 5,000 certified child psychiatrists in the United States. With estimates of 10% to 15% of all children having mental health problems (7–10 million children), it has never been possible for child psychiatrists to address any but a small percentage of the need. Many child psychiatrists persisted in their concern that if pediatricians cared for these children, they would be receiving inadequate care (not unreasonable given the little training that pediatricians received in the field). Others were clearly motivated by turf issues. In 1982, in the newsletter of the *American Academy of Child Psychiatry,*[17] Curran wrote that Prugh's report (supporting behavioral pediatrics) "... ignores the overall threat that this group may have to the future viability of Child Psychiatry." That this is still an issue was indicated by the reluctance of many child psychiatrists to support the approval by the American Board of Medical Specialties (ABMS) of the certification of developmental-behavioral pediatrics in the late 1990s.

ORIGIN AND RISE OF BEHAVIORAL PEDIATRICS: THE ROCHESTER EXPERIENCE

In 1964, when one of the authors (Robert Haggerty) was appointed chair of pediatrics at Rochester, one of the new positions he negotiated for was a child psychiatrist, to be paid half by the Department of Pediatrics and half by the Department of Psychiatry, but to be housed in pediatrics (similar to the model of Boston Children's Hospital and Dane Prugh). For a variety of reasons, this position was never filled. The other author (Stanford Friedman) had been recruited by Haggerty's predecessor, William Bradford, at Rochester in 1963 to develop a presence in pediatrics for a faculty member performing research and teaching in the behavioral area. Friedman had spent summers during medical school at Rochester with George L. Engel, engaged in research and learning interview techniques. He spent 2 years at the National Institute of Mental Health with David Hamburg and also was mentored by John Mason of the Walter Reed Army Institute of Research. Friedman honed his research skills under Hamburg, leading to a classic article on the adrenal cortical responses of family members who had lost a child to cancer.[18] This study demonstrated the impact of anticipated loss and grief on both physiologic and psychologic processes. Other psychophysiologic studies followed, focused on resistance and susceptibility to infectious and neoplastic diseases in animals.[19]

As a vehicle for teaching and recognizing the need for service, Friedman developed an Adolescent Clinic, which emphasized care of children in this age group with chronic physical diseases and their associated behavioral issues. In addition to the teaching of psychologic aspects of adolescent medicine, Friedman developed a liaison-type of service to address psychologic problems of children in the hospital and those attending clinics. There was need for a rapid response to deal with crises such as children with acute postoperative delirium, suicide attempts, or destructive behavior. It was difficult for the limited number of child psychiatrists to provide this rapid response, and their approach was often to schedule a clinic visit some time later. This led to Friedman's insistence on answering all requests for consultation within 24 hours. He also was asked by practicing pediatricians, who recognized the need for a better understanding of developmental and behavioral problems in their pediatric practices, to develop a biweekly evening workshop bringing problem case histories (and later, audiotapes of interviews) to the group for discussion.[20]

Haggerty, who had a 2-year mixed internship at Rochester with 6 months of psychiatry and was the director of the Family Health Care Program at Boston Children's Hospital, had become keenly interested in the family and the interaction of family stress and infections.[21] On moving to Rochester, he received a Children's Bureau award titled "Patient Care Programs." Part of the support was to train Fellows for more family-focused and population-based careers. This grant supported Fellows, for 1 or 2 years, emphasizing adolescent medicine, behavior, and/or community health. Friedman and Evan Charney (another member of the faculty) both received the coveted John and Mary Markle Award. Charney also received a Community Health Center grant. From these multiple sources of funding, pediatric Fellows in adolescent medicine and/or behavioral pediatrics began to be trained at Rochester. Medical students in summer fellowships or the "year-out" program also participated in this training. The philosophy was to integrate the psychosocial aspects of child care into the department's overall teaching, research, and care programs; the intent was not to develop a separate subspecialty.

In 1970, Friedman published an editorial[22] that, as far as we have been able to find, was the first to use the term "behavioral pediatrics." Also in 1970, Friedman submitted a training grant for "Research Training in Behavioral Pediatrics" to the National Institute of Child Health and Human Development. It was approved but not funded. One of the criticisms was that the faculty, which included pediatricians Evan Charney, Robert Chamberlin, Barry Pless, and Friedman (all interested in the behavioral aspects of pediatrics), and psychologist James Heriot, were funded largely from other sources and would not be fully involved in this program. In addition, the reviewers felt that there was no clear separation in faculty time between clinical involvement and behavioral research. This was, and is, a traditional view; namely, that research, to be good, must be the primary focus of an individual's work. Our philosophy at Rochester was that relevant research typically needed to

emerge from clinical experiences, and that the involvement of faculty supported from other sources was a strength. One of the remaining problems still is that the large clinical service needs of behavioral pediatrics make research difficult. Despite this failure to gain training support, 10 Fellows completed the fellowship program during a 9-year period, and seven were in full-time academic careers in adolescent medicine, school health, or behavioral pediatrics 10 years later.

OTHER EARLY TRAINING PROGRAMS

During the years that the Rochester program was evolving, other programs aimed at integrating mental health into pediatric training developed around the county. One of the earliest, and the longest lasting, was the Child Study Unit of the Department of Pediatrics at the University of California at San Francisco. The program began in 1948, under the leadership of George Shade, who had received 2 years of training at the Philadelphia Child Guidance clinic with Commonwealth Foundation funding. This program began as a mental health unit within a pediatric department, which then became the Child Study Unit in 1966, under Helen Gofman, who became the director after Shade's death. Bayard Allmond joined the unit in 1969. The focus of this program was always the teaching of pediatricians in the mental health aspects of pediatric practice with an emphasis on child development, prevention of mental health problems, and training to improve interviewing skills. The program has provided training for postgraduate pediatric Fellows since 1965 and a mandatory rotation for pediatric residents since 1969. The program has received continuous funding from the Maternal and Child Health Bureau (MCHB) since 1966.

The Department of Pediatrics and the Yale Child Study Center have a long and distinguished history of research and training in developmental-behavioral pediatrics. Arnold Gesell was a pioneer in determining normal developmental stages in infancy. His movies of infant development were the basis for the education of many pediatricians regarding normal development. The long time chair of pediatrics at Yale, Dr. Grover Powers, developed the first "rooming in" project at the Yale-New Haven Hospital and presented a paper at the 58th meeting of the American Pediatric Society in 1948 on "Humanizing Hospital Experiences" for children. He fostered the training of such future leaders of behavioral pediatrics as Morris Green and provided a faculty that included Sally Provence, who was a pioneer in promoting breast feeding. Milton Senn, a pediatrician also trained in child psychiatry, succeeded him and was not only chair of pediatrics but also director of the Child Study Center, effectively linking pediatrics and child psychiatry. His successor, Al Solnit, ran a teaching conference for practicing pediatricians in children's behavior and taught pediatric practitioners such as Melvin Lewis, Morris Wessel, and Richard Granger, who practiced behavioral pediatrics before the name was coined. Yale, like some other programs, sought to integrate development and behavior into general pediatrics rather than develop a new specialty.

In 1960, Drs. Leo Kanner and Leon Eisenberg in child psychiatry at The Johns Hopkins Hospital applied for and received funding through the W. T. Grant Foundation to support 6 to 12 months of child psychiatry training for pediatricians in their third year of pediatric residency, aimed at improving the pediatrician's ability to address mental health issues in the pediatric setting. Esther Wender, one of the current leaders in developmental-behavioral pediatrics, received her training in this program.

T. Berry Brazelton developed a program with the Harvard University pediatric services beginning in the early 1970s. This postgraduate pediatric fellowship training emphasized the first 3 years of the child's life and focused on the parents' role in fostering the mental health of the young child. Support for this training came from multiple sources including the MCHB. Several of the current leaders in developmental-behavioral pediatrics were trained in this setting, including Barry Zuckerman, Peter Gorski, Barbara Howard, and Suzanne Dixon.

Early training and research programs include the following: a MCHB-funded training program at Ohio State University under Antoinette Eaton, M.D., and subsequently Dan Coury, M.D.; research at Children's Hospital of Los Angeles under Barbara Korsch, M.D., and at UCLA under Arthur Parmalee; and research by William Carey. Other early leaders in teaching programs in developmental-behavioral pediatrics include C. Anderson Aldrich, Arnold Gesell, Bonnie Camp, and Mel Levine. Psychiatrists Henry Work, George Gardner, Al Solnit, William Langford, and Reginald Lourie were involved in developing programs for pediatricians. Also, numerous pediatricians were active in the Child Development (later Developmental-Behavioral Pediatrics) Section of the American Academy of Pediatrics (AAP). Julius Richmond and Morris Green, prominent long-term members of the Section, were particularly influential because of their status as pediatric department chairmen. Richmond wrote that child development was the basic science of pediatrics.[23]

DEFINITION OF BEHAVIORAL PEDIATRICS

Behavioral pediatrics was originally conceived not as a subspecialty but as a component of all pediatric training. However, at the level of academic medical programs, many recognized the need for a faculty group who would organize the teaching and patient care and conduct research.

It is important at this stage of the history to talk about the evolution in meaning of the term behavioral pediatrics, for, as with any new and developing discipline, there are differences of opinion, and different settings emphasized different aspects of professional roles and boundaries. Friedman, in 1975, defined behavioral pediatrics as "an area within pediatrics which focuses on the psychological, social and learning problems of children and adolescents."[24] He later added that in addition to "problem-oriented" aspects of pediatrics, behavioral pediatrics also included prevention, advocacy, ward and clinic management, and the interdisciplinary delivery of health care. In addition, borrowing from the field of child psychiatry, it was considered appropriate to include the pediatrician's own behavior and insight in his or her care for the emotional problems of children and adolescents. Although emphasis is placed on interdisciplinary work with psychologists, child psychiatrists, and social workers, behavioral pediatrics is an integral part of pediatrics, and, as such, pediatricians must be the role models and practice as pediatricians, not as "poorly trained child psychiatrists." It should be noted that the definition of behavioral pediatrics continued to be unclear and controversial, as reflected in the 1985 National Conference on Behavioral Pediatrics held in Easton, Maryland.[25] The invited participants of this conference, sponsored by the federal Division of Maternal and Child Health, decided that it would be premature to attempt a definition of behavioral pediatrics.

Although there is obvious overlap between what a behavioral pediatrician does and what a child psychiatrist does, each has a separate area of expertise. The child psychiatrist is trained to manage the more severe mental illnesses of children, especially psychoses, severe depression, and delinquency, and today has become expert in psychopharmacology. Behavioral pediatricians address the more common problems of children's behavior. There are general attitudinal differences as well. Pediatricians tend to be more activistic. They try to deliver care to families with problem children, even when such care is resisted. Child psychiatrists tend to accept only patients who want to come and to take a long-range view of interventions.

Outlined in an internal memorandum to the faculty at the Albert Einstein College of Medicine on January 1, 1983, Wender described the knowledge base of behavioral pediatrics to include but not be limited to (1) an understanding of normal cognitive and psychosocial development sufficient to recognize when behaviors fall within or outside the boundaries of normal development, (2) an appreciation of how psychosocial factors contribute to bodily symptoms and how to treat these symptoms initially, coupled with the knowledge of how and when to refer for more specialized care, (3) skill in managing many of the psychosocial effects of chronic illness, (4) an understanding of how illness and medical procedures affect the child and his family, (5) skill in managing common behavior problems in childhood, (6) knowledge of common developmental and psychologic pathology sufficient to recognize these disorders, and (7) appropriate coordination of care when referral is needed. In the special issue of *Pediatric Clinics of North America* cited previously,[24] Richmond titles his article "An Idea Whose Time Has Come." The other articles in this issue define the areas of behavioral pediatrics by major early investigators in the field, and the list of chapter headings is a good definition of the field at that time, 1975.

THE WILLIAM T. GRANT FOUNDATION'S EARLY ROLE

In 1976, Friedman (at the University of Maryland as chief of Child and Adolescent Psychiatry and director of the Division of Behavioral Pediatrics, with appointments in both the departments of psychiatry and pediatrics) applied to Philip Sapir, president of the W. T. Grant Foundation, for a grant to train pediatric residents in behavioral and developmental pediatrics. He was joined in the effort by the Chair of Pediatrics, Marvin Cornblath, who offered both support and guidance. At the meeting of the Board of Trustees of the W. T. Grant Foundation in April 1976, Mr. Sapir spoke about "promising new developments in the training of medical students and residents in pediatrics and child psychiatry...." Beatrice Hamburg was especially interested in a program that would focus on pediatric residents and be directed by pediatricians, rather than a joint program with child psychiatrists, and as a Foundation board member, she had major input in the design of the program. Sensing that this was an important new area, Sapir appointed an Advisory Committee consisting of, among others, Haggerty, Friedman, and Hamburg.

After a small discretionary grant was made to plan the program, the Foundation awarded a 3-year grant for $200,000 to the University of Maryland to develop this program. Mr. Sapir, in his 1977 annual report, stated "During 1977, the Foundation initiated a program of support for the training of pediatric residents in behavioral and developmental pediatrics with the goal of helping to establish such programs as an integral part of the training of all pediatric residents throughout the three years of their pediatric training."[26]

It is of interest that during the same year, the W. T. Grant Foundation awarded a grant to Ruth Gross of Stanford University, Department of Pediatrics, for the evaluation of a postresidency training program in developmental pediatrics and pediatric psychiatry. Tom Anders, chief of Child Psychiatry there, collaborated with Gross to develop this program, described as a "conjoint post-residency training program in developmental pediatrics and in pediatric psychiatry." The program was "based on the belief that the pediatrician and child psychiatrist in training should have many experiences in common and should have some of the skills of the other, while at the same time developing his or her own area of expertise."[27] Sapir, in his report,[26] noted that the Foundation's goal was to "encourage the development of several residency training models...." Clearly these two grants were different models, but both aimed at preparing pediatricians to be more competent in the care of children with behavioral problems.

In July 1977, the W. T. Grant Foundation announced a competitive "program of support for residency training in behavioral (developmental) pediatrics" to "35 selected" medical schools in the United States. (These had been selected by the Advisory Committee because of their current programs that augured success in the new field.) The program was to be an integral part of the training of all pediatric residents. The request for proposals noted that "Although such programs may well be developed in conjunction with, or as an outgrowth of, liaison programs in child psychiatry, or of post-residency fellowship programs in behavioral pediatrics, support will not be provided solely or primarily for such programs." Later in the announcement it stated "...as a primary care physician he (the pediatrician) should be able to treat a wide range of dysfunctions which occur during infancy, childhood and adolescence, and which typically involve the interrelationship of social/behavioral, developmental, and

physiologic factors." Mr. Sapir clearly intended this program to train pediatricians, enabling them to provide competent services for children with behavior problems—a challenge to some child psychiatrists over turf.

The announcement of the request for proposals from the W. T. Grant Foundation spelled out the criteria for a successful application, including commitment of the department chair, faculty, space, and service facilities. It also noted that programs might well differ in the "degree of emphasis placed on one or more major areas; e.g., preadolescence and adolescent problems, problems of infancy and early childhood, school age or school-related problems, psychosomatic problems." The announcement noted that "the Foundation is quite willing to provide support which is supplemental to funding from the government. . . ." Later it noted "hopefully, such agencies as NIMH and NICHHD will see fit to provide sufficient support such that private funds will not be required (and Congress will see fit to appropriate the necessary funds)." At the February 2, 1978, board meeting, Mr. Sapir reported on the meeting of the Advisory Committee in January and that they had reviewed 20 applications. Altogether, 75 applications were received during the next few years.

The Advisory Committee met, on at least one occasion, with representatives of The Robert Wood Johnson Foundation to determine if a joint program was feasible. Eventually, The Robert Wood Johnson Foundation decided that it preferred to fund a program of "General Academic Pediatrics" focused on support for postresidency fellowships rather than residency and with emphasis on research training. The fact that Haggerty was appointed director of the General Academic Pediatrics program, which began in 1978, and that he was appointed president of the W. T. Grant Foundation in November 1979, led to linkages between the two programs. (Mr. Sapir resigned as president of the W. T. Grant Foundation on October 25, 1978.)

The 11 programs eventually funded by the W. T. Grant Foundation were selected, in part, because of differences in design and emphasis to allow some comparisons in the evaluation of characteristics that seemed to be most successful. Maryland had the most structured program (developed in large part by Marianne Felice, then a second-year Fellow), with 2-month block rotations in each of the first and second years and an elective in the third year. In the first year, basic issues of interviewing and psychologic development of healthy and ill children were taught. In the second year, the resident also participated in consultation with community agencies: an elementary school, a day-care center, and a multidisciplinary diagnostic center. Residents followed patients with problem behaviors in their continuity clinic. Forty percent of third-year residents elected to participate in the program. (Felice was appointed director of this aspect of residency training after Friedman took on the role of evaluator of all the 11 programs.) Although child psychiatrists participated in the program, they did so as consultants; behavioral pediatricians were the role models. However, it should be noted that Friedman was director of the Division of Child and Adolescent Psychiatry, as well as head of the Division of Behavioral Pediatrics. The program recognized the crucial role of a committed department chair of pediatrics (initially Marvin Cornblath) to the success of the program.

During 1978 the W. T. Grant Foundation funded five behavioral-pediatrics programs in addition to the one at Maryland: Boston University (Joel Alpert, chair; Barry Zuckerman, director); University of California-Los Angeles (James Cherry, chair; Arthur Parmalee, director); Duke (Samuel Katz, chair; Sam Yancy, director); Indiana (Morris Green, chair; Ernest Smith, director); and Utah (Lowell Glasgow, chair; Esther Wender, director).

In 1979, five more programs were funded: Case Western Reserve (Richard Behrman, chair; John Kennell, director); Columbia (Michael Katz, chair; Nicholas Cunningham, director); Syracuse, (Howard Weinberger, chair; Steven Caplan, director); Penn State (Nicholas Nelson, chair; Glen Bartlett, director); and Wayne State (Sanford Cohen, chair; Joseph Fischoff, director). Wayne State was the only program with a child psychiatrist as director.

Three of the 11 programs relied heavily on teaching behavioral pediatrics in continuity clinics. Eight programs had block rotations, but only five had mandated rotations: two in the first-year residency, one in the second-year residency, and two in both the first- and second-year residencies. Two programs had heavy emphasis on infancy and early childhood; emphasis on psychosocial problems of adolescence was weak in most programs. Teaching of interview techniques varied, with only one program successfully exposing all residents to intensive instruction in these skills.

TASK FORCE ON PEDIATRIC EDUCATION

In a concurrent effort, the Task Force on Pediatric Education issued its report in 1978 calling for more training of pediatricians in child development and behavior as one of the highest priorities.[28] The publication of this report was supported in part by the W. T. Grant Foundation.

The Task Force was organized under the leadership of C. Henry Kempe, and the American Academy of Pediatrics (AAP), and consisted of representatives of nine organizations* concerned with the training of pediatric residents, four private practitioners selected by the AAP, and four consultants. The report predicted that "Pediatricians will be called on increasingly to manage children with emotional disturbances, learning disabilities, chronic illness, and other problems of a developmental, psychological, and social nature" (p. 13 of the report). Under the heading "Underemphasized Areas in Pediatric Residencies" (p. 19), the report states "In certain subjects the educational content of many residency programs is inadequate. The most significant of these are the biosocial† and developmental aspects of pediatrics and adolescent medicine."

*The organizations were the American Board of Pediatrics, Society for Adolescent Medicine, Society for Pediatric Research, Ambulatory Pediatric Association, American Pediatric Society, Association of Medical School Pediatrics Department Chairmen, American Medical Association Residency Review Committee, Society of Professors of Child Psychiatry, and American Academy of Child Psychiatry.

†A term developed by the Task Force to cover the psychosocial and behavioral aspects of pediatrics.

The report documents residents' need for more training in the behavioral and developmental areas and lists the content of a suitable curriculum. Included were knowledge of normal and abnormal growth and development and topics related to the prevention, diagnosis, and interventions of behavioral and educational problems. Also emphasized were principles of family dynamics and skills in interviewing (p. 20). This teaching should, according to the report, be multidisciplinary, but be under the charge of a pediatrician (p. 21).

How influential this 1978 report actually was in changing pediatric residencies is difficult, if not impossible, to determine, because other factors were operant during the following time period. However, some progress was reported in a survey of 3,000 pediatricians 10 years after the Task Force report.[29] This survey was almost identical to the previous questionnaire used to generate data for the Task Force's report. The authors found among pediatricians who completed their residencies from 1984 to 1989 a perception of more adequate training in developmental-behavioral pediatrics. In addition, there was an increase in the number of pediatricians who identified their area of special interest as developmental-behavioral pediatrics. These increases since the 1978 Task Force survey were modest. The authors state "current trends are nevertheless encouraging and may reflect the impact that the Task Force and its report have made on pediatric education."

Twenty years later, Errol Alden, deputy executive director of the AAP; Russell Chesney, chair of the Department of Pediatrics at the University of Tennessee at Memphis and chair of the Academy's Committee on Education; and Jimmy Simon, chair emeritus of Pediatrics at Wake Forest University and one of the members of the original 1978 Task Force, recognized the need to update the report. They secured funding and the participation of all the other American pediatric organizations for the Future of Pediatric Education II.

In this Future of Pediatric Education II report,[30] the authors recognized that some progress had been made in education of pediatricians in the psychosocial areas but stressed that the many social changes that had occurred during the period exacerbated the need for training in this field. As they stated in their conclusion, "Pediatric training should continue to emphasize in-depth knowledge of normal development . . . but should also embrace new areas that mirror the changing health needs of children, including neurodevelopmental, behavioral and genetic issues." In the body of the report, under "Changing Patterns of Morbidity," they state "In addition, a growing percentage of children are developing severe developmental-behavioral pathology. . ." In the recommendations section, the first one states "Biopsychosocial and developmental problems . . . are serious and very widespread. All pediatricians should have the skills to cope with them."

Although the report dealt with the need for more adequate funding of both graduate education (residency), as well as continuing medical education, it was beyond the scope of the report to address the need for more adequate reimbursement of the special services for these children. Foremost among these are the difficulties of adequate payment for the team to deal appropriately with the child and family with complex biopsychosocial problems. Inadequate funding and lack of faculty in this specialty are rate-limiting factors in achieving both the goals of this report and the Residency Review Committee requirements for more and better training and service for children with these problems.

FORMAL EVALUATION OF THE WILLIAM T. GRANT FOUNDATION–FUNDED BEHAVIORAL PEDIATRICS PROGRAMS

Formal evaluation of the new Behavioral Pediatrics Programs from outside each program was a goal from the beginning, as noted by Mr. Sapir in his Annual Report for 1977. In addition, each program was requested to do an internal evaluation. In 1979, Friedman submitted a proposal to assess the "Behavioral Pediatrics Programs," with initial funding by the W. T. Grant Foundation. The intent was to compare the 11 programs with 13 matched residency programs (ones that did not have a specific program in behavioral pediatrics and had not applied for the W. T. Grant Foundation support but were comparable in reputation and residency training). This external evaluation was to include assessment of (1) interest, attitudes, and knowledge of residents regarding psychosocial aspects of pediatric care; (2) educational techniques and strategies that accomplished changes in these areas; (3) attitudes, knowledge, and support of pediatric faculty in these areas; (4) impact of the program on students and nonpediatric trainees; and (5) the resources used with emphasis on multidisciplinary contribution from child psychiatry and other disciplines (e.g., psychology, social work). Evaluation instruments would be developed and administered at critical times during training. In addition, site visits were to document differences in approaches to training.

Initial evaluation of the Maryland program[31,32] demonstrated that during the course of their residency, participants gained considerable knowledge about behavioral pediatrics and felt more confident to diagnose and manage behavioral problems, advise parents, and refer to various hospital and community resources. These increases occurred especially during the block rotations. As a by-product, the evaluation demonstrated that behavioral pediatrics could be successfully introduced during the first year of residency, in contrast with the belief of many faculty.

After this evaluation of a single program, all 11 funded programs were studied by site visits during their first or second year of Foundation support.[33] The results were sobering. In these programs, selected after a national competition, interview techniques were poorly taught in most. Scientific literature germane to behavioral pediatrics was virtually unknown. Only two programs had effective and friendly relations with child psychiatry, although in most programs child psychology seemed to be partially filling the void. Little research was being performed by the faculty. Linking the teaching of behavioral pediatrics to settings or activities that some perceive as low departmental priority, such as community health centers, was a serious educational barrier.

The evaluation compared the 11 funded programs with the 13 that had not applied for W. T. Grant Foundation funding.[34] Of the 13 nonfunded programs, seven had developed behavioral pediatric curricula. Thus, there were 11 funded programs, seven not funded but with programs, and six with no behavioral pediatrics program. Questionnaires to assess residents' knowledge and attitudes were sent to all 801 residents in these programs; the response rate was 71%. Significant changes occurred during the second year of residency with greater self-reported competence in management and ability to advise parents among funded and not funded (but with a program) groups than in the comparison group with no behavioral pediatrics program. As noted previously, the fact that even funded groups were variable in their ability to implement a full program potentially diluted the effects.

A survey of all 246 pediatric residency programs in the United States was performed in 1982.[35] Of the 60% returned questionnaires, 49% now said that they had a formal behavioral training program; only 13% offered none. The majority used continuous training (continuity clinic) rather than block rotations as the setting. Barriers included inadequate funding, lack of appropriate trained faculty, and resistance of residents and faculty. The faculty was primarily composed of pediatricians, but psychologists and social workers also played prominent roles. Only 18 of the 147 programs responding offered fellowship training in behavioral pediatrics, hardly enough to remedy the perceived shortage of faculty.

The Maryland evaluation group applied to the W. T. Grant Foundation for a 5-year more comprehensive evaluation to compare the three groups of programs. After the external evaluation, the Advisory Committee met and reviewed the proposal, but the Foundation rejected it as too expensive. There was also concern that it would be difficult to measure behavior of the residents, and reliance on paper-and-pencil tests of knowledge and attitudes were believed to be inadequate. The Foundation also expressed that its desire was to funnel their limited resources into support of what was seen as a critical shortage, namely, research in behavioral pediatrics. Some members of the committee felt this was an unwise decision, and as a result, today we have only tantalizing data suggesting that behavioral training in pediatric residency increases knowledge and attitudes, and no data on skills (e.g., interviewing).

The fact that 7 of 13 so-called comparison programs had instituted behavioral pediatrics training suggested to some that "the victory had been won," and that there was no longer the need to prove the effectiveness of such training. After all, other subspecialties have never systematically evaluated the effectiveness of their training. But it was an opportunity missed.

Each year, the 11 directors of the programs, funded by the Foundation, met at the time of the pediatric society research meetings. These meetings usually lasted 2 days and became a forum for the discussion of such issues as (1) the best methods of teaching components of the curriculum, (2) the optimal timing of various aspects of curriculum (e.g., during the first, second, or third year of residency), (3) the support of the faculty, and (4) the interdisciplinary process. The agenda for these meetings was developed by the program directors who shared in the leadership of these sessions. In 1979, the program directors decided also to develop a small half-day program aimed at promoting behavioral pediatric research and training issues to others attending the pediatric society research meetings. This was to become the prototype for the earliest meeting of the new Society for Behavioral Pediatrics (later the Society for Developmental and Behavioral Pediatrics [SDBP]).

FORMATION OF THE SOCIETY FOR DEVELOPMENTAL AND BEHAVIORAL PEDIATRICS

At the meeting of the 11 funded program directors in May 1982, Esther Wender proposed the development of a permanent academic organization to (1) provide a forum for sharing research findings in behavioral pediatrics and child development, (2) promote behavioral pediatrics and child development teaching in pediatric residency programs, and (3) act as a resource and advocacy group to promote mental health needs of children in and out of medical settings. The subsequent discussion addressed the following questions:

- Should this organization be independent or attempt to affiliate with another organization?
- Should membership be open to nonpediatricians?
- Should individuals with interest in developmental disabilities be encouraged to join?
- Should there be criteria for membership?
- What name should the new organization have?

It was decided that a new organization would be formed called the Society for Behavioral and Developmental Pediatrics, recognizing the overlap and interactions between development and behavior. This name was challenged by an existing Society of Developmental Pediatrics. A decision was made by Friedman to delete "Developmental" from the name to avoid a legal challenge to the incorporation process, and it was more than 10 years before the organization regained its original name.

Initially, the group approached the Ambulatory Pediatric Association to explore the possibility of joining that organization as a special interest group (or some other arrangement). After much deliberation, the Ambulatory Pediatric Association ruled against such a plan, not wishing to separate behavioral pediatrics from general pediatrics. The training directors then decided to "go it alone." In an effort to develop a high-quality organization, membership would be limited to pediatric and nonpediatric professionals who had published at least one article in a peer-reviewed journal. The group elected a president and committee chairpersons to initiate the development of the organization:

President: Stanford B. Friedman, M.D.
Constitution and bylaws: Candace Ericksen, M.D., and Doris Tinker, Ph.D.
Membership: Esther Wender, M.D.
Nominations: W. Samuel Yancy M.D.
Program: Barry Zuckerman, M.D.

At the first formal meeting of the new society the next year, Haggerty (as president of the W. T. Grant Foundation) expressed his concern about the large administrative costs of the fledgling society (in retrospect not a problem), the de-emphasis on research, and the competition with two existing organizations, the Ambulatory Pediatric Association and the Society of Adolescent Medicine, each with similar research methods and overlap in membership. There was also the issue of whether the organization should be a Section of the American Academy of Pediatrics (AAP). There were cogent reasons for a separate society, but Haggerty was concerned that by becoming separate it would lose its connections with departments of pediatrics, the pediatric literature, and the main pediatric research societies, the very issue that pediatricians had criticized about child psychiatrists. Haggerty still has this concern, because the Society for Developmental and Behavioral Pediatrics (SDBP) meets at a different time from the other academic pediatric societies. An alternative would be to meet just before or after the academic societies, as some of the pediatric specialties do. Also toward this end would be to encourage mainstream pediatric journals and texts to publish articles and chapters and papers to be presented at larger pediatric meetings and continuing medical education courses. A problem still to be solved is to bring the work of the SDBP into the mainstream of academic pediatrics.

The Society was initially located in Friedman's office at the University of Maryland, with his secretary, Charlene Johnson, helping in such chores as processing membership applications and obtaining nonprofit corporate status. A lawyer, Barry Lenk, worked on a pro bono basis with the Society regarding the latter process, and a local accounting firm volunteered time for many years to provide an audit for the Society. Nonetheless, the Society ran out of money, and was "bailed out" by a $5,000 grant from the W. T. Grant Foundation. As the work load increased, a series of part-time graduate students and part-time management firms tended to the office, until in 1984, Noreen Spota joined the Society as its business manager. Since that early period, the Society has been financially self-sustaining.

JOURNAL OF DEVELOPMENTAL AND BEHAVIORAL PEDIATRICS

The initiative and foresight of Marvin Gottlieb led to the creation of the *Journal of Developmental and Behavioral Pediatrics* (*JDBP*). As early as the 1950s, Gottlieb perceived a need for a journal devoted to developmental and behavioral issues that would, as Gottlieb outlined, (1) enhance the quality of care, (2) augment professional skills, (3) develop a camaraderie with fellow specialists, and (4) ultimately provide additional justification for subspecialty recognition by the American Academy of Pediatrics (AAP) (M. I. Gottlieb, personal communication, 2001). Later, Gottlieb added the promotion and dissemination of research in this area and interdisciplinary approach to clinical issues as major goals of the *Journal*.

Gottlieb based the need for a journal largely on his own lack of formal developmental and behavioral training as a resident and the lack of resource information available to him as a practicing clinician. He relates a parent's plea early in his career: "Dr. Gottlieb, I need your help. I was told my child is a 'late bloomer.' What does this mean? What do I need to know?" (M. I. Gottlieb, personal communication, 2001).

Although thoroughly convinced of the need for a journal, it took many years for Gottlieb's idea to come to fruition. He attributes this time lag primarily to his own hesitation to assume responsibility to create a journal. At the time, there were few active or helpful supporters of his pioneer efforts. Indeed, interesting a publisher willing to take the financial risk was a major obstacle. Nonetheless, Williams and Wilkins Company, largely through the efforts of Ms. Alma Wills of that publisher, finally, after much persuasion by Gottlieb, agreed to start the new *JDBP*. The first issue of *JDBP* appeared in March of 1980. Lippincott Williams and Wilkins still owns the copyright and publishes the *Journal*.

The first editorial board recruited by Gottlieb (Table 1) was an impressive group of individuals focused on developmental and behavioral issues. Initially, the journal encompassed a broad spectrum of developmental and behavioral issues as listed in Table 2. This first year was formatted for a quarterly presentation at $25.00 a year for individuals and $30.00 for institutions.

Soon after the formation of the Society of Behavioral Pediatrics (later the Society for Developmental and Behavioral Pediatrics [SDBP]), the Society initiated exploration of an official journal. Under the leadership of Melvin D. Levine, various options were evaluated; subsequently, negotiations were concluded with Williams and Wilkins for the Society to be the official sponsor of the *JDBP* and assume all editorial responsibilities. A search committee was appointed, chaired by Julius Richmond, to recommend an editor who might reflect the broad scope of the Society, and in 1985 Stanford Friedman was appointed to this position by the Executive Committee of the Society. He served as editor for two terms (12 years) and was succeeded by Paul Dworkin in 1997, also selected by a Search Committee chaired by Robert Haggerty.

The *Journal* currently (December 2002) has a circulation of approximately 1,400, which, interestingly, is essentially the same as when the Society took over the editorial functions of the *JDBP* in 1985. It now publishes six issues

Table 1. First Editorial Board of the *Journal of Developmental and Behavioral Pediatrics*

Editor in Chief:	
Marvin I. Gottlieb, M.D., Ph.D.	
Associate Editor:	
Peter W. Zinkus, Ph.D.	
Larry J. Bradford, Ph.D.	Herbert J. Grossman, M.D.
T. Berry Brazelton, M.D.	Thomas J. Kenny, Ph.D.
George W. Brown, M.D.	Marcel Kinsbourne, M.D.
Arnold J. Capute, M.D.	Jeanne M. McCarty, Ph.D.
Raymond L. Clemmens, M.D.	Chester Poremba, Ph.D.
William A. Daniel, Jr., M.D.	Sylvia O. Richardson, M.D.
David Belais Friedman, M.D.	N. Paul Rosman, M.D.
Normal Geschwind, M.D.	Larry B. Silver, M.D.
John F. Griffith, M.D.	

Table 2. Selected Topics Appearing in *JDBP* During Its First Year of Publication

March 1980 (three of nine articles)
- "Unanswered Questions about Childhood Suicidal Behavior: Perspectives for the Practicing Physician" by Cynthia R. Pfeffer, M.D.
- "Dyslexia: Initial Assessment and Outcome" by Arnold J. Capute, M.D., et al.
- "Do Repetitive Movement Patterns in Children and Animals Serve a Dearousing Function?" by Marcel Kinsbourne, M.D., Ph.D.

June 1980 (three of ten articles)
- "Focal Left Temporal Lobe Lesions and Delayed Speech Acquisition" by Daniel B. Hier, M.D.
- "The New Morbidities: Physician Competence and Consumer Utilization" by David A. Bergman, M.D., et al.
- "Outcome of Very Low Birth Weight (VLBW) Infants. 1. Neonatal Behavior of 188 Infants" by Elsa J. Sell, et al.

September 1980 (three of eight articles)
- "'Hyperactivity': Still a Maze of Questions" by Harrie R. Chamberlin, M.D.
- "A Left-Right Identification Scale for Clinical Use" by Dennis Whitehouse, M.D., et al.
- "A Clinician's Guide to the Use of Stimulant Medication for the Psychiatric Disorders of Children" by Dennis P. Caldwell, M.D.

December 1980 (three of seven articles)
- "Pediatric Practitioner's Knowledge of Developmental Disabilities" by Mark L. Wolraich, M.D.
- "Sexual Behaviors in Retarded Children and Adolescents" by John F. Simonds, M.D.
- "A Pilot Study of Blood Endorphin Levels in Children Using Self-Hypnosis to Control Pain" by Karen Olness, M.D.

per year, with a page allotment of 450 pages. In addition, six supplements have been published. Especially noteworthy, in regard to teaching developmental-behavioral pediatrics, is a curriculum in developmental and behavioral pediatrics published as a supplement in 1988, as the result of a committee chaired by Sam Yancy.[36] Subsequently, a more extensive curriculum was published in 1999, the product of a hard-working committee chaired by Dan Coury.[37] Other supplements were as follows:

"The Diagnosis and Treatment of ADHD in Early Childhood: Evidence-Based Controversies and Implications for Practice and Policy," P. A. Gorski (ed), February 2002

"Challenging Cases," M. T. Stein (ed), April 2001 (published in conjunction with *Pediatrics*)[38]

"Developmental Delay and Psychopathology in Young Children," R. K. Kaminer, H. J. Cohen (eds), June 1995

"Priorities in Psychosocial Research in Pediatric HIV Infection," L. J. Bauman, L. Wiener (eds), June 1994

The *Journal* now attracts 90 to 100 scientific manuscripts per year and publishes 25% to 35% of those received for publication. In addition, *JDBP* includes other features (e.g., review and special articles, commentaries, book reviews, and reviews of articles from other journals). The *JDBP* is now financially solvent, and modest royalties are available to the SDBP. Although, as mentioned, subscriptions have not significantly increased over the years, the Authors' Citation Ratings (compiled by ISI Thomson Scientific, Philadelphia, PA), which reflect how often articles in the *JDBP* are cited by other investigators, have steadily risen. The *JDBP*, together with the Society's annual meeting, constitutes the core of the Society's scientific endeavors.

FELLOWSHIP TRAINING

A lack of faculty appeared to be a key barrier to the further development of developmental-behavioral pediatrics. Therefore, Friedman applied to the Maternal and Child Health Bureau (MCHB) in 1986 for a fellowship training program, which was not approved for funding. His own experience at Rochester and Maryland, where he had trained 36 Fellows (22 of whom were in faculty positions by 1988), led him to believe that this critical shortage of faculty could be remedied. In 1986 a training program in behavioral pediatrics at the fellowship level was developed by the MCHB "to train academic leaders, faculty, and researchers." There were originally 12 MCHB training programs, and each was funded for 5 years.[39] Early evaluation by the MCHB was extremely positive, and the program was judged to be successful with 67% of the graduates in academic settings. In 1999, nine grants were awarded, for a total of $1.2 million, with a mean award amount of $132,000.[40] By the year 2000, there were 50 fellowship programs in developmental and/or behavioral pediatrics listed in the *Journal of Developmental and Behavioral Pediatrics* (*JDBP*).[41]

SECTION FOR DEVELOPMENTAL AND BEHAVIORAL PEDIATRICS OF THE AMERICAN ACADEMY OF PEDIATRICS

Sections of the American Academy of Pediatrics (AAP) are primarily focused on the education of academy members in a particular area. Although there is considerable overlap between the members of the Section for Developmental and Behavioral Pediatrics and the Society for Developmental and Behavioral Pediatrics (SDBP), the functions of the two organizations are different. The SDBP has the broader function of fostering research, publishing a journal, and conducting an annual scientific meeting. Thus, it is the scientific home for people in the field. In addition, to be a member of an Academy Section, one must be a pediatrician, although membership in the SDBP includes nonphysician behavioral scientists.

Interest from pediatricians in mental health and children's problem behaviors at the AAP began early. Five years after the founding of the AAP in 1930, a Committee on Mental Hygiene was set up at the AAP under the chairmanship of Bronson Crothers. (Committees of the AAP are organized to prepare reports and make policy recommendations, whereas Sections are composed of members sharing an interest in a field.) During the next several years, a number of changes in the name and function of the committee occurred, and in 1949, on the recommendation of the committee, a Section on Mental Health was formed under the chairmanship of Milton Senn. The major focus of the new Section was teaching AAP members about the field. The name was changed again in 1960 when a new

Table 3. Past Recipients of the C. Anderson Aldrich Award

1964 Milton J. E. Senn, M.D.	1984 John H. Kennell, M.D.
1965 Alfred H. Washburn, M.D.	1984 Marshall H. Klaus, M.D.
1966 Julius B. Richmond, M.D.	1985 Edward F. Zigler, Ph.D.
1967 Lawrence K. Frank	1986 Robert Haggerty, M.D.
1968 Edith B. Jackson M.D.	1987 Mary D. S. Ainsworth, Ph.D.
1969 Leo Kanner, M.D.	1988 Barbara M. Korsh, M.D.
1970 Benjamin M. Spock, M.D.	1989 Albert J. Solnit, M.D.
1971 Erick H. Erikson, L.L.D., Sc.D	1990 Martin C. O. Bax, D.M.
1972 J. Roswell Gallagher, M.D.	1991 William B. Carey, M.D.
1973 Gunner Dybwad, L.D.	1992 William K. Frankenburg, M.D.
1974 Anna Freud, L.L.D., Sc.D	1993 Jerome Kagan, Ph.D.
1975 Arthur H. Parmelee, M.D.	1994 Barton D. Schmidt, M.D.
1975 Sally Provence, M.D.	1995 Melvin D. Levine, M.D.
1976 Harry H. Gordon, M.D.	1996 Russell A. Barkley, Ph.D.
1977 C. Henry Kempe, M.D.	1997 Morris A. Wessel, M.D.
1978 Ronald Stanley Illingworth, M.D.	1998 Stanford B. Friedman, M.D.
1979 Stella Chess, M.D.	1999 Karen N. Olness, M.D.
1980 Leon Eisenberg, M.D.	2000 Abraham Bergman, M.D.
1981 Michael L. Rutter, M.D.	2001 Allen Crocker, M.D.
1982 Morris Green, M.D.	2002 John (Jack) Reinhart, M.D.
1983 T. Berry Brazelton, M.D.	

Section on Child Development was organized under the chairmanship of Julius Richmond to further his concept (previously discussed) that child development was the basic science of pediatrics.[‡] In 1988, the Section, led by the Section Chair Barry Zuckerman, M.D., changed its name to the Section for Developmental and Behavioral Pediatrics. The goal of the name change was to have a name that would provide consistent name recognition and comparability to the SDBP. The focus of the Section was now geared more toward the high-prevalence, low-severity behavioral and developmental problems and aimed at primary care pediatricians.

In the 1960s and 1970s, there was much interest in training pediatricians to improve their knowledge and skills of developmental, behavioral, and psychosocial pediatrics, and Section leaders collaborated with child psychiatrists, for example, Dane Prugh, Meyer Sonis, and Reginald Lourie. Benjamin Spock, although not actively involved, exerted a powerful influence to train pediatricians to deal with psychosocial issues.

In 1964 the Section on Child Development established the C. Anderson Aldrich Award with funding from Ross Laboratories (Abbott Park, IL). The Aldrich Award is given to pediatricians who have made outstanding contributions to the field of child behavior and development. The award is presented during the AAP Annual Meeting during the Section's educational program (Table 3).

Also in 1964, the Section established a Health Education Committee, which revised the Academy's bibliography on sex education with a pamphlet, "Selected References on Sex Education," published in 1965. The Section also established a Subcommittee on Mental Retardation, which worked closely with the Academy's Section on Handicapped Children to improve medical care for the retarded child. It also increased the coverage of problems of handicapped children in annual meeting programs. This led to the establishment of a Teaching Institute on Mental Retardation in 1964. The Section also established a Subcommittee on Implications of Federal Legislation on Programs for Child Development, which tracked the effects of such legislation on child-development programs. In 1967, the Education Committee of the Section published "Training Opportunities in Child Development," a list of training programs for pediatricians in child development and child psychiatry. During the early 1970s, the Section was involved with efforts to improve television programming for children. The Section also surveyed child-development teaching in major pediatric departments.

In 1973 the Section established the Dale Richmond Memorial Award. This award recognizes child advocates and health professionals (e.g., physicians, psychiatrists, psychologists, and writers) for outstanding contributions in the field of health, behavior, and child development. Dale Richmond (1950–1971), the son of Rhee and Julius B. Richmond, showed a deep concern for those in need and was active in numerous community and service programs at the local and national levels. The award is presented at the AAP Annual Meeting during the Section's educational program (Table 4).

The Section has held joint programs at the AAP annual meeting with other Sections, most notably Community Pediatrics and Adolescent Medicine. The Section also established liaisons with the Committee on Early Childhood, Adoption, and Dependent Care, and the Committee on Psychosocial Aspects of Child and Family Health. In addition, the Section had a member on the Task Force on Coding for Mental Health Disorders in Children and later had a representative on the Academy's Task Force on the Family. The Section played a major role in planning and securing funding for a Consensus Conference on

[‡]This history is based on a speech given to the Section in 1971 by Henry Work: History of the Section on Child Development: A Tribute to Sherman Little (unpublished). From the Library of the American Academy of Pediatrics, October 1971.

Table 4. Past Recipients of the Dale Richmond Lectureship

1973 Urie Bronfenbrenner, Ph.D.	1988 Robert J. Haggerty, M.D.
1974 Bettye Caldwell, Ph.D.	1989 Leon Eisenberg, M.D.
1975 Jerome Kagan, Ph.D./Orville Brim, Ph.D.	1990 Felton Earls, M.D.
1976 Edward Zigler, Ph.D.	1991 Margaret C. Heagarty, M.D.
1977 Lisbeth Bamberger Schorr, M.D.	1992 Deborah Klein Walker, Ed.D.
1978 Lawrence T. Taft, M.D.	1993 Ruby Hearn, Ph.D.
1979 Morris Green, M.D.	1994 James Garbarino, Ph.D.
1980 Sibylle Escalona, Ph.D.	1995 Stephanie Coontz, M.A.
1981 George Tarjan, M.D.	1996 Judith Wallerstein, Ph.D.
1982 C. Arden Miller, M.D.	1997 William Harris, Ph.D.
1983 Edwin W. Martin, Ph.D.	1998 Robert Coles, M.D.
1984 Vince L. Hutchins, M.D.	1999 Marian Wright Edelman, L.L.B., J.D.
1985 Elizabeth Boggs, Ph.D.	2000 Frances Page Glascoe, Ph.D.
1986 Paul F. Wehrle, M.D.	2001 Edward Chrisopherson, Ph.D.
1987 Albert J. Solnit, M.D.	2002 Marie Bristol-Power, Ph.D.

Developmental Issues Related to Children held in November 1991 and also was involved with the Future of Pediatric Education projects.

In recent years, the Section has concerned itself with issues such as coding and reimbursement, attention deficit disorders, learning disabilities, the effects of maternal substance abuse on children, spanking, violence, grief counseling, family functioning, and the need for hospice care for dying children. One feature of its scientific meetings has been a program on the 10 best articles published during the previous year. The Section also has assisted in the preparation of Academy brochures on topics of interest to Section members. Membership has grown steadily to the point that the Section is the eighth largest in the Academy. There were various efforts to start a newsletter, and an occasional newsletter appeared before 1991. In 1991, the Section established a formal newsletter that has been published twice per year ever since. In 1994 and 1995, the Section also conducted a needs assessment survey of its members to determine which areas were most important to members. In 1996, the Section established a home page on the Academy's website that helped the Section communicate with its membership. The Section has, under the guidance of Hank Shapiro, established a developmental-behavioral pediatrics list serve or chat line, which serves 350 pediatricians in the United States and abroad. In February 2000, the Section held a 2-day Strategic Planning Meeting to plan new initiatives.

DEVELOPMENT OF SUB-BOARD ACCREDITATION

For several years, the Society for Behavioral Pediatrics had been discussing the wisdom of, and exploring the process of, applying for subspecialty status. Despite the potential benefits of subspecialty status, consensus about the central importance of child development and behavior and family functioning to the science and practice of general pediatrics had resulted in decisions *not* to initiate such a petition. In 1990, when the Society for Developmental Pediatrics made a formal application to the American Board of Pediatrics (ABP) for subspecialty status in Neurodevelopmental Disabilities, the potential disadvantages of foregoing formal subspecialty status for the discipline became greater. This recognition led the Executive Council of the Society for Behavioral Pediatrics (in April 1991) to pursue support from the ABP for the subspecialty of development-behavioral pediatrics with the purpose of pursuing formal recognition through sub-board certification.[42] In addition, although many leaders in developmental-behavioral pediatrics had resisted subspecialty certification for many years, they came to recognize that national trends in medicine necessitated subspecialty status.

In 1992 the Accreditation Council for Graduate Medical Education of the American Medical Association declared a moratorium on any new subspecialty petitions, causing a temporary delay in the process; thus in 1993 the ABP announced that it would consider no new subspecialty applications until further notice. Nevertheless, two professional organizations, the Society for Developmental Pediatrics and the Society for Behavioral Pediatrics each decided to proceed with the process of preparation of their applications for formal subspecialty status, according to Perrin et al.[42]

As the result of increasing recognition of the substantial clinical and academic needs being addressed by the subspecialty of behavioral pediatrics, the Executive Council and then the entire membership of the Society for Behavioral Pediatrics voted to change its name to reflect its growing scope, thus returning the Society to its original name. In 1994 the Society for Behavioral Pediatrics became the Society for Developmental and Behavioral Pediatrics (SDBP). In October 1994 the SDBP submitted a preliminary application for formal subspecialty status to the ABP. Initially, SDBP favored a joint subspecialty board with the Society for Developmental Pediatrics, believing that there is considerable clinical overlap between the efforts of the two societies, and that development and behavior in children are intimately intertwined. However, the latter society refused to join in the process and chose to petition for independent certification through the joint sponsorship of the ABP and the American Board of Psychiatry and Neurology.

From the beginning of this process, the ABP was aware that there might be concerns about the formal recognition

of this new subspecialty from practicing general pediatricians and academic generalists. It was clear to all that child development and behavior are central to all of pediatrics. Academic General Pediatrics was heavily invested in behavioral issues and especially their relationship to psychosocial and learning problems, as well as traditional medical diseases, and many of its fellowship programs focused their research on this interface. Nonetheless, many groups within the practicing pediatric and academic generalist community were canvassed, and there was universal support for pursuing subspecialty status for developmental-behavioral pediatrics. By 1997 the ABP was reassured that there was little or no opposition from this large constituency.

The Section for Developmental and Behavioral Pediatrics also played a significant role in the accreditation process. The Section had sought to convince the ABP that a subspecialty certification in developmental-behavioral pediatrics was needed. Its initial efforts were unsuccessful, but the issue would not go away.

The Section tried again in 1994. Their efforts were successful as the board agreed to consider such a subspecialty. In 1994 Joe Sanders, executive director of the American Academy of Pediatrics (AAP), contacted James Stockman, president of the ABP. The Section chair, William Coleman, represented the Section in an assessment of the opinions and needs of general pediatricians. The efforts led to the determination that board certification would provide them with more education, enhance their services and skills, and provide more appropriately trained subspecialists to serve as consultants and sources for referrals. Approximately 400 members of the Section wrote to the ABP supporting the accreditation process. Walter Tunnessen (now deceased), then senior vice president of the ABP, stated that this very strong response was a significant factor in the ABP's decision to support the accreditation of developmental-behavioral pediatrics.

In 1997 the prohibition against new subspecialties was lifted by the American Board of Medical Specialties (ABMS). Promptly, the ABP approved the Society for Developmental Pediatrics' application, which was based on cosponsorship with the American Board of Psychiatry and Neurology and emphasized in its training the neurologic aspects of children's disabilities. This application was tentatively approved (on its "first reading") by the ABMS. Despite several efforts to find common ground, the leadership of the Society for Developmental Pediatrics continued to oppose the development of formal board certification status for developmental-behavioral pediatrics.

At this time, James Stockman, the new president of the ABP recognized that despite the fact that the two fields are substantively related and overlapping in scope and mission, a collaborative application was unlikely to be successful. The ABP chose to support two independent subspecialty applications to the ABMS, rather than pursuing further efforts to create a joint application, and insisted furthermore that the two applications be considered simultaneously. Therefore, the Society for Developmental Pediatrics' application was held in abeyance while the SDBP petition could be completed.

Opposition to the creation of a new sub-board in developmental-behavioral pediatrics also was encountered from the Child and Adolescent Psychiatry subspecialty of the American Board of Psychiatry and Neurology, although some prominent leaders in that field supported the SDBP application. Without the support of the American Board of Psychiatry and Neurology, it was unlikely that the ABMS would approve the application. When the Council on Certification and Recertification of the ABMS first considered the application of the SDBP, the American Board of Psychiatry and Neurology formally opposed it and challenged the SDBP to come to an understanding with the child psychiatry community regarding the scope of and training for the new subspecialty.

Despite that challenge, tentative approval for the SDBP petition (its "first reading") was granted by the ABMS in March 1998, despite strenuous objections from the American Board of Psychiatry and Neurology. A task force was organized between the two organizations, and the SDBP's application was rewritten to meet some of the concerns of the child psychiatrists. This iteration clarified the distinctions among developmental-behavioral pediatrics, child neurology, child psychiatry, and "neurodevelopmental disabilities." A curriculum for developmental-behavioral pediatrics was developed that emphasized how the research, patient care, and academic roles of developmental-behavioral pediatricians were different from those of child and adolescent psychiatrists in many respects. The agreement included a recommendation that general pediatric residencies also include rotations in child neurology and child psychiatry. Despite some recognized overlaps between developmental-behavioral pediatrics and child and adolescent psychiatry, the need for research and training of pediatricians, recognition of the vast and growing need for prevention, care, and advocacy for mental health, learning, and behavioral problems of children and adolescents, and support of families reduced the opposition. Not compromised was the recognition of developmental-behavioral pediatrics as a long-standing pediatric subspecialty, and that members of the SDBP are integral members of pediatric departments rather than of psychiatry or neurology departments. It was further noted that development and behavior

Table 5. Number of Programs Without Formal Division or Section of Developmental and Behavioral Pediatrics Reporting Fulfillment of Residency Review Committee Requirements

Method of Fulfillment	No. of Programs Reporting
Experienced/trained faculty often in general pediatrics	5
Outside agencies or hospitals	4
Neurology	3
Child development/disability program	2
Developmental/behavioral rotation	2
Continuity clinic	1
Child psychiatry	1
Lecture series	1
No data	5

Table 6. Number of Programs Reporting Faculty Who Are Members of Section on Developmental and Behavioral Pediatrics of the American Academy of Pediatrics and the Society for Developmental and Behavioral Pediatrics[a]

No. of Programs Reporting Faculty in AAP Section		No. of Programs Reporting Faculty in SDBP	
No. of Programs	No. of Members	No. of Programs	No. of Members
17	0	16	0
31	1	24	1
12	2	12	2
12	3	14	3
6	4 or more	13	4 or more
9	Not known	6	Not known
15	Missing data	17	Missing data

[a]Assume significant overlap of membership.
AAP, American Academy of Pediatrics; SDBP, Society for Developmental and Behavioral Pediatrics.

cannot be separated, either in theory or practice. Developmental-behavioral pediatrics firmly embraced the biopsychosocial model and recognized that other disciplines do also. Thus, after 8 years of sometimes acrimonious conflict, both the subspecialties of developmental-behavioral pediatrics and neurodevelopmental pediatrics were approved by the ABMS in March 1999.

After formal approval from the ABMS, the ABP appointed a sub-board of developmental-behavioral pediatrics and gave it three primary charges: to develop criteria for eligibility to take the certifying examination, to create the examination itself, and to work with the Residency Review Committee to develop guidelines for subspecialty training. Seven members and three consultants (from child neurology, child and adolescent psychiatry, and pediatric psychology) were appointed to the sub-board. The first examination was set to be administered in November 2002.

CURRENT STATUS OF THE TEACHING OF DEVELOPMENTAL-BEHAVIORAL PEDIATRICS

During the year 2001, starting in the Spring and ending in December, 147 questionnaires were sent by the authors to the chairpersons of all pediatric residency programs affiliated with medical schools in the United States and Canada.[§] Of the 147 mailed, 101 (69%) were returned initially or after follow-up contact by telephone and/or e-mail. Of these, 36 were completed by the chairperson, 64 by a designated faculty member, and two instances could not be determined.

The questionnaire asked each department chairperson (including the chairs in 10 Canadian and one Caribbean program) or a designated faculty member to describe the current status of developmental-behavioral pediatrics in their department, especially basic information regarding current residency and fellowship training in this area. Specifically excluded was teaching or programs focused on developmental disabilities.

Of the 101 programs responding, 82 stated they had a division or section of developmental-behavioral pediatrics, and 19 did not. The latter, when questioned how they met the Residency Review Requirements in this area, reported a variety of options (Table 5). Noteworthy was that five programs relied on "experienced" and/or "trained" faculty, often in a division of general pediatrics, to instruct residents, and four relied on developmental-behavioral teaching at outside hospitals or agencies.

Table 6 shows the number of faculty with membership in the Section on Developmental and Behavioral Pediatrics of the American Academy of Pediatrics (AAP) and membership in the Society for Developmental and Behavioral Pediatrics (SDBP). It should be noted that probably many faculty belong to both organizations. Respondents were asked to list major funding sources (10% or more or total program budget), and Table 7 lists these sources. Again, some programs have more than one source of funding in 10% or more of their programs.

Respondents were asked about the strengths and weaknesses of their programs. Note that a respondent could list more than one strength or weakness, hence the total number of responses exceeds the 101 returned questionnaires. Regarding the strengths of the developmental and behavioral program, the "expertise" and "strong teaching of the faculty" was the most frequent response (28.6%; Table 8). Interestingly, research represented only 7.7% of the responses. Of the weaknesses reported, "inadequate faculty" represented 27.8% of the responses and "limited or no research" 18.9%. Clearly, adequate faculty is a key issue, whether addressing strengths or weaknesses.

Programs reported a total of 58 Fellows in training: 31 in the first year, 19 in the second, and 8 in the third year. We have no information regarding the reason for the decline over the 3 years. Further, given the lack of emphasis in research just cited, it should be noted that research

Table 7. Major Sources of Funding (10% of Budget or More) for Division (Section) of Developmental and Behavioral Pediatrics

Funding Source	No. of Programs
Private patient or clinic fees	77
Research grants	
Local, state, or institutional	42
Federal	27
Private foundation	24
Other	39

[§]Questionnaire available on request.

Table 8. Number of Programs Listing Specific Strengths and Weaknesses

	No. of Programs Reporting	% of Total Responses
Strengths		
Expertise of faculty, strong teaching	48	29
Fulfills patient needs, good clinical care, and/or facilities	26	16
Multidisciplinary team or approach	22	13
Strong programs in specific areas (e.g., genetics, development)	21	13
Community/school-based programs	15	9
Research	13	8
Residency rotation	5	3
Institutional resources, endowed proferssorships	5	3
Many trainees	2	1
Other	12	7
Total	168	100
Weaknesses		
Inadequate faculty/personnel	38	28
Limited/no research	26	19
Inadequate funding	16	12
Poor reimbursement for services	11	8
Poor teaching/disorganized teaching, too much/too little focus	10	7
Limited clinical population	6	4
No fellowship	6	4
Too large patient population, overly difficult patients	5	4
Limited facilities	4	3
Weak ties with child psychiatry	3	2
Other	12	9
Total	137	100

productivity is a requirement of all 3-year pediatrics fellowship programs.

Residency Training

Of the 101 departments surveyed, 95 reported a residency rotation in developmental-behavioral pediatrics, and three reported no such rotations (missing data for three respondents). Of the 95 programs reporting rotations, 78 described the rotation as 1 month, and 13 described the rotation as different than 1 month (missing data in 11 instances). Eighty-one programs reported using a curriculum guide, and 15 stated no guide was used in teaching developmental-behavioral pediatrics (missing data for six programs). Sixty-eight programs said they developed their own program, and 24 used the curriculum developed by the SDBP.

Respondents were requested to list no more than five highest priorities in developmental-behavioral pediatric

Table 9. Priority of Topics in Residency Training

Topics	No. of Responses	% of Total Responses
Normal development, assessment, and testing	61	15
ADHD and other learning problems	58	14
Identification and assessment of developmental delay	46	11
Behavioral disorders	44	11
Services and care for chronic illness and DD community, medical, and educational services	30	8
Autism and PDD	29	7
Cerebral palsy and other neurologic disorders	18	5
Down syndrome and mental retardation	16	4
Parental and family support	16	4
Speech and language disorders	14	4
Interviewing and communication	13	3
Behavioral and pharmacotherapy interventions	12	3
Neonatal and high risk infant follow-up	10	3
Multidisciplinary team approach	7	2
Psychiatric/psychological disorders	6	2
Child abuse	5	1
Genetic syndromes	4	1
Other	13	3
Total	401	100

ADHD, attention-deficit hyperactivity disorder; DD, developmental disability; PDD, pervasive developmental disorder.

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