This paper describes the goals and implementation of a program which trains pediatricians in child development at Boston Children's Hospital. The program emphasizes an understanding of "normal" child development, rather than the pathological model with which most pediatricians are familiar. Pediatricians are encouraged to use their awareness of a child's developmental progress to establish a cooperative relationship (rather than a dominating one) with the child's parents. Two-hour seminars are provided twice weekly for the doctors by an expert in child development. Each pediatrician is required to carry out a research study related to child development. To aid the doctors in their research efforts, weekly seminars in research methods are conducted by psychologists.

Pediatricians are expected to learn to teach child development principles to other medical personnel during weekly ward rounds, consultations, or clinic work. Through these trained pediatricians, the program aims to apply an understanding of child development to models for preventive and caregiving services in the community. It is anticipated that the program will establish a working liaison between pediatrics and other fields concerned with early identification and intervention.
PEDIATRIC TRAINING PROGRAM FOR CHILD DEVELOPMENT SCHOLARS

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I would like to describe the Child Development Fellowship Program at Boston Children's Hospital for training pediatricians to take leading roles in promoting understanding of normal Child Development in medical settings. This program has been funded by the Carnegie Corporation—and more recently—by the Robert Wood Johnson Foundation. In three years, we have now had 9 Fellows through the program as well as 14 pediatric residents and 8 medical students.

The program emphasizes an understanding of "normal" child development and if any of you are familiar with the traditional medical model, this in itself is an innovative model. The only course in child development which Harvard Medical students receive in their four years of medical school and in their two to three years of pediatric specialty training is one half day a week taught by child psychiatrists from a pathological perspective. As pediatricians, we are trained to look only for pathology—never to evaluating strengths or to share in the excitement of normal development! Promulgating a non-pathological model, then, becomes our first goal in our program—and it will not surprise you to hear that it's a constant battle!

Our second goal is not only to establish the excitement and potential for normal development in children, but to find our role as pediatricians who want to share in it. This could be divided into three segments:
1. an awareness of a broad developmental evaluation of a child
   (including his personality style, his coping abilities, his way
   of approaching a task - as well as how he performs),
   2) transference issues, and 3) sharing our point of view with the families and the
   supporting team for intervention. A surprising revelation has been
   that if we really mean to share in the child's progress, we must indeed
   share - and not take over. It is difficult for anyone who cares about
   small children to share responsibility for their well-being. Anyone who
   cares about children feels (s)he can do better by them than anyone else -
   and this unconscious competitive feeling influences the behavior toward
   parents of doctors, nurses, psychologists, daycare-givers, etc. It's
   a powerful force, and it makes it difficult for any of us in early child-
   hood, for we end up as destructive rather than constructive as we
   devaluate or exclude parents. So the goal becomes that of exploring,
   understanding, and learning to utilize the transference relationship which
   we as professionals can establish with children and parents.

   Our third goal is to create the intellectual and experiential base
   for understanding development in normal children. For this, we have
   turned to the discipline of Child Development, primarily in the guise of
   Elizabeth Fox. She leads the group through the literature of Child De-
   velopment in two, two hour seminars a week. Also, she is a constant
   source of guidance, support and a referral source to the Fellows as they
   seek to develop their own model. Implicit in her work as a member of
   the team is her ability to modify her/teaching methods and goals by
blending them to ours. She has had to go on our ward rounds, participate in patient care in our clinics. She has had to suffer our resistance, our ignorance as pediatricians in order to understand what we could hear, what literature we could read and understand as she learned how to perpetrate a model which was pertinent to the needs of clinicians and researchers in pediatrics. However, I'm pretty sure she'll join me in saying that it's been an exciting, rewarding experience.

Seconding her work with our fellows is a team of psychologists, Edward Tronick, Lauren Adamson and Heidelise Als, who work with me in mother-infant research. They have joined to lead our fellows-through a weekly seminar in research methods and to back them up in their original research efforts. Each fellow is expected to conceive, develop and carry Original research becomes our fourth goal. through a piece of research in the field of Child Development. It has surprised me and them that this is so difficult. Although they all come with important research questions, their training in medicine does not fit them for rigorous behavioral research. Does that surprise any of you? I doubt it. One of the hardest jobs Liz and I have had is helping each fellow over his or her initial ambivalence about his new role as a researcher. Pediatricians are trained to do service for people, and we are led to believe that we should solicit cooperation from patients only if we provide care in exchange. Nothing in our training has prepared us to believe that behavioral research is really as valuable as more traditional physiological medical research. And yet, in three years, our fellows have been able to complete research on pediatric roles in daycare, the outcome of ruminators, failure-to-thrive infants, pediatric involve-
ment in prenatal interviews, use of videotape to teach interviewing skills, day care as a teaching exercise for pediatricians, and to institute a work to evaluate the effect of mothers' working on babies' attachment behavior in the first four months, using the Brazelton Neonatal Assessment to increase attachment behavior in new mothers, the effect of bilirubin phototherapy on neonatal behavior, and a design for differentiating the infant's responsiveness in a reciprocal interaction to mother, father and strangers. These last two projects have paralleled and been integrated into the work in our laboratory with the Neonatal Scale and our work with mother-infant reciprocity which we shall report on elsewhere. The pediatricians and the research psychologists obviously feed each other and I'm sure that the psychologists would be the first to admit that they have gathered a rare education in pediatrics as they have supervised each of the Fellows in their research efforts.

One of the offshoots of this experience has been the conviction that we all share (and more recently Fran Horowitz expressed at Joy Osofsky's behest in the Child Development Newsletter) that one of the goals of such a program should be to train Child Psychologists who are in fields related to medicine and psychophysiology in the tools they need from pediatrics to enrich their models of research in Child Development.

Our fifth goal is to create teachers for a new specialty within pediatrics—normal child development. Its goals would be the early identification and intervention in at-risk dyads or triads, as well as
a better understanding of the interaction between psychological and physiological developmental processes. Each of the Fellows, as excellent clinicians already, present optimal role models for house officers and medical students. But we have all recognized the problems of teaching "soft" information such as the importance of the transference in a pediatric relationship, or developmental processes which are necessary to an understanding of the total child to pediatricians at a time when house officers they are attempting to learn about treating acute physical illness.

There are several opportunities for the Fellows to try their teaching skills. First, we have two kinds of weekly rounds on the wards where we present cases and discuss them with an inter-disciplinary group of ward personnel. Second, consultations on the wards (which have risen from 25 the first year to 275 this last year) offer a major opportunity for one-to-one teaching and we all (about 15) troop around on Thursday afternoon to see most of the "consults". In addition, there are lectures for house officers, nurses, parents and outside groups. It certainly is surprising (but shouldn't be) how much ambivalence and shyness each of us has to overcome in teaching such a "soft" discipline. Experience coupled with conviction helps a great deal. An example of the way we teach might be cited — e.g. an 8 m.o. FTT (Failure to Thrive) might be presented at our weekly rounds. In addition to a history and physical which aims at an evaluation of the nature of the mother-child interaction, as he is brought into rounds for evaluation, we assess his initial responses for their affective and cognitive content. Is he attached to
the caretaker? Will he go easily from one to another without looking back at the previous person? Does he show anxiety about the strange situation or the new handler? Is he so well developed that he shows no affect or is he frozen? Does he prefer objects to people, and interpersonal stimuli at a distance vs. close up? Using Denver or Gesell items we attempt to assess his motor and cognitive status but are constantly alert to signs of attachment or affective status which point not only to previous experience with stress and separation but give us an idea of how much affect he can mobilize. Color changes and energy level give us an estimate of his physical status. These can be more important as signs of his at-riskness than is his physical status in a disease such as failure-to-thrive which is usually a failure in the environment's reaction to the child as well as a disease of undernutrition. The team in our multidisciplined rounds will then approach the diagnosis and treatment of the child as an example of a psychosomatic disease entity, involving the environment as well as the child.

A major opportunity for teaching has been presented to us in the guise of an Early Childhood Clinic in the Out-Patient Department. We have a three man team of nurse practitioners, social workers, medical students and house officers who are supervised by one of our own Fellows in this clinic to see each patient. The clinic is designed to serve patients under three years with behavioral problems. Our goals are those of diagnosis and prevention. In order to achieve these, we focus on 1) the establishment of a meaningful relationship with the parents
at the level that they present themselves and 2) within this relationship, looking at the presenting symptom as a disturbance in the parent-child interaction. Our approach is not a one-shot diagnostic one, but a four to six week short-term diagnostic and therapeutic intervention.

Our sixth goal is to see how to apply some of our understanding to models of care for children and parents which are already in use in the community: preventive, or caregiving models in our society. The OPD, the Emergency Clinic, the prenatal clinic at the BI, other primary care operations, and finally but most importantly, daycare settings and primary schools have been our focus so far. For example, the Fellows have been caregivers at the front with small children in Day Care. It has been found to be such a searchingly powerful model for understanding small children, their parents, the demands of being in charge of small children for a stretch, and finally our role as we interact with teacher's, parents, and children that we have begun to use it (Dr. Peter Paladin) to teach house officers and medical students as well as ourselves about children, their development and their needs and our relationship to them. Here again, we have found our competitive feelings a major problem. Another example has been the Fellows' involvement at the Boston Hospital for Women with pregnant women, who use them as confidantes and therapists for themselves in pregnancy, and then after the infant arrives, use the pediatrician as a firm supportive base for establishing attachment to their new babies. After having known the pediatrician prenatally, we have found that mothers assume that (s)he is on her side and will use
him much more effectively as a professional who sees her side as well as that of the infant in discussing psychological as well as physical issues.

Our seventh goal is to develop an integrated relationship with child psychiatry and child development. We have a member of the Child Psychiatry Department, Dr. Robert McCarter, who has explored various models for teaching us his expertise—the best model so far has been one-to-one supervision which has worked out best on the spot and in the clinic with cases. From child development we have had frequent contact with many leaders in the field who are in touch with us because of our own research and who offer us powerful opportunities for understanding their research problems, how they attack them, e.g. our own group, Condon, Thomas, McGraw, Parmelee, Horowitz, McCall, Kagan, Konner, etc. Recently, we have come to feel the need for a neurologist member of the team and will search for a way to incorporate him or her in the near future.

The main excitement of our program is contained in the concept of developing this new model for ourselves and hopefully for all of pediatrics. We hope to establish a working liaison with the other fields concerned with early identification and intervention—social service, psychology, nursing, child development, etc. We have certainly been having an exciting, rich, too full experience. Our successes are demonstrated in the rapidly increasing involvement of the house staff, the consultations, challenges to create a new model for evaluating children on the wards, and to create a new model for OPD care for parents and children. The
changes in all of us over the past few years have been dramatic. But we have an even more important challenge—which we have felt and begun to seize upon—from child development and our work with all of you in S&CD. We want to participate in a multidisciplined effort to begin to create a new multifaceted model for understanding the developing child—one which includes the many modalities which interact to create the total child as opposed to the old, far too simple S-R model. We want to capture the sources of fueling in him which provide the energy for development. One comes from the excitement a child gets from within (viz. his own sense of competence—felt at each stage of success) and the other he receives from his environment—which gives him the many rich opportunities for identification for a kind of growth and development which results from the models and modelling of those around him. We need to communicate with the disciplines involved in S&CD, and we stand ready to add our knowledge gained from a new model in pediatrics which is trying to rid itself of the blinders of a pathological model. I hope we can continue to develop the kind of exciting, fruitful interaction with all of you that we've had with a few of you already!