

WHITHER PEDIATRICS:
A STUDY IN PROFESSIONAL TRANSFORMATIONS

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Whither Pediatrics: A Study in Professional Transformations

ABSTRACT

This thesis analyses transformations in pediatrics during its history as an organized medical specialty. Pediatricians emerged in a period of high infant and child mortality and poor public health to fight disease and treat difficult feeding problems. After mortality rates began to decline they turned to prevention, supervising the normal growth and development of healthy children. However, as prevention absorbed an ever larger proportion of their time, they became bored and dissatisfied. During the 1970s, competing groups of child health care providers such as pediatric nurse practitioners and family practitioners exacerbated pediatricians' difficulties. Worried about their possible disappearance as primary care specialists, pediatricians sought a new mission in ministering to children's non-physical problems. The "new pediatrics" focuses on the behavioral and psychosocial problems of children and adolescents. This study contributes to understanding how professions respond to changes and threats in their environment.

SYNOPSIS

La présente thèse traite de l'évolution de la pédiatre depuis qu'elle existe en tant que spécialité structurée de la médecine. Le pédiatre est apparu à une époque où la mortalité infantile était élevée dans une société où la santé publique était mal armée pour lutter contre la maladie et des problèmes d'alimentation difficiles. Le taux de mortalité infantile diminuant, les pédiatres se tournèrent vers la prévention, voyant à ce que des enfants sains se développent et grandissent normalement. Toutefois, la prévention occupant de plus en plus de leur temps, les pédiatres commencèrent à s'ennuyer et à se sentir frustrés. Dans les années 70 l'existence de corps organisés se disputant le domaine de la santé infantile, telles que les infirmières cliniciennes spécialisées en pédiatrie ou les omnipraticiens, vinrent aviver les difficultés que rencontraient déjà les pédiatres. Craignant leur disparition, ils se donnèrent une nouvelle mission en se chargeant des problèmes ne relevant pas de la santé physique. Ainsi, la "nouvelle pédiatrie" s'intéresse avant tout aux problèmes psychosociaux et aux problèmes de comportement chez l'enfant et l'adolescent. Cette étude tente de comprendre comment une profession réagit au changement et lorsqu'elle se sent menacée par son environnement.

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INTRODUCTION

"Nothing endures but change."

Heraclitus

This thesis is about changes in pediatric practice over the course of its development as an organized specialty. There have been three phases in pediatrics' history. Pediatrics first emerged as a distinct specialty in the late nineteenth century, when infectious diseases were rampant and, as one of its practitioners put it, "human life was cheap" (Lucas, 1927:2). More than a quarter of all children died before they reached the age of five (Cone, 1979:112). There was little understanding of the causes of disease and few, if any, effective treatments. Pediatricians at the time epitomized the ideal image of the doctor laboring against heavy odds to save children from early death. The mission of pediatrics was to study and treat the diseases that ravaged children, especially those connected with the artificial or bottle feeding of young children.

Between 1920 and 1950, the focus of pediatrics shifted away from feeding problems and the treatment of children's diseases towards prevention or "child hygiene." Pediatricians defined themselves less as baby feeders and healers of disease, and more as guardians of physical health. "Child hygiene," wrote one of the specialty's leaders (Veeder, 1923:518), "is at present the most important motif of our work, as it will continue to be in the future, and in child hygiene work it has been the child that has been the topic of consideration - not disease or

medicine. . . . The essential development of pediatrics must be from the standpoint of the child and not from that of disease."

Since the 1950s, pediatricians have been practicing what they call the "new pediatrics." The new pediatrics is concerned not simply with physical growth and development, but with total emotional, psychological, social and even spiritual well-being. Today, pediatricians do more than monitor the health of their patients and treat their minor illnesses. They "treat" children for nightmares, shyness, eating and sleeping problems, fears and phobias, nervous tics, nail-biting, thumb-sucking, bed-wetting, glue-sniffing, temper tantrums, school problems, stealing, fire-setting, running away, using obscene language, sibling rivalry, troubles in getting along with other children, overdependent relationships with parents, noncompliance with parents' and teachers' wishes, and reactions to chronic disease and traumatic experiences such as child abuse. They are also showing a much greater interest in the problems, behavioral and otherwise, of older children and adolescents.

How have these transformations come about? Pediatricians describe them as a natural and logical evolution. "All science, of which medicine is a major segment," according to one pediatrician (Cole, 1959:642), "is like a multiheaded hydra. Each time one problem is solved, two new ones arise to take its place. Each discovery, while answering some old question, broadens our horizon so that we constantly see new and more complex problems. . . . The more we learn, the more is seen that we do not understand."

Critics of the medical profession, on the other hand, see the transformations as evidence of medicine's imperialistic designs, with doctors exercising control over an ever greater range of human problems and experiences. Ivan Illich, one of the most provocative opponents of this medicalizing trend, has bemoaned the "medicalization of life" itself. The medical profession, he charges, has turned the human life span into a series of age-specific disabilities requiring medical supervision. From the unborn and newborn, to the menopausal and old, the entire population is at risk: "Life is turned into a pilgrimage through check-ups and clinics, back to the ward where it started" (Illich, 1976:87).

This thesis shows that the transformations in pediatrics were neither natural, nor purposefully expansionary. They were rooted in the crises and opportunities that pediatricians encountered, and in their efforts to adjust to a constantly changing environment of work. Professions do not function in a vacuum. Like all occupational groups, they inhabit an ever changing world. These changes affect the group's work life. Some changes present new challenges and opportunities for practice. Others affect the group adversely or threaten to eliminate the need for its distinctive services. This inevitable fact of professional life means that professions too need to change and to adjust to new circumstances around them. They need to respond to their environments, and where possible, influence those environments in order to secure the most advantageous conditions possible for their work. Pediatricians have faced particularly dramatic changes. Childhood mortality and morbidity fell drastically with the control of infectious

diseases; the nature of childhood morbidity has changed; birth rates and the size of the child population have fluctuated; other groups interested in child health have come and gone. Through each of these changes, pediatricians struggled to preserve a role for themselves by redefining their professional mission and broadening their scope of practice. It is this struggle for professional survival that most clearly explains the directions that pediatrics, as a specialty, has taken.

This thesis describes pediatrics in North America. In the Third World, children have not benefitted from advances in Western scientific and medical knowledge. An estimated 20 million children under the age of five die annually in developing countries; the corresponding figure for the developed world is half a million. More than 97 percent of all deaths in the world among children under the age of five years occur in the developing nations (Morley, 1973:ix). Pediatricians generally treat children under 12 years of age and face conditions similar to those that characterized pediatric practice in North America around the turn of the twentieth century. Infectious and gastrointestinal diseases, aggravated by poverty and malnutrition, are rampant. In Europe, pediatricians are consultants. Though the diseases they treat are different from those found in underdeveloped countries, they share with pediatricians in those countries a definition of pediatrics that revolves around the treatment of disease. Canada falls somewhere between the American and European models. In communities with few pediatricians, pediatric practice consists mostly of referrals from general practitioners and concentrates on treatment. In metropolitan areas that attract large

numbers of pediatricians, pediatric practice looks much as it does in the United States (Klein, 1984).

Outline of the Thesis

The first two chapters of the thesis provide the theoretical and methodological backdrop for this research. In Chapter 1, I put the thesis in the context of the sociological study of professions and occupations, and describe a theoretical framework to analyze the development of pediatrics. I also discuss the literature on medicalization. In Chapter 2, I describe the sources of data for my thesis. This is followed by a discussion on the usefulness of professional journals and literature as a source of data about professional development. In particular, I consider the merits of the presidential address as a research tool.

The substantive chapters correspond roughly to the different phases of pediatric history. Chapter 3 deals with the emergence and growth of pediatrics as a specialty. I outline the structural conditions that gave rise to pediatrics, the circumstances surrounding the establishment of the first pediatric organizations and the specialty's early growth. I also describe pediatric work during those years, especially the specialty's interest in the problems of artificial feeding.

Chapter 4 examines the shift to prevention, the first transformation in the pediatric mission, and the conditions that led to it. I explain the disappearance of baby feeding as a problem and the

more general decline in children's infectious diseases. I also explain the changes within pediatrics, namely the emergence of pediatric subspecialists, that began to threaten the general pediatrician. As a result, pediatricians began to move into prevention and used prevention to compensate for the reduced demand for their curative services.

Chapter 5 looks at the second transformation - the shift to the new pediatrics. Again, I divide the chapter into two sections. The first deals with the circumstances that forced pediatricians to reassess their future. After they added prevention to their traditional role of treating disease, why did pediatricians find it necessary to expand still further into non-physical aspects of children's lives? The second section describes how pediatricians defined the new pediatrics and how they justified their expansion into new areas of care.

In Chapter 6, I describe developments in child health care during the 1970s, and explain how they affected pediatrics. Falling birth rates and the emergence of competing groups of child health care providers, especially pediatric nurse practitioners and family practitioners, pushed pediatrics further in the direction of the new pediatrics.

Chapter 7 focuses on how the specialty tried to make the new pediatrics an integral part of pediatric practice. It describes how the new pediatrics became the formal definition of pediatric's appropriate scope of practice and the process of educational reform.

Chapter 8, the conclusion, summarizes the thesis, speculates on the future of the new pediatrics and pediatrics' fate as a primary care specialty, and points out certain areas for future research.

CHAPTER 1

THEORETICAL FRAMEWORK

Two bodies of literature provide the theoretical framework for this research: a) sociological studies of the professions, especially Bucher's natural history model of professional development, and b) medicalization.

The Study of Professions

Up until the 1960s, the sociological study of professions included two distinct, but related approaches. The structural approach focused on the internal characteristics of a profession, and more specifically, on those traits that separated the professions from other occupations. For many years sociologists commonly referred to it as the trait, attribute, or taxonomic approach. The work of Ernest Greenwood (1957) provides a typical example. Greenwood argued that professions, but not other occupations, included a base in a systematic theory; professional authority recognized by its clientele and approved by the community; an ethical code regulating relationships with clients and colleagues; and a professional culture sustained by professional associations.

Other structuralists included different characteristics in their lists of professional attributes. Gross (1958) maintained that professions dealt with unstandardized products, demanded a degree of personal involvement and were involved in work that was essential to the

welfare of society. Barber (1963) pointed out that the professions are based on systems of rewards that are ends in themselves rather than an expression of self-interest. Perrucci and Gerstl (1969) added that the work of the professions was challenging and that professionals worked autonomously. Terence Johnson (1972:25) has observed that the "list makers" often seemed to be guided by the occupations they wanted to endow with, or deprive of, professional status. As the lists proliferated, the trait approach produced a state of affairs so hopelessly muddled its exponents could not agree even on whether there was a modicum of a consensus among them. Some (Goode, 1957; Ben-David, 1958) saw a "striking" congruence between the various definitions of a profession and argued that the differences were more in emphasis than substance. Others (Millerson, 1964) saw little agreement.

Another group conceived of professions as one pole of a continuum along which all occupations move. They asked how occupations move along the continuum and how they acquire those traits that make them professions. Wilensky (1964), for example, described professionalization as a five-step process involving: 1) the creation of a full-time occupation, 2) the establishment of a training school, 3) the establishment of a national organization, 4) efforts to win legal support, and 5) the establishment of a code of ethics. Although this "process" approach was clearly different from the structural approach, it rested on the same assumption: that the professions are fundamentally different from occupations. By focusing on the professionalization process it merely side-stepped the question of what that difference actually was.

In the early 1950s, Everett Hughes (1951) challenged the assumption that had guided so much sociological work on the professions. He suggested that whether any occupation was truly "professional" was a false question. According to Hughes (1951:315), the concept of profession was "not so much a descriptive term as one of value and prestige." It had become a "symbol for a desired conception of one's work, and hence, of one's self" (Hughes, 1951:320).

Through the 1960s, other sociologists developed the critique. Howard Becker (1962) wrote that the term "profession" was not a neutral, scientific concept, but a "folk" concept, a part of the society that sociologists study. From a sociological perspective, the term should be treated as no more than a label and the professions were no more than occupations that had been "fortunate enough in the politics of today's work world to gain and maintain possession of that honorific title" (1962:33).

Similarly, Julius Roth (1974) observed that the ranking of occupations according to professional traits was a game that the occupations themselves played to increase their relative standing and to reap the attendant rewards of the professional label. By focusing on the issue of professional traits, sociologists were acting as "dupes" of the established professions. Rather than studying that game, they were apologists for the professional ideology, justifying professionals' control over their work situation and their power over a clientele, a means of production, public policy and a public service. Out of this critique emerged what might be called a labeling view, or what Bosk (1985) has termed an "anti-myth" perspective, on professions. It is a

more skeptical perspective that refuses to take a profession's claims about itself for granted and concentrates on the reality of professions and professional life. Since the 1970s, this perspective has dominated the study of professions. The central questions that it poses are: how do occupations attain professional status and the power that comes with it, and how do they wield that power? The result has been the debunking of many professional myths.

A Segmental View of Professions

A key shibboleth to fall under the pressure of more critical analysis was the idea of professional culture or solidarity, a trait that appeared regularly on lists of professional attributes. William Goode (1957) described professions as a microcosm of society, that is, as relatively stable, homogeneous groups bound by a common sense of identity, norms, values, interests and goals. He referred to professions as "communities within a community." Indeed, according to Goode, the degree of cohesiveness in an occupation is a measure of its professional status: "as the profession comes into being, or as an occupation begins to approach the pole of professionalism, it begins to take on the traits of a community" (1957:195).

In 1961, Bucher and Strauss took issue with this view of the professions. While professional culture explained some structural features of professional organization, it overlooked significant aspects of professional life. Professions, they maintained, are not homogeneous and stable, but fluid and stratified, "loose amalgamations of segments pursuing different objectives in different manners and more or less

delicately held together under a common name at a particular period in history" (1961:326).

Segments differ from each other and can potentially conflict over such dimensions as a) their sense of the profession's mission or vision of what unique contribution the profession can make, b) the kinds of work the profession should be doing, how that work should be organized and which tasks should take precedence, c) the methods and techniques the profession should use, d) the clients that the profession should be responsive to and what the nature of the relationship with those clients should be, e) where the lines of collegueship that direct relationships within a profession should be drawn and what relationships should exist with neighbouring and allied occupations, f) where the profession's interests lie and what professional associations best represent those interests and g) who should control the associations and organs of public relations of the profession.

Moreover, the configuration of segments is constantly changing:

Segments are not fixed, perpetually defined parts of the body professional. They tend to be more or less continually undergoing change. They take form and develop, they are modified, and they disappear. Movement is forced upon them by changes in their conceptual and technical apparatus, in the institutional conditions of work, and in their relationship to other segments and occupations. Each generation engages in spelling out, again, what it is all about and where it is going. In this process, boundaries become diffuse as generations overlap, and different loci of professional activity articulate somewhat different definitions of the work situation. Out of this fluidity new groups may emerge. (1960:332).

Bucher and Strauss proposed an emergent or segmental model for studying professions. They suggested that sociologists treat the movement of professional segments as analogous to social movements, as collective attempts to promote, maintain or resist changes affecting the segment and its work. From this perspective one would look at the identities (or professional ideologies) that different segments espouse, the organizations they create, their relationship to other segments in the profession, and their strategies for promoting and implementing their particular positions.

A Threatened Professional Segment: Pathology

Bucher's (1962) study of pathologists clarified the concept of segmentalization, and described a segment whose identity and work patterns were in jeopardy. In the case of pathology, the threat came from changes in theories and methods of studying disease that undermined the traditional focus of pathologists. Until 1945, pathology was principally an academic discipline housed mostly in medical schools. Some pathologists worked in hospitals and laboratories applying pathology to the diagnosis of disease in live patients. But they were few in number and low in status. After World War II the situation changed. Scientific progress rendered pathology's traditional theories and methods of studying disease obsolete. At the same time, the demand for applied laboratory services increased and pathology had the opportunity to become a predominantly practicing field, like other medical specialties.

The dilemma divided the specialty into two segments: those who felt pathology should try to maintain its scientific identity and those who wanted it to evolve into a clinical specialty. It was the older, scientific segment of the specialty that faced an uncertain future. It had to deal with the dual challenge of rapid technological change and the clinically oriented wing of the specialty.

The scientific segment responded by developing what Bucher calls a "revitalization formula." A revitalization formula, in general terms, is a strategy for mitigating the effects of external threats and ensuring the continued survival of the segment. For academically oriented pathologists, this entailed reiterating the value of their old mission, distancing themselves from older techniques, stressing new methods of research and re-formulating their sense of mission to incorporate these methodological changes. Bucher suggested that revitalization formulas may take different forms, but she hypothesized that in order to survive significant changes in the context of their work, threatened segments must find such a formula.

A Natural History of Professional Development

Through the 1970s, Bucher (1980) constructed a framework for looking more systematically at the development of professions and the segments within them (see also Bucher, 1988). She presented this framework in the form of a natural history model. Because Bucher's segmental approach highlights process rather than structure, there is a tendency to assume that she is concerned with the process of professionalization. Ritzer and Walczak (1986), for example, in a

recent overview of theoretical perspectives on the professions, categorize Bucher with others who have looked at how occupations become professions. In presenting her natural history model, however, Bucher expressly warred against such an interpretation of her work. The model, she insisted, described the development and growth of occupational groupings. Indeed, she used the terms occupations and professions interchangeably, indicating that the model is applicable to both. In keeping with the labeling view of professions, the process of professionalization becomes relevant in the model only insofar as an occupation adopts it as a strategy in its development. Moreover, the model is applicable not only to occupations, but to their component segments. After all, according to Bucher (1980:6), occupations and segments are essentially the same kinds of collectivities, and each undergoes its own natural history.

The model consists of three distinct stages: emergence, consolidation and transformations. The emergence of occupational development encompasses both the "grounds" and the "dynamics" of emergence. "Grounds" refers to the structural conditions that give rise to new occupational groupings. In medicine, which has experienced tremendous segmentation over the last century, the impetus for emergence has come from several sources: changes and innovations in the work of an established occupation, new technology, vacuums in knowledge or services, the desire of a parent occupation to create ancillary groups to perform tasks its own members do not wish to perform, and medicine's appropriation of new areas of care (medicalization).

While "grounds" addresses the structural context of emergence, "dynamics" captures the process itself. New occupations begin with a group of workers "discovering colleagueship." That is, they begin to share similar definitions of their work and its problems that distinguish them from others. Depending on their patterns of interaction - the structural features of their situation are decisive - such a group may become the nucleus of a larger movement. The group feels that beyond the joys of colleagueship, they need some organization to safeguard and advance their unique interests.

They begin to create formal organizations. Through these organizations they stake out their territory and develop a rhetoric to justify their claims. Though the organizational activities and rhetoric of the new group are aimed primarily at those outside the profession who are in a position to grant it legitimacy, they also serve an important internal function. They give the rank and file of the occupation the clear identity and ideology they need to wage the battle for recognition in their own work spaces. At this stage the occupation is also concerned with recruiting new members, and may establish its own training programs. In some cases, they may add new material to existing programs. In other cases, the segment seeks more radical change, and perhaps even an entirely new program of study.

The "consolidation phase" involves what Bucher (1980:22) calls the "elaboration of institutional forms and arrangements": increased organizational complexity and internal organizational differentiation. New work roles emerge, territory may shift or expand, and the occupational ideology may change. The consolidation phase could also

give rise to segments that seek to break away from the original parent group. The impact on the parent group may be minimal. On the other hand, it could present a serious threat and propel the occupation into a third phase of development: transformation.

In her earlier work with Strauss (1961) and in her study of pathologists, Bucher assumed that all occupations and segments eventually run their course. They take form, develop, change and disappear. In her later work, Bucher (1980:27) was more impressed with the staying power of occupations: "Occupations appear to be very resilient forms of human creation, many of which have survived almost cataclysmic changes in their social worlds." In order to survive, however, they need to transform themselves and set about emerging once again.

Transformation is the least developed in Bucher's framework. In an attempt to clarify the concept, Bucher described three types of circumstances that could lead to transformation. The first is the decimated field. Decimated fields are those that have undergone extreme segmentation through the consolidation phase of their development. As a result, the survivors are forced to reconsider "what is left?" After an agonizing process of reappraisal, they decide that there is still an important place for them either in tackling the profession's original core problems or in representing the profession's general principles. Second, there are ploughed out fields. In ploughed out fields, the reappraisal culminates in an acknowledgement that there is nothing left. The original problems are solved and there are no new problems to replace them. Third, there are rejuvenated fields, where

new discoveries offer the potential for continued survival. Ploughed out and decimated fields may undergo rejuvenation.

The process of transformation involves several maneuvers. There is a fundamental redefinition of the nature of the field, its underlying paradigm, its territory, its mission, or all of these. These redefinitions require the profession to renegotiate its relationships with its client group, and with formal organizations and other occupations. A transforming profession, in other words, finds itself involved once again in the kinds of activities that characterize an emerging profession. The crucial question about this process, Bucher points out, is whether the profession has to re-establish its legitimacy.

Throughout her description of the model, Bucher emphasizes the two-sided nature of the relationship between professions and their environment. Much of a profession's activities, regardless of its phase of development, is directed at shaping itself in response to the larger social structures and forces around it. But at the same time it attempts to shape its environment and the circumstances within which it must practice. Those who study professions often overlook this dimension. Yet, as Bucher (1980:32) notes: "Whether or not particular occupations succeed in molding their environment for their own ends, much of the reality of occupations as special collectivities is lost if we do not pay attention to the activities they engage in relative to shaping their own circumstances."

Bucher presented the natural history model of occupations as an analytical tool. She encouraged researchers to look at empirical cases

to settle questions that her theoretical formulations raised. She also recommended looking beyond particular circumstances to concepts that would capture the basic elements of change and development across occupations. I see this thesis as making a contribution towards this end. I have conceptualized the shifts in the definitions of pediatric practice as professional transformations. In examining them, I have looked for ways that this case enriches our understanding of the conditions that bring about these transformations and the processes that are involved.

Medicalization

When a threatened medical specialty in a ploughed out field attempts to rejuvenate, it may seize on a human problem and turn it from a troublesome behavior into a disease. This process is called medicalization. While sociologists of work were taking a more critical look at the professions generally, sociologists of medicine were looking at the medical profession and the power that it enjoys by virtue of its preeminent status in society. This line of inquiry was part of a more general trend during the late 1960s and 1970s to fashion a distinctive sociology of medicine. Up until then, medical sociologists identified closely with the goals of doctors and were heavily influenced by the professional perspective. They adopted as research problems, issues that the medical profession defined as problematic. They put sociology at the service of medicine rather than using it to critically examine medicine as a social institution. This is the distinction that Straus

(1957) described as "sociology in medicine" versus "sociology of medicine."

Among the powers that came with medicine's professional dominance, sociologists discovered, was the power to define disease. Positivistic notions of disease as objective physical entities gave way to a more relativistic conception of diseases as products of human definition. Freidson (1970a, 1970b), for example, stressed the need to separate disease as a physical state from disease as a label. While conceding the existence of "real" disease, he maintained that sociologists could not adopt the medical profession's idea of objective disease without becoming embroiled in the inconsistencies and errors inherent in time-bound cultures.

For Freidson, the imputation of disease, unlike disease itself, is a social process and carries with it significant social consequences. The task of sociology, he claimed, was not to explore physical conditions or even the relationship between physical conditions and the disease label, but the social process through which people - doctors and laymen alike - impute disease.

The medical profession, in Freidson's view, plays a key role in imputations of disease. Doctors have the official mandate to decide what will be regarded as disease and who will be regarded as sick. He argued further, that there is an inherent bias in medicine towards the imputation of disease. The medical profession is prone to see illness and the need for treatment more than it is prone to see health and normality. This bias operates both at the interactional level, in

contacts with individual patients, and at the level of generating new categories of disease:

[The medical profession] is active in seeking out illness. The profession does not treat the illness laymen take to it, but it also seeks to discover illness of which laymen may not even be aware. One of the greatest ambitions of the physician is to discover and describe a "new" disease or syndrome and to be immortalized by having his name used to identify the disease. Medicine, then, is oriented to seeking out and finding illness, which is to say that it seeks to create social meanings of illness where that meaning or interpretation was lacking before. (Freidson, 1970a:252).

Freidson suggests that the rise of the medical profession, in conjunction with its propensity to "create" disease, has been a major factor in the medicalization of society over the course of this century.

Medicalization, as I have explained, refers generally to the use of a medical model to define and deal with human behaviors and problems. Zola (1972:487) describes the trend towards medicalization as "making medicine and the labels "healthy" and "ill" relevant to an ever increasing part of human existence." Sedgwick (1973:37) has referred to it as "the progressive annexation of non-illness into illness." Conrad and Schneider (1980) have refined the concept by suggesting that medicalization can occur on several levels. It occurs: a) at a conceptual level when a particular behavior or condition is defined as an illness or syndrome, b) on an institutional level when doctors supervise programs that operate on the basis of a medical understanding of a particular problem, or when they act as gatekeepers for state

benefits which are legitimate only if the problem is considered medical, and c) at the level of doctor-patient interaction when doctors recognize cases of illness and impute them to specific individuals.

Initially, the medicalization literature focused on the uses and abuses of the medical labeling of mental illness, and the ever-widening psychiatric net (Goffman, 1961; Scheff, 1966; Szasz, 1961, 1970). But the recognition that all disease is socially constructed led to exploration of other behaviors and areas of life that have fallen under the medical rubric. The expansion of medical jurisdiction and control was obviously not limited to psychiatry. Since the 1970s, sociologists have studied the medicalization of all sorts of human experiences including childbirth, aging, obesity and anxiety.

The Medicalization of Deviance

Within this literature there is a strand that focuses specifically on the medicalization of deviant behavior and social problems. In 1966, Nicholas Kittrie, a legal scholar, described what he called the "divestment of the criminal justice system and the coming of the therapeutic state" (1966:25). Deviants were increasingly seen as victims of disease rather than willful offenders of the moral and legal order. Kittrie was interested in the legal basis upon which the state has been able to turn crime into a medical problem and force treatment or therapy on those whom it sees as deviant. He traced historically how the normal legal safeguards protecting individuals, including the right to counsel, a jury trial, and protection against hearsay and illegally

obtained evidence, were all suspended in the name of the "good" of the individual and the welfare of the state.

Within sociology, Conrad and Schneider (1980a) have provided the clearest framework for understanding the medicalization of deviance. They base their formulation on the labeling theory of deviance. They treat deviance not as an objective act, but as a label imputed to certain behaviors and conditions. Rather than considering the processes and consequences of labeling at the level of interpersonal interaction, as most labeling theorists have done, Conrad and Schneider take a macro-sociological approach. They look at the evolution of certain definitions or categories of deviance, and the historical progression it has followed. Before the seventeenth century, while a theological world view predominated, deviance tended to be understood as a moral transgression. With the emergence of the nation-state and the formalization of law, legal or criminal definitions of deviance came to the fore. The development of modern rationalism and the ascendancy of science have brought with them the inclination to see deviance as a technical, scientific or medical problem. Conrad and Schneider's "sociology of deviance designations" (1980a:17) describes how these changes in designation come about or, more specifically, how badness has become sickness.

While some analysts, such as Illich (1976), Szasz (1970), and even Freidson (1970a), attribute medicalization to forces inherent in the medical profession or to medical imperialism, Conrad and Schneider explicitly reject this position. Though they acknowledge that such forces need to be taken into consideration, they insist that the

question of how specific behaviors or problems become medicalized can be answered only by empirical inquiry and not by a priori assumptions. They describe medical labels and deviance designations more generally, as "the products of a political process, social constructions usually implemented and legitimated by powerful and influential interests and applied to relatively powerless and subordinate groups" (1980a:36). These interests need not represent the medical profession. Very often they include other groups who stand to gain from the definitional change. In each case of medicalization then, it becomes important to look at the definers, their activities and the socio-historical circumstances surrounding them. For this reason, Conrad and Schneider describe their approach as a "historical-social constructionist" view.

This approach has been applied to madness, alcoholism, opiate addiction, juvenile delinquency, and homosexuality (Conrad and Schneider, 1980a), compulsive gambling (Rosecrance, 1985), malpractice in medicine (Morrow, 1982), transsexualism (Billings and Urban, 1982), and religious cults (Robbins and Anthony, 1982). It has also been applied to several cases involving children.

Medicalization and Children

There are two studies in the historical social-constructionist tradition that have looked specifically at medicalization involving children. Conrad (1975, 1976) has documented the emergence of the hyperkinesis label. Hyperkinesis is a condition in children, characterized by excitability, restlessness, impulsivity or aggression. According to Conrad, the emergence of a medical label for this type of

deviance was the result of the development of an effective technique for controlling erratic behavior in children. In 1937, Charles Bradley, a doctor who worked with institutionalized children in Providence, Rhode Island, discovered that amphetamine-type drugs had a paradoxical effect on children. Rather than stimulating the central nervous system as they do in adults, they pacified or calmed them. Conrad suggests that this discovery spurred doctors to create a specific disorder to fit the treatment. In 1957, Laufer et al. coined the term "hyperkinetic impulse disorder." Once the disease label became available, large pharmaceutical companies and groups such as the Association for Children with Learning Disabilities were instrumental in promoting it. Their task was facilitated by the pharmaceutical revolution in mental health and the increased interest in child psychiatry.

The successful establishment of the hyperkinesis label, Conrad argues, has had significant consequences. It has removed children's misbehaviors from the realm of public discussion and makes them problems over which doctors exercise almost complete control. It has meant that the behaviors are now managed using the tools of medicine, in this case, mainly drugs. Finally, it has individualized and depoliticized children's deviant behavior. Both the causes of and the solutions to the problem are sought within individual children rather than in their surrounding environment.

There is no specific reference to the role that pediatricians played in this process. Conrad states only that once children's deviance was medicalized, the medical profession assumed the responsibility for managing and controlling it and that, although it may

not have sought this role, "its members have been, in general, disturbingly unconcerned and unquestioning in their acceptance of it" (Conrad, 1975:520).

Pfohl's (1977) analysis of the child abuse problem provides a clue as to why pediatricians at least, were willing to assume this social control function. In accounting for the "discovery" of child abuse as a social problem, Pfohl isolates the critical role that pediatric radiologists played. Pediatric radiologists were the only group able to overcome the impediments that constrained the rest of the medical profession from recognizing the problem of child abuse prior to the 1960s. These impediments included their reluctance to admit that parents could actually hurt and injure their children, the norm of doctor-patient confidentiality which in the case of children extends to their parents as well, the unavailability of "child abuse" as a diagnostic category, and doctors' reluctance to become involved in time-consuming criminal justice proceedings. According to Pfohl, because pediatric radiologists worked behind the scenes and had no direct contact with patients or their parents, they were not subject to some of these constraints. More importantly, as a low status specialty they were in a position to benefit from their "discovery" of a pressing social problem. They were supported in their campaign, Pfohl observes, by pediatricians and psychiatrists.

As a result of the disappearance of previously dangerous or deadly diseases, pediatricians too were sliding towards marginal status. They felt that a link with the "deadly" forces of abuse could enlarge the "risky" part of their mission and reduce their marginality.

This reference, though brief, is important because it alludes to pediatrician's organizational troubles. It also suggests that if pediatricians were willing to connect themselves with child abuse to alleviate their problems, they would be willing to expand into other areas as well.

My main purpose in this thesis is not specifically to explain the role that pediatricians played in the "discovery" and medicalization of child abuse, hyperkinesis, or other forms of deviance connected to childhood. But an examination of the concerns and problems of pediatricians inevitably leads to a greater appreciation of their involvement and beyond this to a greater understanding of the processes of medicalization.

Symbolic Interactionist Roots

Though I have discussed the various substantive theories that inform this thesis separately, there is a common underlying thread that ties them together. All of the perspectives - the labeling view of professions, the natural history model of professional development, the labeling theory of deviance, medicalization and social construction of disease labels - are rooted in symbolic interactionism.

Symbolic interactionism is a theoretical perspective first developed by George Herbert Mead (1934) and to a lesser extent Charles Horton Cooley and W. I. Thomas. But it was Herbert Blumer (1969) who actually coined the term and provided the first clear and systematic statement of the theory's principles. Blumer (1969:2) summarized these

principles in the form of three tenets: 1) "human beings act towards things on the basis of the meanings that the things have for them," 2) "the meanings of such things is derived from, or arises out of, the social interaction that one has with one's fellows," and 3) these meanings are handled in, and modified through, an interpretive process."

According to symbolic interactionists, the world is not imbued with intrinsic meaning. Individuals give meaning to, or interpret the objects, situations and people around them, and then respond to these meanings. They form these meanings in the context of interaction. The meanings are social products, created in and through the defining or interpreting activities of individuals as they interact and try to fit their lines of action to each other. Moreover, these meanings are never fixed. People are constantly adjusting, revising and modifying the meanings that they attribute to the actions of others. Interaction becomes a constant process of interpreting, negotiating and re-negotiating meanings.

The picture that symbolic interactionism paints of human behavior stands in sharp contrast to the social determinism of structural perspectives in sociology and the psychological determinism of social psychological theories such as behaviorism. Rather than depicting behavior as a spontaneous response to given social or psychological stimuli, symbolic interactionists emphasize the creative, indeterminate and unpredictable quality of human action and interaction. From this perspective, institutions are not fixed entities, but dynamic, ongoing social arrangements that are always evolving and changing.

- .. Society is not a static structure, but a process in which human beings are continually constructing and negotiating a social order.

Symbolic interactionism has had a profound effect on virtually every area of sociological inquiry, including the study of deviance (Becker, 1963; Erikson, 1962; Kitsuse, 1962)), social problems (Spector and Kitsuse, 1977), professions (Becker, 1962; Hughes, 1971) and medicine (Freidson, 1970a, 1970b). In each of these areas, symbolic interactionists have posed questions and taken directions that are distinct from traditional sociological approaches. They have treated the conditions, states, behaviors and other "realities" they study not as objective facts, but as social constructions. The focus becomes the process by which groups create these realities for themselves and the consequences of these constructions.

Summary

In this chapter I have reviewed two bodies of literature. The first part of the chapter described an approach within the sociology of work that treats professions as changing and developing occupational segments, functioning much like social movements. In particular, I highlighted the idea of threatened professional segments and the tendency for such segments to transform themselves in an effort to rationalize their continued existence.

In the second part of the chapter, I discussed the growing interest, within both the sociologies of medicine and deviance, in the socially constructed nature of disease labels. I described an approach

that treats these labels as the products of the defining activities of specific individuals and groups. I pointed out that although the medicalization of certain aspects of children's lives has been examined, we have an incomplete understanding of the role that pediatricians have played in this process, except for Pfohl's brief reference to the status and organizational problems in pediatrics.

This thesis makes a contribution to both bodies of literature. It is essentially a study of professional development and, more specifically, professional transformations. The case of pediatrics provides an unusually rich opportunity to examine such transformations, since over the course of its history as an organized specialty, pediatricians have redefined their mission and transformed themselves, not once, but twice. By examining the circumstances under which these transformations occurred and how they were accomplished we learn more about what transformations involve.

But in the course of exploring pediatric development we also learn more about the process of medicalization. Pediatrics' struggle for survival has involved a gradual expansion in the specialty's scope of practice and its professional mandate. Pediatricians revitalized their specialty first, by adding prevention to their core professional tasks, and then, by adding children's non-physical problems. The case of pediatrics demonstrates that, at least in some instances, medicalization is a revitalizing strategy for troubled professional segments.

CHAPTER 2

RESEARCH METHODS

This chapter deals with the methods and techniques I used in conducting this research. I begin by describing the data upon which the thesis is based. Then I discuss the profession's own literature as a source of information about professional development. There is a wealth of data in this literature that sociologists have yet to tap. I identify both its strengths and drawbacks. Finally, I focus specifically on the presidential address as a tool in the study of professions. I try to go beyond the data themselves to describe the research process and to share some of the lessons that I learned about working with documentary material.

Sources of Data

The data for this thesis came from a wide array of sources.

The Professional Literature

My main source was the pediatric literature: journals, monographs, textbooks, conference proceedings, organizational policy statements and promotional literature, surveys, newsletters, committee reports and internal histories and biographies, that is, those written by pediatricians primarily for their pediatric colleagues. The journals were particularly important. I systematically examined several pediatric journals including Pediatrics, the Journal of Pediatrics, the

American Journal of the Diseases of Children, and for earlier periods, the Archives of Pediatrics, the Transactions of the American Pediatric Society, and the Transactions of the Section on the Diseases of Children. I paid special attention to their editorials, letters to the editor, commentaries, debates, presidential addresses, and news and announcement sections. I also consulted more general sources such as the records and publications of the American Medical Association and the professional literature of groups such as pediatric nurse practitioners, family practitioners and child psychiatrists.

Census Data

Since demographic trends have exerted a major influence on pediatrics' development, I made extensive use of census data. The U.S. Bureau of the Census' Historical Statistics of the United States (1975) was particularly useful. It documents in concise tables, infant, child and maternal mortality rates, life expectancy, morbidity and birth rates over the years 1900-1970. To update these tables and for more detailed information on such trends as birth patterns (i.e., birth weights, average maternal age), I used the Bureau's annual Statistical Abstracts and Vital Statistics of the United States.

Secondary Historical and Sociological Analyses

To explain the demographic trends and to place the development of pediatrics in its larger socio-historical context, I turned to a vast body of secondary historical and sociological material. This material included descriptions and analyses of health care in the nineteenth and

twentieth centuries, the development of organized medicine, the bacteriological revolution, and the public health and child and maternal welfare movements.

Interviews

I supplemented the documentary research with approximately twenty interviews. The interviewees included several retired pediatricians who entered the ranks of the specialty during the 1930s and 1940s, and whose careers spanned the periods of significant change; general pediatricians who are currently in private, primary care practices; pediatricians who specialize in the treatment of behavioral and learning problems; residents in pediatrics, as well as one resident who was in the process of transferring from pediatrics to child psychiatry; interns who were contemplating pediatrics as an area of specialty practice; a psychologist working with behaviorally disturbed children in a pediatric hospital; and general and family practitioners. I have not included countless, more casual conversations with pediatricians, other health care workers and parents. I have had many opportunities over the years to present my work to both medical and non-medical audiences. These presentations invariably elicited observations, reactions, opinions and anecdotal experiences that were illuminating. For the most part, they confirmed trends and patterns that I had already detected in the literature. However, in some cases, they sensitized me to issues that I had overlooked or the significance of which I had missed.

Participant Observation

To get a clearer sense of what contemporary pediatrics entails, I spent time as a participant observer in a variety of settings: private pediatric practices; various wards and clinics of a local children's hospital, most notably a Learning Disorder Clinic and a Behavioral Pediatrics Clinic; a Family Medicine Clinic in a local general hospital; and the meetings of a pediatric research team comprised of pediatric specialists and subspecialists, epidemiologists and social scientists. I also spent two days with a general pediatrician who resides in a Northern community with a population of 100,000. As one of only two pediatricians in the community, she functioned primarily as a referral specialist and dealt with problems that in most urban settings would have fallen within the purview of a subspecialist. Like the interviews, the data from these observations did not find their way directly into the thesis. But they were useful indirectly in rounding out my understanding of the key issues in pediatrics today. They also showed me how the decisions made at an official or organizational level have translated into practice.

The Professional Literature as a Source of Data

This analysis of pediatrics stands out methodologically from other studies of professional development in its reliance on the profession's own journals and literature as a source of data. Most sociological inquiries of this type are based on formal and informal interviews with members of the profession. Sociologists have not been

oblivious to the professional literature, but they have used it in restricted ways: to supplement or provide background information for their interviews; to cover historical aspects of the profession's development; or as a "pathway" to other types of data about the profession. Habenstein (1970), for example, in discussing ways to study the professions, deals almost exclusively with strategies for making and deepening contacts with its members. He directs the attention of the investigator to journals in the field only as a way of identifying possible contacts. Journal editors, he points out, should be sought out because they are usually "in the know" and may themselves be involved in movements within the profession that the sociologist would want to explore. The "lowly letter to the editor" (Habenstein, 1970:108) is a good place to discover the rank and file zealots. If they were willing to write a letter to the editor, he speculates, they would probably be willing to talk to a sociologist. Why letters to the editor should be considered "lowly" and why they cannot stand on their own as data on rank and file positions is not clear.

This relative neglect of the professional literature seems to reflect a more general aversion to documentary data in sociology. According to Glaser and Strauss (1967), this bias has its roots in several possible sources: 1) the traditional concern, at least in American sociology, with separating the social sciences from the interests and methods of history - which sociologists have conceived as a more humanistic field, 2) sociologists' desire to see the concrete situations and individuals that they are studying, and 3) sociologists' distrust of their own competence in discovering and working with

documentary materials. "The well-trained sociologist," they write (1967:163), "may brave the rigors of the field or confront the most recalcitrant interviewees, but quail before the library."

Glaser and Strauss (1967:163) argue eloquently that documentary materials are as potentially valuable for generating insights and theory as are observations and interviews:

When someone stands in the library stacks, he is, metaphorically, surrounded by voices begging to be heard. Every book, every magazine article represents at least one person who is equivalent to the anthropologist's informant, or the sociologist's interviewee. In those publications, people converse, announce positions, argue with a range of eloquence, and describe events or scenes in ways entirely comparable to what is seen and heard during field work. The researcher needs only to discover the voices in the library to release them for his analytic use.

I discovered these "voices in the library" serendipitously. I began my research, as many sociologists do, rummaging through the library for background information on my subject before heading out into the field. Perhaps I delved more deeply than most because of what I perceived to be a major handicap. I was trying to study developments in American pediatrics from a Canadian vantage point. The field, as I saw it then, was a country away, with all the logistic problems that was going to entail. I felt that the more groundwork I could do with the information that was accessible to me in the library, the more surmountable those problems would be. I could minimize the time and effort, not to mention the expense, involved in establishing contacts and arranging interviews with distant informants.

The library search, which I presumed would be simply a prelude to interviews, became instead my main technique for gathering data. As the search continued I accumulated masses of information on virtually every aspect of pediatrics' development, most of it from the profession's own literature - the sources I enumerated at the beginning of this chapter. For every phase of pediatrics' history, from its formative years as an organized specialty until the present, I found descriptions of key turning points and major events, discussions of the issues that concerned and preoccupied pediatricians, debates about the course that pediatrics should be following, and surveys relating to both practice patterns and pediatricians' opinions on a diverse range of subjects. I also found information on trends outside of pediatrics that were exerting an influence on its development, for example, demographic shifts and governmental policies. Professional groups are extremely sensitive to external forces that could affect their work. They are quick to detect and document these trends, and thorough in exploring their possible ramifications. In considering the socio-historical circumstances of pediatrics' development, the professional literature provided vital clues.

The more information I gathered, the more convinced I became that the literature and records of the specialty contained the story of its development, and that the "field" lay in these materials. The feeling of being removed from the action disappeared. The few interviews I eventually conducted confirmed my assessment. As I have pointed out, though the interviewees occasionally provided me with new information,

for the most part they merely supported observations I had made in the course of my library work.

Many of my discoveries, particularly the initial ones, were "lucky accidents" (Glaser and Strauss, 1967:164). Besides using subject catalogues to locate relevant data, I spent many hours in the library stacks pulling out titles that looked promising and flipping through journals. I almost always stumbled across material that I could use. As the study proceeded I became more systematic in my search. There were several reasons for this. First, my original finds provided many references for me to trace and those references in turn led me to other material. Most sociologists know the value of following the reference trail in reviewing a particular body of scholarly literature. The technique is equally useful in making one's way through the professional literature. Perhaps because of their rigorous scientific training, doctors are meticulous in citing their sources, whether they are reporting on a piece of research, expounding a particular point of view in a commentary or debate, or writing a letter to a journal editor. This makes it easy to trace certain themes over time and across sources.

Second, as I became more familiar with the literature that was available, I developed a sense of where to look for the information I needed. I knew, for example, that certain journals were the main repository for the committee reports and official policy statements of pediatric organizations; that the preface of textbooks and monographs, as well as the inaugural issue of new, specialized journals usually described the state of the art within an area; that pediatric organizations often commemorated an anniversary of their founding by

publishing a festschrift, a history of the organization, collections of biographies or a series of essays on historical or contemporary issues in the profession, all of which can be informative; that certain journals specialized in matters related to medical education and professional training programs; that certain individuals within a profession could be counted on to argue a particular point of view consistently over the years and that by tracing their contributions one could get a sense of the relative strength of their position within the field; and that presidential and chairmen's addresses are like a window on a profession, providing a clear view of how far a profession feels it has come and where it is going at any given point in its development. (I discuss this point at length in the next section.)

Finally, with my account taking shape, the emphasis shifted away from getting a general picture of pediatrics' development towards looking for answers to specific questions. At this stage, browsing became less productive, especially since I was acquiring more efficient ways to locate data. However, I never completely abandoned my habit of browsing. While tracking down an article or report, I perused the rest of the volume for items of interest. Occasionally, I would spend an afternoon checking new titles and library acquisitions, or going through the latest issues of a series of journals. One drawback to this practice is that it can be distracting. In the midst of one line of inquiry, a whole new range of questions may present themselves to tempt the researcher. The best solution is to make a note of these discoveries and come back to them later. Good organization and careful referencing are crucial. Another drawback to this practice is that it

is self-perpetuating. There are always new leads to check and more sources to trace. The trail never quite exhausts itself and it becomes difficult to know when to stop. Field researchers face a similar problem in deciding how many interviews are sufficient or how much longer they need to remain in the research setting before they begin to write up their analyses.

I have alluded to two strengths of the professional literature as a source of data on professional development - its richness and its accessibility, especially when there are constraints on the use of interview data. Another major strength lies in the quality of the data that it yields, particularly with reference to its validity. Those who have studied the medical profession have observed a general ambivalence, if not antipathy, among doctors towards sociologists and their research. Doctors are not like most other social groups that are flattered by the attention of scholars, or who welcome the novelty of a sociologist's interest. Rosen (1980:87-90) attributes this inhospitableness partly to the prestige of the medical profession. While the mere uttering of the words "professor" or "sociologist" is enough to "open doors and mouths" among other groups, doctors are less likely to be impressed. Another factor that Rosen identifies is the divergent perspectives that doctors and sociologists hold. Doctors, with their highly scientific background and training, have little respect for the "soft" methodology of social scientists and for their ostensibly radical politics. "At the very least," Rosen (1980:89) observes, "the approaching sociologist is easily regarded either as an "outsider" who carries some generalized kind of "threat" or as a relatively benign bungler who has little to offer."

In recent years, the medical profession has had even more reason to regard outsiders with suspicion. In what Haug and Sussman (1969) have called the revolt of the client, the public is increasingly challenging the monopoly that the professions hold on expert knowledge and their right to self-regulation. At the root of the challenge is a rejection of the view that professionals function on a higher ethical plane or are less self-serving than other workers. Doctors in particular have become "familiar whipping boys" (Haug, 1973:204) and have lost much of their traditional authority. There are many reasons for this climate of antiprofessionalism (Halmos, 1973:6). But sociologists have contributed to it by conducting the kind of research I described in the previous chapter - research that has penetrated the image that the medical profession has projected and looked at the realities of professional life.

The result has been a sense of beleaguerment on the part of doctors that has further reduced their accessibility to the sociologist. It is more difficult to find doctors willing to be interviewed. Those that are willing are less likely to be forthcoming in their responses. In their effort to avoid discrediting or damaging the image of the profession, they may hold back or give bland and sterile answers. The pediatricians that I interviewed were extremely cautious in their remarks. Even the more cynical among them seemed uncomfortable discussing the organizational politics and pragmatics that have guided pediatrics' development. For example, several of the older pediatricians had reservations about the new pediatrics and the legitimacy of the specialty's involvement with children's behavioral and

learning problems. As critical as they were about the new pediatrics, however, they stopped short of linking it with the threat to pediatrics as a primary care specialty. When pressed, they described the new pediatrics as a case of misplaced devotion to the welfare of children. Pediatricians broadened their mandate, they argued, not because the new pediatrics offered them a new lease on life, but because of their profound love of children.

Sociologists who rely on interview data have found ways to work around the problem of interviewees who are carefully managing the information they provide and the impressions they make. Some (Roy, 1970) recommend taking the stance of the naive, uncomprehending listener, getting respondents to repeat themselves more than once, hopefully with more clarity, insight and detail. Others (Habenstein, 1970) suggest that the opposite approach might be more productive. Only by fostering trust with respondents and demonstrating a thorough and sympathetic understanding of the complexities of professional life can a sociologist hope to gain access to the "backstage" of the profession. Habenstein (1970) also points out the benefits of getting different factions of the profession to tell tales on each other. While such strategies might get respondents to divulge more information than they originally intended, they do not eliminate the problem altogether. Researchers are left wondering whether they have the full story or some sanitized version of events and situations.

The professional literature avoids the problem of recalcitrant respondents entirely. It provides what Webb et al. (1966) would describe as "unobtrusive measures" - data that is not tainted with the

various biases that the interview process can introduce. As I worked with this material I was repeatedly struck by the irony that while on the one hand the medical profession takes such pain to project and protect an idealized image of itself, on the other hand it leaves a remarkably telling and candid account of its affairs in the public record. Doctors may be reluctant to talk to curious sociologists, but in their journals and other published documents they openly and freely talk to each other - and these documents are readily accessible to the sociologist. Reading through the professional literature is comparable to standing like an invisible observer among the members of the profession as they voice their deepest concerns, consider their options, decide how the interests of their specialty might best be served, and even fret over their public image and how to improve it. There is no sense whatsoever that one is being exposed only to what the profession intends for public consumption.

What accounts for this irony? One explanation may be that the professions simply do not conceive of their published documents as part of the public record. They know that these journals and documents generally circulate only among members of the profession and specialized libraries. Further, they assume that few individuals outside the profession would want to examine them. Given the meager interest that scholars in general, and sociologists in particular have shown in the professional literature, the assumption is not unreasonable.

The more compelling explanation is that beyond the earliest stages of its development, a profession has no choice but to use its publications as a forum for discussing its affairs. Once a professional

organization is in place, it begins to generate records in the form of minutes, conference proceedings, policy statements and annual reports, and eventually, journals and newsletters. The larger the group becomes, the more dependent it is on these documents as a channel of communication among its members. The result is a rich body of data that allows sociologists, if they are aware of it, to get at the heart of professional dynamics.

The disadvantages of working with the professional literature, compared to its considerable strengths, are few. One disadvantage is that it is difficult to get clarification for references that are vague. The material may contain a statement or discussion that presumes prior knowledge the researcher does not have. In some, but not all, cases it is possible to get the background information elsewhere, or at least to get enough of the context to allow a reasonable interpretation. Nor is it possible, as in interviews, to probe and to press the informant for further information. One is forced to work with what there is.

One is also limited by the size and resources of the library. I had the benefit of a large, well-stocked medical school library, the libraries of two university-affiliated pediatric hospitals, and a leading specialized library in the history of medicine. Not all communities offer such an array of specialized resources. Inter-library loan services make it possible ostensibly for researchers to obtain access to virtually any document they seek. But because documentary or library research depends so much on being able to walk through the shelves and sift through material that is there, especially in the initial stages of a project, these services are of limited use.

Finally, library research is a solitary activity and not suited to all temperaments. The researcher is often burrowed in remote sections of the library and enjoys little human contact. At the same time, it is important to note that working with library materials can be exciting and engrossing. With a little imagination it becomes easy to envision the circumstances from which the materials emanated. From the photographs, biographies, personal tributes, obituaries and writing styles, it is possible even to glean a mental picture of many of the key figures involved. Historians are well aware that these materials have a life of their own and have experienced the thrill of working with them.

Presidential Addresses

Among the most revealing documents within the professional literature are the presidential addresses. There are four types of addresses. Some presidents provide an overview of the organization's finances and activities during their tenure. These uninspired addresses read like annual reports, are generally boring for their audiences and of little use to the researcher interested in professional development. Other presidents focus on topics of historical interest. They may describe an earlier phase in the profession's work or an important historical milestone in its evolution. In pediatrics, addresses in this category included descriptions of traditional treatments for particular medical conditions, pediatricians' contribution to certain movements and causes, and tributes to past presidents. The third type of address is technical. The president examines a new discovery or scientific advance

in the field, explores the state of the art within a particular area, perhaps one in which he or she has established a reputation, or describes the profession's research frontiers.

The fourth, and most useful type of address takes the form of a mission statement. It expresses the organization's professional goals, takes stock of its current state and outlines its prospects for the future. In pediatrics, the majority of presidential addresses have fallen into this category and have included titles such as "The AAP - Its Aim and its Scope" (Abt, 1931), "Pediatrics in the Space Age" (Cole, 1959), "American Pediatrics - a Retrospect and Forecast (Holt, 1923), "Pediatrics at the Delta" (Holt, 1961), "Pediatric Education at the Crossroads" (Levine, 1960), "Whither Pediatrics" (Low, 1977), "The Future of Pediatrics" (Morse, 1937) and "Pediatrics: A Perspective on the Present and Future of a Proud Profession" (Olmsted, 1978).

The preponderance of mission statements among the addresses of the presidents of pediatric organizations may be typical of all professions and may be linked with the nature of presidential addresses. In any organization the position of president is honorific and prestigious. It is a symbol of its incumbent's status as a respected and admired leader within the field. The membership expects from its presidents the kind of statement that only they, by virtue of their experience, authority, perspective and wisdom can make. Presidents are usually painfully aware of these expectations and from the moment of their election begin to collect their thoughts on the kind of speech they will deliver. They strive for a momentous speech, one befitting a president and one that will make an impact. As Erving Goffman (1983:1),

reflecting on his own 1982 address to the American Sociological Association, wrote: ". . . in theory, a presidential address, whatever its character, must have significance for the profession, even if only a sad one." A mission statement stands a good chance of meeting this prerequisite.

On the other hand, the preponderance of mission statements among pediatric addresses may have to do with pediatrics' particularly turbulent past. When a profession is going through a relatively stable period in its development, presidents have the luxury of basking in its past glories and accomplishments or focusing on the more mundane aspects of its organizational activities. However, when a profession is experiencing difficulties and a questionable future, as pediatrics often has, there is pressure for its leaders to deal with the crisis at hand. It is especially at these moments that members of a professional organization look to their leaders for direction and guidance. They do not want to hear empty platitudes about the greatness of their profession, but frank and realistic analyses of its problems. They want to be reassured that their leaders are sensitive to these problems and have some vision of the profession's future.

In either case, these types of presidential addresses are a valuable resource for those studying professional development. They allow the researcher to take the pulse of the profession at any given point in its history and to get an idea of the issues and problems that concern it. The professions themselves seem to recognize the significance of these addresses as a record of their development and from time to time publish them in a convenient collection. On the 25th

anniversary of the American Academy of Pediatrics, for example, Beaven (1955) brought together in one volume, the addresses of the organizations first twenty-five presidents. In their history of the American Pediatric Society, Faber and McIntosh (1966) trace the main themes of its presidential addresses over the period 1889 to 1964. Such collections make it relatively easy to map out the course that a specialty or a profession has followed over the years. Of course, the sketch is rough and requires much filling in. But it provides an excellent starting point for the researcher.

The presidential address is a particularly useful document to consult in the case of transforming professions. When a profession deals with its organizational troubles by changing or expanding its mandate, one of its initial concerns is to repudiate older images of itself and set forth a new rhetoric to clarify and justify its new roles and interests (Bucher, 1980:30). This rhetoric is most likely to be found in the statements and addresses of its leaders. They are the ones who communicate, especially to the members of the profession, the ways in which it is changing, or at least how they would like to see it change.

Summary

In this chapter I have described the data that I used in writing this thesis, emphasizing in particular the professional literature. I have argued that this literature offers an abundant, rich and often overlooked source of data for those interested in analyzing the

- .. professions and their development. The most convincing testament to the merits of this data, however, lies in the substantive chapters of this thesis which demonstrate the kind of analysis they make possible.

CHAPTER 3

THE BIRTH AND RISE OF A NEW SPECIALTY

In 1880, at the 31st annual meeting of the American Medical Association, 40 doctors met to form the Section on the Diseases of Children. This marked the beginning of organized pediatrics in the United States. After a slow and tenuous start, the new specialty gradually established itself. Over the next forty years pediatrics grew into one of the most popular and thriving specialties in medicine.

In this chapter I describe the emergence and consolidation of pediatrics. First, I consider the conditions of childhood and children's health, and the medical services available at the time. I trace the factors that gave rise to pediatrics, as well as some of the milestones of its organizational growth. Finally, I describe how pediatricians defined their professional task. Though the mission of pediatrics, in its broadest terms, was to study and treat the diseases of children, pediatricians were particularly concerned with one of the greatest scourges of childhood in the last half of the nineteenth century - the artificial feeding of babies. The practice of pediatrics, through to the 1920s, was so closely tied to artificial feeding, the profession refers to these years as the "era of the pediatrician as baby feeder" (Veeder, 1938:54). In the final section of the chapter, I discuss the pediatrician's unique role as baby feeder.

The Context of Emergence

When pediatrics first emerged as a specialty in the late nineteenth century, the conditions of childhood were as bleak as they ever have been. The United States was industrializing, cities were growing, and millions of immigrants were attracted to the country's shores. It was a time of unprecedented growth and prosperity. But progress came with a high price. Urban living conditions, already deplorable by present day standards, deteriorated. The health of the entire population, especially children, suffered significantly. Though exact records are not available, Smillie (1955:201), a medical historian, has estimated that the mortality rate for infants, that is for children under one year of age, in New York City in 1885, was 273 per 1000 live births, up from 120 per 1000 in 1810. The greatest killers were the infectious diseases: cholera infantum, typhoid fever, dysentery, tuberculosis, diphtheria, pertussis (whooping cough), scarlet fever, influenza and pneumonia. Nearly half of all deaths due to infectious diseases occurred in infants and children under 5 years of age (see Table 3-1). Estimates for Massachusetts, show that the infant mortality rate climbed from 131 per 1000 live births in the 1851-1854 period, to 153.2 in the 1895-1899 period (Cone, 1979:106, 131).

There was little that doctors of the day could do for sick children. Their theories held that disease was the result of evil humors in the blood. Their treatments consisted of drastic or "heroic" measures designed to rid the body of these noxious substances. Phlebotomy (blood-letting), blistering, purging (vomiting) and the

TABLE 3-1
THE TEN LEADING CAUSES OF DEATH IN CHILDHOOD: 1850*

Children Under 1 Year	Children 1-4 Years
<ol style="list-style-type: none"> 1. Croup 2. Dysentery 3. Convulsions 4. Pertussis 5. Pneumonia 6. Cholera Infantum 7. Fever 8. Cholera 9. Tuberculosis 10. Scarlet fever 	<ol style="list-style-type: none"> 1. Dysentery 2. Scarlet fever 3. Croup 4. Cholera 5. Fever 6. Pertussis 7. Pneumonia 8. Cephalitis 9. Worms 10. Convulsions
Children 5-9 Years	Children 10-19
<ol style="list-style-type: none"> 1. Scarlet fever 2. Cholera 3. Dysentery 4. Fever 5. Typhoid Fever 6. Croup 7. Dropsy 8. Cephalitis 9. Pneumonia 10. Tuberculosis 	<ol style="list-style-type: none"> 1. Tuberculosis 2. Cholera 3. Fever 4. Typhoid Fever 5. Dysentery 6. Pneumonia 7. Dropsy 8. Accident 9. Cephalitis 10. Scarlet Fever

* Smillie (1955) has noted that many of the diagnostic categories, such as fever, convulsions and worms, are not clearly defined. On the basis of his analysis of the records, Smillie concludes that diphtheria, scarlet fever, and intestinal infections (cholera infantum, cholera, dysentery, convulsions, and worms) were leading causes of death in children under five. Tuberculosis was an important cause of death in infants, dropped in importance for the next 15 years and then, became the leading cause of death in the 10-19 age range.

Source: Adapted from Smillie, 1955:206.

administration of massive doses of minerals such as mercury, magnesium, lead, iron, copper, zinc, arsenic and potassium, were all part of the doctor's armamentarium. Since they did not distinguish between children and adults, they applied the same treatments to both. Adults barely survived these treatments; for children they were devastating.

John Gittings, a pediatrician researching nineteenth century methods of treatment, was astounded by the descriptions he found. "The use, or rather the abuse of drugs," he wrote (1928:4), "chiefly cathartics, is a source of never-ending wonder." The doctor of a newborn whose symptoms Gittings recognized as those of a cerebral hemorrhage ordered, over a 36-hour period, 2 ounces of infusion of senna, 7.5 grams of Rochelle salts, .6 grams of jalap and .06 grams of mercuric chloride, besides several "purging clysters." A seven year old girl with croup received 8.6 grams of mercuric chloride over a 60-hour period. The treatment of a one year old youngster suffering from violent vomiting, fever, a distended abdomen and diarrhea included the following:

Four grains (0.26 Gm.) of scammony and 2 (0.130 Gm.) of mild mercuric chloride were given every four hours with some infusion of senna and syrup of rhubarb. On the second day, the vomiting and watery purging had nearly ceased, so the scammony and other drugs were repeated. On the third day, no feces had appeared, so a cathartic clyster morning and evening was ordered together with 1 grain (0.065 Gm.) of mild mercuric chloride and 4 grains (0.26 Gm.) of jalap, four times a day, in place of the former mixture. On the fourth day, the results had been nil except for a little mucus produced by the clysters, so a new combination was tried four times a day - 4 grains (0.26 Gm.) of scammony, 2 grains (0.13 Gm.) of jalap with a mixture of

infusion of senna and tincture of jalap, and also the clysters. By the fifth day, no feculent material had appeared, although all the medicines had been retained. . . . The dose for the day was 1 drachm (3.75 Gm.) of aloes dissolved in 1 ounce (30 cc.) of simple syrup, to be given in divided doses every two hours together with the jalap and scammony powders. On the sixth day, all the syrup having been taken and retained, our little hero had the first feculent motion since the commencement of his illness. The fullness of the abdomen was somewhat diminished, but fever persisted. The aloes and powders, therefore, were carefully continued. On the seventh day, after two copious evacuations, the fever began to fall, so for good measure $\frac{1}{2}$ grain (0.0325 Gm) of mild mercuric chloride was given four times a day with an aperient mixture (specifications not furnished), and the child gradually became convalescent. (Gittings, 1928:5-6).

The amounts of these substances struck Gittings as so excessive, he consulted the U.S. Bureau of Weights and Standards to see if the measures at that time were comparable to contemporary standards. The director of the Bureau was inclined to believe that they were, although he lacked definite information.

The extent of blood-letting was even more shocking. "They were stout youngsters in those days," Gittings wrote (1928:6), "and took their bleedings and blisterings as well as their cathartics." One doctor treated cases of croup by withdrawing between six and eight ounces of blood, and followed this up by placing three or four leeches on the trachea and a full-sized blister on the chest. Blood-letting was an almost routine course of treatment for children because doctors believed that it was effective against fevers, and most infections in children were characterized by fever. The idea was to withdraw enough blood to induce fainting or to temporarily stop the pulse. Moreover,

since children do not perspire as much as adults, doctors felt that it was the only way to release the sources of disease. They bled infants through the jugular vein because other veins were too small to locate. Coulter (1969:113) has described the treatment of children as "one of the saddest aspects of nineteenth century practice."

Recognizing the inefficacy of their treatments, most doctors preferred not to treat children at all. They might respond to requests for their services, but rarely sought children as patients. Their attitude was that "the diseases of small children are small things" (Jacobi, 1911:3). As a result, the primary responsibility for the care of sick children fell on the shoulders of women, particularly experienced mothers and midwives in the community. Though it was not a central aspect of their role, midwives included among their activities, ministering to sick and dying young children.

Medical indifference towards children was also a reflection of larger societal attitudes. Up until the mid-nineteenth century, the conditions of childhood, and particularly the high mortality rates did not evoke great public concern. Families experienced the death of their children as a dreaded loss, certainly. But they were resigned to the perilous nature of childhood and expected at least some of their children to die. They accepted death in general, but especially death in childhood, as the will of Divine Providence. According to Ehrenreich and English (1979:185): "Each individual child had to be seen as a possibly temporary visitor. Frontier parents often left their infants nameless for many months, lest they "waste" a favourite name; and mothers spoke not only of how many children they had raised, but of how

many they had buried." A nineteenth century advice manual for mothers devoted a special chapter to coping with "The Loss of Children" (Sigourney, 1839).

After 1850, this equanimity gave way to widespread inquietude about the poor life chances of most children. People were no longer willing to tolerate what they were beginning to see as a waste of young lives. They refused to accept the high mortality rates as inevitable and irreversible. As one of the first pediatricians (Holt, 1913:53) put it: "We are now coming to look upon a high infant death rate as evidence of human weakness, ignorance and cupidity. We believe that Providence works through human agencies and that in this field, as in others, we reap what we sow, no more and no less." Through the last half of the nineteenth and the beginning of the twentieth century, the problems of childhood became a major social issue.

Scholars are still debating the reasons for this new-found concern. Much of the debate revolves around the influence of demographic trends. Shryock (1936) and Rosen (1958) have suggested that the concern for children and their problems was the result of falling birth rates. Once children became more scarce, their value increased. Rosen (1958:350) notes that these declines coincided with the rise of mercantilist ideas and policies in the United States. The country set out to acquire colonies as sources of raw material and potential markets. In order to carry out its expansion it needed fit young men to serve in its armed forces.

Other social historians (Musgrove, 1964; Stannard 1977; Stone, 1977) have suggested that attitudes towards children changed after

mortality rates began to decline. Once children began to live longer they became safer emotional investments. However, this explanation is problematic because, at least in the United States, mortality rates did not begin to fall until the end of the nineteenth century, well after attitudes changed (Smillie, 1955:201; Vinovskis, 1972; Yasuba, 1962).

Zelizer (1985) insists that debates about the relationship between population trends and the concern for children are too individually and psychologically focused. They miss the point that there was a shift in the cultural meaning of childhood. According to Zelizer, the problems of children emerged as a national priority as a result of the "sacrilization" of their lives. Children became sacred, that is, objects of sentimental and religious value. "Individual and group responses," she argues (Zelizer, 1985:32), "were therefore shaped by a cultural context that upheld child life as uniquely sacred and child death as singularly tragic." However, Zelizer does not address the reasons for this shift in cultural values.

Whatever its source, the new attitude toward children led to intense private, and then public, activism on their behalf. The child welfare movement, as it is generally called, was responsible for a variety of special services, programs and institutions geared not only to sick children, but the destitute, neglected, abused, deserted, handicapped, maladjusted and delinquent. Over the last half of the nineteenth century, the movement's reformers established separate juvenile courts and child saving agencies such as Children's Aid Societies and Societies for the Prevention of Cruelty to Children; they initiated the effort to curb child labour; they also constructed special

institutions for children, including houses of refuge, reformatories, orphanages, infant asylums, hospitals and dispensaries (Zietz, 1959:40-78).

The Rise of a New Specialty

The child welfare movement was one of two main factors that gave rise to the new specialty of pediatrics. It focused public attention on the perils of childhood and the need for ameliorative action, thereby creating a social climate favorable to the emergence of a specialty devoted to the medical problems of children. More significantly, it provided the institutional context for pediatrics' emergence. Sydney Halpern (1982) has linked the rise of pediatrics directly to the various institutions for children that the movement established, particularly the children's hospitals. In the 1850s and 1860s, several children's hospitals came into existence, including the Nursery and Child's Hospital in New York City (1854), the Children's Hospital of Philadelphia (1855), the Chicago Hospital for Women and Children (1865) and Boston Children's Hospital (1869). Through the 1870s, more than a dozen additional hospitals were founded.

Most of these hospitals were small, converted family dwellings with about 20 beds. Private boards of philanthropists and volunteers, mostly women, funded and ran the hospitals. They typically hired a full-time matron to supervise, but the volunteers did much of the day-to-day custodial work. The boards asked prominent doctors to donate their medical services. These were doctors who comprised the elite of

the medical profession, those who rejected traditional and unproven theories and methods of practice and were beginning to establish a more scientifically grounded approach to medicine. Their work in charitable institutions, such as children's hospitals, was both a way to contribute to the welfare of their communities and at the same time demonstrate their stature within the medical hierarchy.

The doctors who worked in the children's hospitals and other children's institutions began to develop a special interest in their medical problems. Abraham Jacobi, the "father of American pediatrics," was one of them. Jacobi was born in Germany and graduated from medical school in Bonn in 1851. Forced to leave Germany because of his political activities, he came to New York City in 1853 and set up a general practice. By the end of the decade he was an attending physician at New York's Nursery and Child's Hospital. As his experience in treating children grew, Jacobi organized special teaching clinics on the diseases of children at the New York Medical College during the early 1860s, at the University Medical College during the late 1860s, and at the College of Physicians and Surgeons beginning in 1870 (APS, 1938:2-6).

Other founders of the specialty shared similar careers. Most combined their private general practices with charitable work in children's institutions and, as the specialty began to develop, teaching. Job Lewis Smith served as attending physician at several children's institutions including the Northwestern Dispensary, the New York Foundling Asylum, the New York Nursery and Child's Hospital and the Infant's Hospital on Randall's Island, and taught clinical pediatrics at

the Bellevue Hospital Medical College (APS, 1938:65; Faber, 1963:796-797). Thomas Morgan Rotch was an attending physician at both the Infant's Hospital and the Boston Children's Hospital and eventually taught pediatrics at Harvard University (APS, 1938:63; Talbot, 1957:29-32). Luther Emmett Holt taught at the New York Polyclinic Hospital and succeeded Jacobi at the College of Physicians and Surgeons at Columbia University (APS, 1938:35-37; Park and Mason, 1957:33-41). Louis Starr worked at the Children's Hospital in Philadelphia and taught pediatrics at the Pennsylvania School of Medicine.¹

Their interest in children's diseases, as well as their common work experience set these doctors apart from their medical colleagues. It led them to get together, first informally, and then formally, to establish their own organizations. Halpern concludes:

The impulse to organize, I maintain, grew out of the contingencies of their daily professional lives and the recognition, within a nascent constituency, of common preoccupations and interests. It is likely that their motivations included identification with those who shared similar circumstances and the perception that mutual benefit could be accrued through collective action. A professional association might promote pediatrics as a field of medical research, enhance the prestige and dignity of practitioners' work, and improve the material conditions of their careers. It might, indeed, transform inchoate mutual sympathy and incipient group consciousness into a cohesive professional identity (Halpern, 1982:86-87).

Another factor that contributed to the rise of pediatrics was the evolution of specialism within medicine (Halpern, 1982:87-89). Through the first half of the nineteenth century, the idea of disease as one

unitary, generalized condition had given way to an understanding of diseases as problems connected to specific organs. By 1850, scientifically oriented doctors were specializing in organ systems such as the brain, throat, eyes and ears, and particular technologies such as surgery. These specialties gradually began to organize themselves as separate sections within the larger American Medical Association (AMA). But they found that the AMA was not the best forum within which to pursue their narrower professional interests. The AMA was primarily a generalist's organization. Many of its members opposed specialization because they felt that it deleteriously fragmented the practice of medicine. They were also conscious of the potential competitive threat from specialties.

As a result, specialists formed independent associations. The first of these was the American Ophthalmological Society (1864), followed by the American Otological Society (1867), the American Neurological Association (1875), the American Dermatological Association (1876), the American Gynecological Association (1876), the American Laryngological Association (1879), the American Surgical Association (1880), and the American Climatological Association (1883).² In 1888, several national specialist societies created the Congress of American Physicians and Surgeons (Stevens, 1971:46).

These associations preceeded the formal organization of pediatrics. Though none of them set a precedent for age as the basis of specialization, their existence contributed to the emergence of pediatrics in three ways: First, they established the principle of specialization within medicine. Second, they gave pediatricians an

incentive to organize themselves. Third, they provided a model for pediatricians to follow in that organization.

Organizational Development

The first organization that pediatricians formed was the Section on the Diseases of Children within the AMA, which came into existence in 1880. At the time, they called themselves pediatricists and their area of interest, pediatry or pedology. These terms were replaced in the twentieth century with the terms pediatrician and pediatrics, probably to prevent confusion with podiatry, the study of diseases of the foot (Cone, 1979:70). The Section elected Abraham Jacobi as its chairman. When asked about the Section's origins, Jacobi answered: "There is no history; we just did it. It was a clear case of spontaneous generation. The Section was in the air and we were present when it condensed. That is all" (Schlutz, 1933:417).

The Section started vigorously, but soon ran into the same difficulties that other specialties had encountered within the AMA. Schlutz (1933:417) claims its early years were marked by "a struggle for existence and independent identity." The general membership of the AMA did not see the need for a separate section devoted to the medical problems of children. "Is disease in children sufficiently distinct from disease in all adults to merit separate and special consideration" asked one pediatrician rhetorically (Christopher, 1894:779)? "[Within the Section] . . . the answer would be unanimously in the affirmative. It is not so certain, however, that the answer would be the same if the question were submitted to the profession at large."

There is no record that the section met at all in 1887 and 1888. In 1889, the Section on Obstetrics, which had handled all matters pertaining to children prior to the creation of the Section on the Diseases of Children, introduced a resolution to the AMA House of Delegates to dissolve the section completely. The AMA defeated the resolution, but only after an impassioned plea by the Section's chairman, J. Larrabee (Schlutz, 1933:418).

The tenuous status of the section, combined with the growing trend towards independent specialty associations, led pediatricians to create a separate and independent pediatric organization. In 1887, after a meeting of the International Congress of Medicine in Washington, D.C., several American pediatricians met informally to consider the possibility of an autonomous association. They formed a committee under the chairmanship of Job Lewis Smith to bring together all those with a "special interest in the advancement of the study of the diseases of children" (Gifford, 1969:370). A year later, on September 18, 1888, 42 pediatricians met in Washington D.C. to establish the American Pediatric Society (APS). The group elected Abraham Jacobi as its first president. The APS considered a loose affiliation with the AMA or the Congress of American Physicians and Surgeons, but decided to steer clear of "all medical cliques" and to avoid "entangling alliances" (APS, 1938:xi). The APS technically restricted membership to researchers who had made a contribution to the understanding of childhood disease, but included just about every clinician and academician in the United States and Canada with a declared interest in pediatrics (Faber and McIntosh, 1966:311; Morse, 1935:305).

Striving for Recognition

The goal of the first pediatricians was not to get doctors to recognize pediatrics as an exclusive area of practice. Products of their age, they did not believe that doctors should limit themselves to any particular aspect of medicine. Though their research and institutional work may have focused on children, in their private practices they continued, by choice, to treat adults as well as children (Brennemann, 1938:56).

What they did want was to get the rest of the profession to recognize that children were legitimate objects of medical attention and that their diseases were distinguishable from those of adults, and therefore needed to be treated differently. The resistance they encountered is evident in the response to a journal notice announcing the third annual meeting of the APS. One reader wrote: "Permit me to ask if it does not smack of affectation to give a name to a national medical association which cannot be found in the dictionary?" The journal's editors astutely noted:

We are inclined to think . . . that our correspondent's objection is not to the word "pediatrics," but is intended as a criticism of the purposes of the society which devotes its efforts to the special study of the diseases of children. (Journal of the AMA, 1891:603).

Pediatricians criticized doctors harshly for showing so little regard for children's medical problems and ways of dealing with them. One of them (Casebeer, 1883:327) wrote:

We have often been pained by the remarks dropped from the lips of some physicians . . . such as "Well, you may give a few drops of paregoric or some catnip tea or most anything of that kind you may find convenient, as we cannot do much for children so young;" or "Your mothers or "old women" can treat young children as well as I or any physician can;" or "I don't like to treat children. It is so unsatisfactory. They cannot tell how they feel and what is the matter with them, and I never can tell what they need." (Casebeer, 1883:327).

Casebeer felt that the challenge of treating sick children was so daunting, it belonged not to mothers and "old women," but to doctors, indeed, to the best doctors: "If the uneducated women and nurses are to be given work because of their kindness of heart and their good nursing," he argued (1883:328), ". . . certainly let it be given them in the realm of the adults where a neglect or a misapplied remedy is far less harmful."

But treating children did not mean simply applying the principles of adult therapeutics. Children were not miniature adults and pediatrics did not deal with "reduced doses and the same class of diseases in smaller bodies" (Jacobi, 1889b:2). Pediatricians insisted that children were unique and that the first step towards helping them was to recognize their distinctiveness. They stressed repeatedly that children had their own anatomical and physiological features and that it was impossible to deduce these features from those of adults; their developing organs functioned differently; they were susceptible to infectious diseases that adults could ward off; their responses to disease were often different; a minor condition in an adult could be life-threatening for a child; traditional treatments that worked for

adults did not always work for children; feeding problems were more acute among children; children were not always able to communicate their symptoms and therefore required special methods of diagnosis; and the prognosis for children was often different (Jacobi, 1889a).

Thomas Rotch (1891), in his presidential address to the APS, condemned the ignorance that permeated all medical ranks, from the poorly trained doctor to the scientific elite of the profession. He accused the medical profession of actually contributing to the deplorable state of children's health through their lack of understanding of childhood diseases and their harmful therapies:

You probably all have met with the same experience as mine, not only among the poorer class of physicians, but, astonishingly as it still seems to me, among the highly educated and distinguished members of our profession. Among men who are recognized leaders, men who have done much for humanity in other branches of medicine and yet, who, with dignified authority, continue to utter dead platitudes concerning children. . . . It is no exaggeration to state that a large number of sick infants and young children throughout the land are suffering from the vigorous treatment of their zealous medical attendants, rather than from the disease with which they started. This is the mission of our Society to put an end to. (Rotch, 1891:8).

In the eloquent rhetoric typical of new segments and professions, Rotch called for a new spirit of "iconoclasm" and original scientific research into the problems of children:

[Pediatrics] must break down and sweep away these misleading structures, clear the ground of these undesirable remnants of the past, get own to the virgin soil and then, by original research, build up our new fabric on a stable basis. Wise iconoclasm and patient originality must be the weapons by which we shall fight our way to the front and place the standards of pediatrics where it ought to be. . . . Here then, is our opportunity for original research for we have a branch of medicine which universally is new. (Rotch, 1891:7-8).

Educational Advances

Another major goal of the first pediatricians was to persuade medical schools to incorporate pediatrics into their training programs. Pediatric teaching began in the 1860s, when the New York Medical College allowed Jacobi to lead a weekly clinic for its students. By the end of the decade, most medical schools provided some formal instruction in the treatment of children's diseases. An 1898 survey of 117 medical schools demonstrated that only 7 (6 percent) offered no pediatric training at all. But the same survey showed that few schools attached much importance to pediatrics. Forty three schools (37 percent) combined pediatrics with another department, usually obstetrics and the diseases of women. In the 64 schools (55 percent) that had a special chair of pediatrics, the majority (49 schools or 77 percent) were at the clinical or associate, rather than full professor level (see Table 3-2).

The experience of J. P. Crozer Griffith illustrates pediatrics' thwarted status in medical schools. Griffith received his medical training at the University of Pennsylvania School of Medicine during the 1870s, when the school's two professors in the diseases of women also

TABLE 3-2
PEDIATRIC TRAINING IN MEDICAL SCHOOLS: 1898

	Number	Percentage
No Training	7	6
Combined with Another Department	43	37
Special Chair	64	55
Clinical/Associate	(49)	(77)
Full Professorship	(15)	(23)
Total	117	

Source: Griffith, 1898.

had the responsibility for the diseases of children. Children got short shrift. Through Griffith's five years at the school, only one lecture, on whooping cough, dealt with the problems of children. In 1884, the School appointed its first professor of pediatrics, Louis Starr. But in 1891, Starr resigned "in disgust" and Griffith was appointed to replace him. He did not receive a salary for his work. He could lecture only once a week, during the last half of the final year of training. He was often assigned to the last hour of the last day of the week when students were tired and inattentive. He could not insist on attendance, nor could he set an examination (Griffith, 1936:601).

While pediatricians worked towards improvements in pediatric training, the medical profession was in the midst of important reforms in medical education. Up until the beginning of the twentieth century, there was little control over the quality of medical education. Some schools, particularly those affiliated with universities, stressed scientific excellence and adhered to rigorous standards. But there were many university affiliated and commercial proprietary schools that were more concerned about their profits than the adequacy of their instruction or the quality of the doctors they produced. In 1910, the Carnegie Foundation, in conjunction with the AMA's Council of Medical Education, commissioned Abraham Flexner to survey the state of medical education in the country.

Flexner produced a damning report: 137 of the 148 medical schools Flexner visited either had no specified entrance requirements or did not enforce them; 138 schools had a teaching staff composed only of practicing doctors, rather than full-time faculty; 140 schools had a

library that was inadequate or no library at all (Bowers, 1976:25). Only the medical schools at Johns Hopkins University, which Flexner had used as a model against which to measure the others, Harvard University and Western Reserve University escaped criticism. He recommended the closing of most schools and the restructuring of medical education around university-based professional schools. The Flexner report revolutionized education in North America. The number of schools dropped from 160 in 1905 to 95 in 1915, 85 in 1920. The weaker schools either disappeared or merged with better quality institutions. The greatest drops were in Class C schools, the lowest category in the system the AMA's Council on Medical Education had devised in 1905 to rate medical training programs. In 1905 there were 32 schools in Class C, in 1915 there were 12, and in 1920 there were 8 (Bowers, 1976:25).

To promote pediatricians' interests in this reform, a group of pediatric professors formed the Association of American Teachers of the Diseases of Children (AATDC) in 1907. Through the AATDC, pediatricians made significant gains. Pediatrics became part of the standard medical school curriculum. As medical schools reorganized, many created independent departments of pediatrics. A survey of Class A medical schools in 1917 showed that in 50 percent of 42 schools, pediatrics was an independent department (Hess, 1917:22). By 1924, 62 percent of 68 Class A schools had an independent department of pediatrics (Bolt, 1924:38). Besides providing courses for undergraduates, pediatric departments also instituted postgraduate programs for those who wanted additional training in pediatrics. These programs included both short,

continuing education courses and hospital-based residencies in pediatrics. In 1928, its goals realized, the AATDC disbanded.

The Growth of Pediatrics

Gains in the educational sphere were accompanied by a burgeoning pediatric literature. Pediatric textbooks and monographs appeared, as did journals such as the Archives of Pediatrics in 1884, the Transactions of the APS in 1889, Pediatrics in 1896, and the American Journal of the Diseases of Children in 1911.

The specialty grew in numbers. After the turn of the century, some doctors began devoting themselves full-time to pediatrics. All their professional activities, including teaching and research, institutional work and private practices, revolved exclusively around children. In 1900, there were no more than 20 full-time pediatricians in the country. By 1914, there were 138 and by 1921, there were 664. In 1914, one out of every 1031 doctors specialized in pediatrics. By 1921, the ratio had risen to 1 in 218. These figures do not include those whose practices were primarily, but not exclusively, focused on pediatrics. There were 741 doctors in this category in 1914 and 1,798 by 1921 (see Table 3-3).

No other specialty experienced such a rapid increase during this period. A study of doctors who graduated between 1915 and 1920, found that while the percentage of graduates limiting themselves to surgery, internal medicine and diseases of the eye, ear, nose and throat had peaked and declined slightly, the percentage of those specializing in

TABLE 3-3
NUMBER OF PEDIATRICIANS: 1900-1921

	1900	1914	1921
Practice Limited to Pediatrics	20	138	664
Special Attention to Pediatrics	--	741	1798
Total	--	879	2462
Ratio of Pediatricians to General Practitioners	--	1:1031	1:218

Source: Veeder, 1935:7.

pediatrics increased nearly 100 percent from 5.8 in 1915 to 11.1 in 1920 (Veeder, 1935:7).

Several factors contributed to the growth. One was the changing appeal of specialization. The ambivalence that characterized both public and professional responses to specialization in the nineteenth century began to dissipate in the early twentieth century. Specialties became well-paying, high status positions, popular with the middle class public that could afford to pay and attractive career paths for young doctors. Another factor was the increase in opportunities for pediatricians both in teaching and practice. The expansion of pediatric departments in medical schools created new teaching positions. The proliferation of children's hospitals and special pediatric wards in general hospitals created new opportunities in the area of practice. Children's hospitals expanded into large, complex organizations. They were no longer staffed by volunteers, but by salaried, professionally trained doctors, nurses and administrators. In 1900, there were 30 children's hospitals in the United States (Garrison, 1965:121). By 1930, there were 70 (White House Conference on Child Health and Protection, 1932:23).

Finally, the child welfare movement played a critical role and may explain why pediatrics grew faster than other specialties. The movement had changed in significant ways since its inception in the nineteenth century. Before 1900, it was concerned broadly with improving the conditions of childhood. After 1900, it focused on a narrower range of childhood issues, and in particular, on infant and child mortality. Second, it grew dramatically in size, encompassing

more than 60 national voluntary organizations, such as the American Association for the Study and Prevention of Infant Mortality founded in 1909, the Child Health Organization founded in 1918, and the National Child Health Council founded in 1920. Third, public health officials began to play an increasingly prominent role in the coordination and funding of child welfare activities, setting up special divisions for child health within their municipal, county and state boards of health. In 1912, the U.S. Congress established the Children's Bureau, under the direction of Julia Lathrop, a social worker. The federal Bureau's mandate was broad: "to investigate all matters pertaining to the welfare of children and child life." But its first real target was infant mortality.

The strength of the movement and its success in making the issue of infant and childhood mortality a national priority boosted pediatricians in their claims for recognition. In accounting for pediatrics' phenomenal growth during the first decades of the twentieth century, one pediatrician (Veeder, 1935:7) wrote: "It has most certainly been due in part to the social trend of recent years, that is, to the increased sense of responsibility for the child on the part of society."

The Pediatric Mission: Baby Feeding

While pediatricians were part of the larger movement to improve the conditions of childhood and to reduce the infant and child mortality rates, their actual contribution to that effort was limited to the

treatment of children's diseases. Within that already narrow mandate, their concerns were more focused still on the problems associated with artificial feeding. Feeding problems dominated pediatric research, teaching and practice from 1880 to 1920. The reasons for this emphasis lie both in the prominence of feeding problems as a source of mortality and in the context of pediatric practice during those years. Most infections that struck children during the last half of the nineteenth century and early part of the twentieth century were intestinal infections. Many were spread through contaminated milk. Cone (1979:152) estimates that until the 1920s, 80 to 90 percent of all children who died from intestinal infections were artificially fed. Most deaths occurred through the hot summer months.

These rates were the outcome of the conditions under which milk was produced, handled and distributed prior to the twentieth century. Urban milk supplies came mostly from cows kept in dirty and cramped city stables, fed on garbage and distiller's mash, and often so diseased they had to be hoisted by cranes to be milked. In New York City, tramps and derelicts milked the cows in return for night shelter in the stables (LaFetra, 1932:38). The milk was often not only contaminated, but adulterated. Unscrupulous producers diluted milk with water or added molasses, chalk or Plaster of Paris to improve its colour (Bettman, 1974:114). George W. Goler, health inspector for the Rochester Board of Health described the conditions of New York dairies in 1890:

We found in many of these establishments, conditions which neither print nor pictures could adequately describe. The stables were dirty, festooned with cobwebs and badly drained; the surroundings, sinks of mud and cow manure; the utensils dirty, often containing layers of sour milk with admixtures of countless millions of bacteria; and the milk itself imperfectly cared for and badly cooled, that it often soured before reaching the consumer. (in Bremner, 1971:871).

Though rural cows were usually better fed, they too lived under less than ideal conditions and were often ill.

Working mostly among institutionalized children who drank this milk, pediatricians quickly realized the disastrous consequences of artificial feeding. In one of the first papers delivered to the newly-formed APS, Job Lewis Smith described his experiences at the Almshouse on Blackwell's Island, where virtually all babies who were not breast-fed, died:

Infants deprived of their mother's milk or its substitute, the milk of the wet nurse, during the period when nourishment at the breast is the proper method of alimentation, have until recently, if we may speak from our experience in New York City, nearly all perished soon after birth, and from causes which were plainly referable to the mode of feeding. This remark is not an exaggeration. My observations fully justify the statement. Several years ago, before the New York Foundling Asylum was organized, the foundlings of New York were assigned to the care of the pauper women in the Almshouse on Blackwell's Island. The diet consisted mainly of cow's milk, which arrived every morning from the country, and was prepared and administered according to the judgement of these women, or of the matron. It was more or less diluted and sometimes some farinaceous substance was added. The steamboat every morning brought foundlings to the island, and every afternoon, removed an equal number for burial

in Potter's Field. To me was assigned the unpleasant duty of visiting and prescribing for these foundlings, and a single infant was pointed out to me which had not died in the usual time. (in Faber, 1963:797).

With artificial feeding such a pervasive threat in the lives of children they treated, pediatricians gave priority to finding effective feeding techniques. According to Cone (1979:131), "to learn how to overcome this formidable cause of infant mortality became the prime mission of pediatrics."

Pediatricians did not know about germs or germ transmission. They were convinced that the problem lay in the composition of cow's milk. To solve the problem, they first analyzed the precise chemical differences between cow's milk and mother's milk, and then tried to modify cow's milk to make it a more comparable substitute. Charles D. Meigs, the family patriarch in a dynasty of pediatricians who studied the feeding of young children, found that cow's milk had more protein than mother's milk. Assuming that the protein made the milk difficult for youngsters to digest, he added carbohydrates (sugar) and fat (cream) to cow's milk to reduce the ratio of protein to fat. His son, John Forsyth Meigs developed a simple formula for the modification. In the 1890s, a percentage feeding method developed by Thomas Rotch, replaced Meig's simple formula. Rotch based his method on the principle that no one formula was suited to all children. He believed that the appropriate percentages of fat, protein and carbohydrates depended on children's individual digestive capacities and nutritional needs. These percentages varied not only from child to child, but for individual

children, from week to week. The slightest variation, he insisted, could make a difference in whether the child would be able to digest the milk.

Rotch's method for calculating the percentages, and the variations that other pediatricians developed were incredibly complex. It took more than twenty pages, dense in detail and equations, to describe the method in Rotch's textbook on pediatrics (1903). (See Figure 3-1 for this description.) The equation could yield up to 575 different formulas (Lawson, 1960:14). One pediatrician who struggled with the method wrote:

The whole thing became increasingly more complicated. It became a problem of mathematics, in which we went at least as high as algebra - some one has said that we once touched logarithms. I cannot vouch for the latter but I do know that for some years, about twenty-five years ago, I carried in the back of my pocket notebook a series of algebraic equations by which I calculated the amount of milk, cream, whey, sugar and water necessary to give a baby the percentages of fat, protein and carbohydrates that I assumed were appropriate for his present age and state of digestion. We even split the protein and debated between one and one-half and one and two-thirds per cent of fat in a given formula (Brennemann, 1933:9).

According to Brennemann (1938:65), some pediatric textbooks and journal articles looked "terrifyingly like treatises on mathematics or higher astronomy." Another pediatrician, Herman F. Meyer (in Cone, 1979:137), concurred that the method required "almost the equivalent of an advanced degree in higher mathematics." Since the equations were beyond the capacity of most general practitioners, it became the

FIGURE 3-1

THOMAS ROTCH'S CALCULATIONS FOR A PERCENTAGE FEEDING FORMULA

Formula for Cream and Whole Milk (4 per cent Cream).—Thus, for a composition of 16 per cent cream ($a = 16$, $b = 3.8$, $S = 4$), and 4 per cent milk ($a' = 4$, $b' = 4$, $S = 4.40$), as a' and b' are equal, the value can be taken out of the numerator and the denominator of (5), leaving

$$(8) \quad C = \frac{Q(P-P')}{4-4}$$

Substituting values for a and b , the formula becomes

$$(9) \quad C = \frac{Q(16-P)}{16-3.8} = \frac{Q(16-P)}{12.2}$$

and formula (6) becomes

$$(10) \quad M = \frac{Q(P-16C)}{4} = \frac{QP}{4} - 4C$$

In the same way, for a 12 per cent cream ($a = 12$, $b = 3.8$, $S = 4.20$) and a 4 per cent milk, formula (8) becomes

$$(11) \quad C = \frac{Q(P-P')}{12-4} = \frac{Q(P-P')}{8.2}$$

and (6) becomes

$$(12) \quad M = \frac{Q(P-12C)}{4} = \frac{QP}{4} - 3C$$

Similarly, for 10 per cent cream ($a = 10$, $b = 3.85$, $S = 4.25$) formula (8) becomes

$$(13) \quad C = \frac{Q(P-P')}{10-3.85} = \frac{Q(P-P')}{6.15}$$

$$(14) \quad M = \frac{QP}{4} - \frac{10C}{4}$$

Formula for Cream and Fat-free Milk.—When in place of mixing the cream with whole milk a fat-free milk is used, we take formula (5) and substituting 0 for the fat value (a') of the milk we get

$$(15) \quad C = \frac{Q(P-P'-0 \times P')}{aP-0 \times b} = \frac{QP}{aP} = \frac{Q}{a}$$

and from (4) we get

$$(16) \quad M = \frac{QP-bC}{P}$$

Thus, for 16 per cent cream and fat-free milk (15) becomes

$$(17) \quad C = \frac{Q \times P}{16} = \frac{P}{16} \times Q$$

and (16) becomes

$$(18) \quad M = \frac{QP-3.8C}{4}$$

In the same way, with 12 per cent cream,

$$(19) \quad C = \frac{P}{12} \times Q$$

$$(20) \quad M = \frac{QP-3.8C}{4}$$

In the same way, with 10 per cent cream,

$$(21) \quad C = \frac{P}{10} \times Q$$

$$(22) \quad M = \frac{QP-3.85C}{4}$$

The formula for sugar does not vary much. Formula (7) is of universal application, and, assuming the sugar percentage of milk and cream to be about 4.40, (7) would become

$$(23) \quad L = \frac{Q(3-4.40)(M-C)}{100}$$

pediatrician's task to calculate the correct percentages and monitor the condition of babies with feeding problems. "It was reserved for the skilled pediatrician," wrote L. Emmett Holt (in Evans, 1967:315), "to manage the difficult feeding case, to use the food materials of that day and with a master's touch to avoid the Scylla of indigestion and the Charybdis of inanition."

Not all pediatricians accepted the need for percentage feeding. Abraham Jacobi (1908:1219), for example, accused advocates of the method of feeding babies "by mathematics" instead of "brains." Moreover, subsequent research discredited percentage feeding. Faber and McIntosh (1966:52) called it "both silly and dangerous," and claimed that it led to serious underfeeding. Cone (1979:137) suggests that whatever success pediatricians may have had with the formulas was due to their use of cleaner milk than was generally available.

But at a time when the dangers of artificial feeding were so great, and when the correct formula was believed to make the difference between life and death, both the medical profession and the public valued and respected pediatricians' esoteric expertise. Indeed, the pediatrician's unique baby feeding skills contributed significantly to the stature of pediatrics and its recognition as a specialty. Park and Mason (1957:25) explain:

[Percentage feeding] appeared the very Eden of pediatrics, where skill was most needed and the pediatrician reigned alone and supreme. . . . Although percentage feeding has now only the importance of a historic curiosity . . . it was actually an important factor in the development of pediatrics as a specialty. Its build-up into a

system of great complexity, the feeding difficulties it created, the attitude toward it akin to mysticism, and finally its grip on pediatric thought, all united to make infant feeding a subject which only the specialist of specialists could tackle. (Park and Mason, 1957).

In his account of the rise of the medical profession over the course of the twentieth century, Starr (1982) argues that the perception of scientific competence and the belief that doctors could effectively treat disease was more important than any actual competence the profession might have had. "Medical authority," he states (1982:139), "was not necessarily weaker for being objectively incorrect." The case of pediatrics provides a good example. The pediatrician's expert knowledge of infant feeding may ultimately have proven invalid. But pediatricians derived the benefits of that knowledge nevertheless.

Summary and Discussion

This chapter has provided an account of the emergence and consolidation of pediatrics' development as an organized specialty, the circumstances under which it first appeared, and its growth in numbers and stature. It has also described pediatric work during these formative years. Pediatrics' early history conforms closely to Bucher's natural history model of occupational development. The impetus, in this case, came from the new opportunities for medical practice that the creation of the first children's hospitals and other institutions afforded. The doctors who worked in these institutions gradually

developed what Bucher might have called a "sense of collegueship," and beyond that, a sense that they had professional interests that they could best advance through a formal organization. They formed the Section on the Diseases of Children, and then, seeking more autonomy, an independent, national pediatric organization, the APS. Through these organizations, they staked medicine's claim over the diseases of children, an area in which most doctors, up until then, had shown little interest. Pediatricians stressed the social value of this area of work, the need to curb the high infant and child mortality rates, and the responsibility that the medical profession bore in this effort. After securing a foothold in medicine, the new specialty consolidated. Pediatrics became an integral part of the newly reformed medical school system. Pediatricians became full-time specialists and their numbers grew significantly.

Throughout this period, pediatricians defined their professional mission generally in terms of the treatment of disease. But what distinguished them from all other doctors was their special interest in the feeding problems of young children, an interest that arose directly out of the circumstances of their work in children's institutions. It was the loss of both their baby-feeding and treatment functions that led pediatricians to seek new professional tasks. I examine these developments in the next chapter.

FOOTNOTES

1. For more biographical data on pediatric pioneers, see APS (1938), Faber and McIntosh (1966), Levinson (1943) and Veeder (1957).
2. Climatology was a specialty that revolved around the effect of weather conditions on individuals' health and the treatment of disease. It became popular with the success of climatic therapy in the treatment of tuberculosis and disappeared as a specialty when more efficacious treatments were developed.

CHAPTER 4

THE SHIFT TO PREVENTION

It was an unfortunate irony for pediatricians that while they were establishing their specialty, the problems around which it had emerged were slowly disappearing. By 1920, artificial feeding had become completely safe and routine. Infectious diseases began to decline around the turn of the century. By 1950, they were almost completely controlled. Many top pediatricians predicted a decline in pediatrics. They could not imagine how the specialty would sustain its growth or be able to continue in the face of a rapidly diminishing need for the pediatrician's specialized knowledge. The predictions were wrong. Instead of declining, pediatric ranks continued to swell at a remarkable rate and the specialty experienced a period of unprecedented growth. How was such growth possible?

In this chapter I argue that pediatrics survived the decline in childhood mortality and morbidity because it shifted away from the treatment of disease towards prevention. During the late 1920s, pediatricians began to offer preventive as well as curative services. Besides treating sick children, they accepted healthy children as patients. Combining treatment with prevention allowed an increasing number of pediatricians to make careers of full-time private pediatric practice. Within those practices, prevention offset the steadily falling demand for curative services.

The chapter is divided into two sections. In the first section, I document the declines in infant and child mortality, the main sources

of these declines and their impact on pediatric practice. The second section deals with the shift towards prevention. I describe how pediatricians first became involved in preventive work, and then, how they protected their interests in this area. Finally, I show how significant a component of pediatric practice prevention became between 1930 and 1950. The chapter ends with a discussion of these changes in the context of revitalization formulas of threatened professional segments.

Declines in Mortality and Morbidity

There is no chapter in medical history more spectacular than the fall in mortality and morbidity among infants and children over the first half of the twentieth century. For infants, the mortality rate dropped 82 percent from 162.4 in 1900 to 29.2 in 1950 (see Table 4-1 and Figure 4-1). For children aged one to four years, the rate declined a staggering 93 percent from 19.8 in 1900 to 1.4 in 1950. For children aged five to fourteen, there was an 85 percent decline from 3.9 in 1900 to .6 in 1950 (see Table 4-1 and Figure 4-2). Life expectancy, a measure of the health of the general population, increased from 47.3 in 1900 to 68.2 in 1950 (see Table 4-2).

Comparing the causes of childhood mortality in 1850 and 1950, Smillie (1955:207) wrote:

TABLE 4-1
INFANT, CHILD AND MATERNAL MORTALITY RATES: 1900-1982

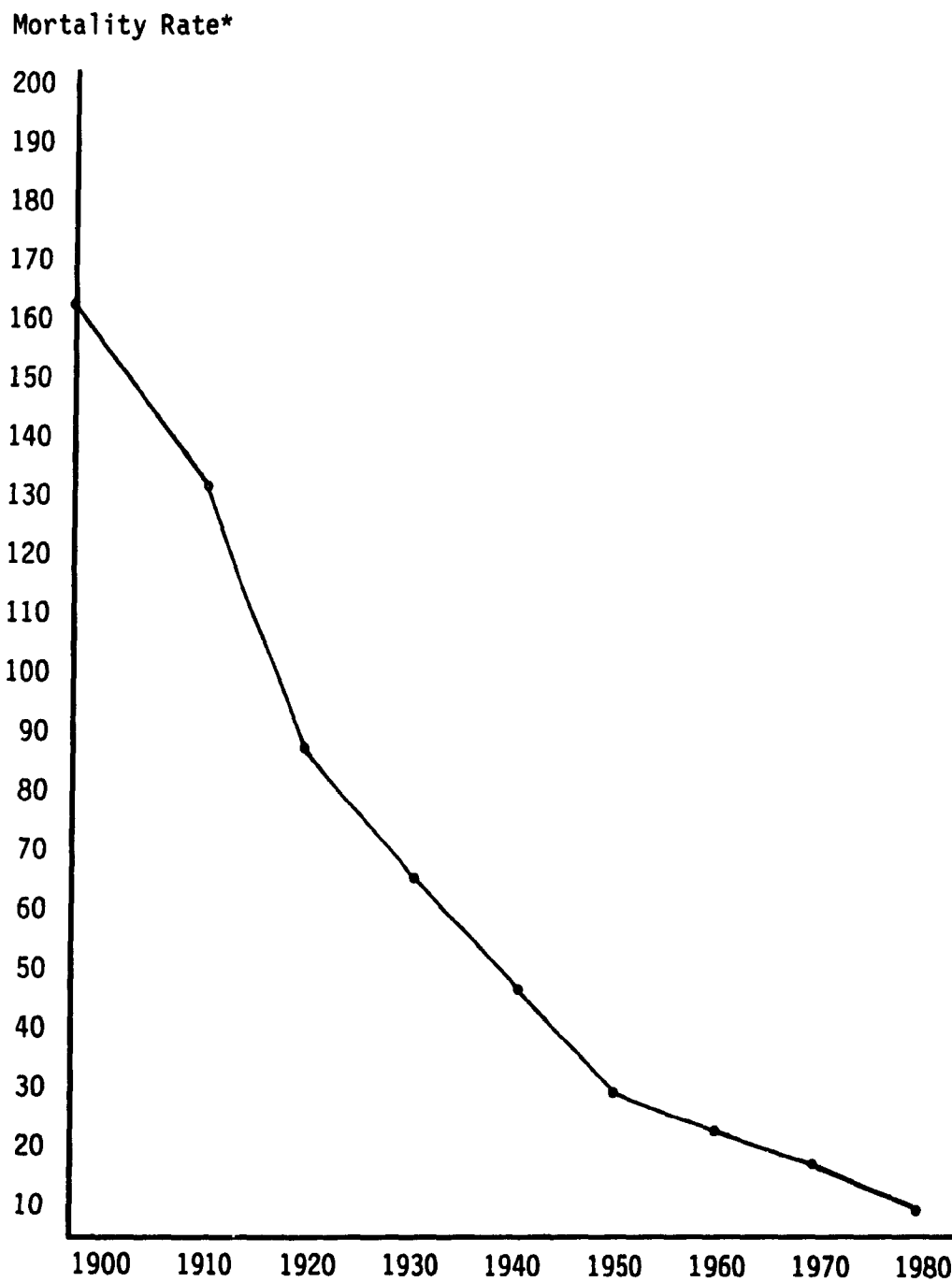
Year	Under 1 year*	1-4 years ^f	5-14 years ^f	Maternal ^α
1900	162.4	19.8	3.9	----
1905	141.2	15.0	3.4	----
1910	131.8	14.0	2.9	----
1915	99.9	9.2	2.3	60.8
1920	85.8	9.9	2.6	79.9
1925	71.7	6.4	2.0	64.7
1930	64.6	5.6	1.7	67.3
1935	55.7	4.4	1.5	58.2
1940	47.0	2.9	1.0	37.6
1945	38.3	2.0	.9	20.7
1950	29.2	1.4	.6	8.3
1955	26.4	1.1	.5	4.1
1960	26.0	1.1	.5	3.7
1965	24.7	.9	.4	2.9
1970	20.0	.8	.4	2.2
1975	16.1	.8	.4	1.3
1980	12.6	.7	.4	.9
1981	11.9	.7	.4	.9
1982	11.5	.6	.3	.8

* Per 1,000 live births

^f Per 1,000 population for specified group

^α Per 10,000 live births

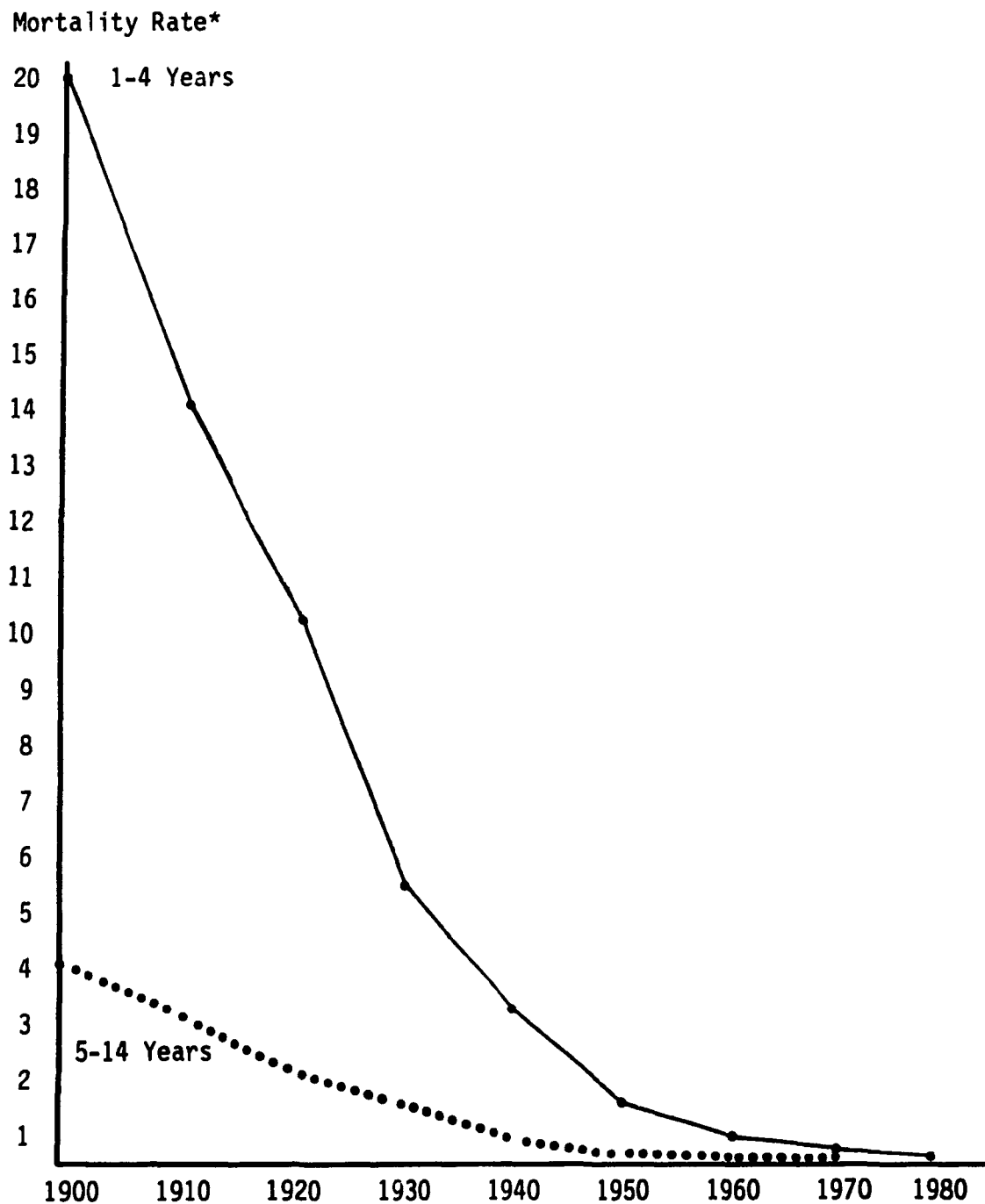
Source: U.S. Bureau of the Census, 1975:57,60
U.S. Bureau of the Census, 1985:70,72

FIGURE 4-1DECLINE IN INFANT MORTALITY: 1900-1980

* Per 1,000 live births

Source: U.S. Bureau of the Census, 1975:57
U.S. Bureau of the Census, 1985:70

FIGURE 4-2

DECLINE IN CHILD MORTALITY: 1900-1980*

* Per 1,000 population for specified group

Source: U.S. Bureau of the Census, 1975:60
U.S. Bureau of the Census, 1985:72

TABLE 4-2
EXPECTATION OF LIFE (IN YEARS) AT BIRTH: 1900-1985

1900	47.3	1925	59.0	1950	68.2	1975	72.6
1901	49.1	1926	56.7	1951	68.4	1976	72.9
1902	51.5	1927	60.7	1952	68.6	1977	73.3
1903	50.5	1928	56.8	1953	68.8	1978	73.5
1904	47.6	1929	57.1	1954	69.6	1979	73.9
1905	48.7	1930	59.7	1955	65.2	1980	73.7
1906	48.7	1931	61.1	1956	66.7	1981	74.2
1907	47.6	1932	62.1	1957	66.8	1982	74.5
1908	51.1	1933	63.3	1958	67.2	1983	74.6
1909	52.1	1934	61.1	1959	68.0	1984	74.7
1910	50.0	1935	61.7	1960	68.2	1985	74.7
1911	52.6	1936	58.5	1961	68.4		
1912	53.5	1937	60.0	1962	68.6		
1913	52.5	1938	63.5	1963	68.8		
1914	54.2	1939	63.7	1964	69.6		
1915	54.5	1940	62.9	1965	69.6		
1916	51.7	1941	64.8	1966	69.7		
1917	50.9	1942	66.2	1967	69.5		
1918	39.1	1943	63.3	1968	69.6		
1919	54.7	1944	65.2	1969	69.9		
1920	54.1	1945	65.9	1970	70.9		
1921	60.8	1946	66.7	1971	71.1		
1922	59.6	1947	66.8	1972	71.2		
1923	57.2	1948	67.2	1973	71.4		
1924	59.7	1949	68.0	1974	72.0		

Source: U.S. Bureau of the Census, 1975:55; 1986:69.

The picture has entirely changed in 100 years. . . . Every single one of the ten important causes of illness and death in infancy and early childhood in 1850 has been wiped out. The slate is clean. Childhood has become a period of abundant health and of preparation for a full and satisfactory adult life, free from invalidism and from the scars of early acute infections.

Tables 4-3 and 4-4, which list the leading causes of death for children in selected decades, show that by 1950, virtually all the infectious diseases that had so long plagued children - cholera, typhoid fever, dysentery, tuberculosis, diphtheria, pertussis, scarlet fever, and pneumonia - were either totally eliminated or under control. Accidents began to top the list of major killers in 1930 for children between five and fourteen years of age, and in 1950 for children between one and four years of age.

A reading of the pediatric literature leaves the impression that pediatricians had a major hand in finally conquering the threat of dreaded childhood diseases. There are references to pediatricians having "fulfilled the physician's ideal of self-elimination by doing his work so efficiently there is no longer need of him" (Powers, 1955:693). One prominent pediatrician (Levine, 1960:652) compared pediatrics to Frankenstein: "creating a mechanism so efficient that it ended up by almost destroying him." Faber and McIntosh (1966:260) described pediatrics as "a suicidal specialty, bent on running itself out of business by solution of its problems." The suggestion that pediatricians were solely, or even primarily, responsible for the

TABLE 4-3
TEN MAIN CAUSES OF DEATH AMONG CHILDREN 1-4 YEARS: 1920-1970

Causes of Death	1970	1960	1950	1940	1930	1920
Rates per 100,000 children 1-4						
All causes	84.5	108.8	139.4	289.6	53.6	987.2
Accidents	31.5	31.5	36.8	48.7	61.2	80.2
Congenital Anomalies	9.7	12.8	11.1	10.3	-	-
Influenza/Pneumonia	7.6	16.2	18.9	62.5	123.1	283.7
Malignancies	7.5	10.8	11.7	-	-	-
Symptoms and Ill-Defined Conditions	2.1	2.8	-	-	-	-
Meningitis	1.9	2.82	.8	-	-	-
Acute respiratory Infections	1.7	-	-	8.9	15.2	12.3
Diarrheal Diseases	1.4	3.2	*	30.2	95.6	141.3
Meningococcal Infections	1.0	1.4	2.6	-	-	-
Gastritis etc.	-	1	*	-	-	-
Bronchitis	-	2.1	2.5	-	-	-
Measles	-	-	-	-	21.9	56.4
Tuberculosis	-	-	6.3	12.3	25.9	45.4
Pertussis	-	-	-	9.7	23.4	57.7
Diphtheria	-	-	-	9.0	33.5	90.5
Appendicitis	-	-	-	6.8	-	-
Streptococcal Sore Throat and Scarlet Fever	-	-	-	-	9.7	23.2
Dysentery	-	-	-	-	-	12.8
All other causes	20.1	25.3	41.4	91.2	153.9	192.8

- Item not applicable

* Figures not available

Source: Adapted from Vaughan et al., 1979:4.

TABLE 4-4
TEN MAIN CAUSES OF DEATH AMONG CHILDREN 5-14 YEARS: 1920-1970

Causes of Death	1970	1960	1950	1940	1930	1920
Rates per 100,000 children 5-14						
All causes	41.3	46.6	59.8	103.7	171.7	263.9
Accidents	20.1	19.2	22.6	28.6	36.1	44.3
Malignancies	6.0	6.8	6.7	3.0	-	-
Congenital Anomalies	2.2	3.6	2.4	2.1	-	-
Influenza/Pneumonia	1.6	2.6	3.2	9.0	18.8	45.1
Homicide	.9	-	-	-	-	-
Diseases of the Heart	.8	1.3	3.9	10.6	15.1	21.8
Cerebrovascular Diseases	.7	.7	-	-	-	-
Symptoms and Ill-Defined Conditions	.5	.5	.8	-	-	-
Benign Neoplasms and Unspecified Neoplasms	.4	.7	.8	-	-	-
Anemias	-	.5	-	-	-	-
Polioymyelitis	-	-	2.5	-	-	-
Appendicitis	-	-	-	.8	13.1	-
Tuberculosis	-	-	1.8	5.5	11.9	22.4
Nephritis and Nephrosis	-	-	-	1.7	-	3.5
Diphtheria	-	-	-	1.7	8.1	28.0
Typhoid Fever	-	-	-	-	4.4	7.1
Meningococcal Infections	-	-	-	-	4.3	-
Diarrheal Diseases	-	-	-	-	3.0	4.1
Diabetes Mellitus	-	-	-	-	-	3.5
All other causes	8.1	10.7	15.1	36.1	59.9	67.6

- Item not applicable

Source: Adapted from Vaughan et al., 1979:5.

declines in mortality is misleading. But they were directly and profoundly affected by the declines.

Losing the Baby Feeding Function

Pediatricians felt the impact of the declines first in their most prized skill: artificial feeding. By the early 1920s, the artificial feeding of babies had become completely routine and the pediatricians' expertise redundant. There were two factors responsible for the demise of the pediatricians's baby feeding role: 1) improvements in the milk supply, and 2) the availability of commercial infant food formulas.

Clean Milk

In the 1860s, Louis Pasteur first theorized that germs were the cause of many diseases. The fixing and staining techniques that Robert Koch, the German bacteriologist, developed during the 1870s made it possible for bacteriologists to confirm Pasteur's theory and to study the principle characteristics, patterns of behavior and modes of transmission of dangerous germs. By the 1890s, their analyses were showing that milk was an excellent medium for the transmission of germs and that the quality of milk, rather than its composition was the chief culprit in the problems that surrounded artificial feeding. They also demonstrated that pasteurization, a heat treatment process that Pasteur had developed for beer and wine, could effectively destroy harmful germs in milk.

Immediately, philanthropists and volunteers mobilized to make clean milk available to children. Between 1893 and 1920, they established hundreds of milk stations that distributed pasteurized milk at a reasonable price or for no cost at all to mothers who could not afford to pay. In 1893, Nathan Strauss, a businessman, opened the first milk station in the United States in a tenement district of New York City. The milk that Strauss distributed was both pasteurized and modified according to pediatricians' formulas. Between June and November, the station dispensed 34,000 bottles of milk (Wain, 1970:255). The following year, he opened six more stations, and by 1902, he was sponsoring 14 stations throughout the city. Other private groups followed Strauss' lead as did the local board of health. By 1913, there were 77 public and private milk stations in New York City. In 1907, there were 143 in 24 cities across the United States; by 1915, there were 539 in 142 cities (Van Ingen, 1921:306-308). Some stations operated through the year; others only during the dangerous summer months.

Besides making clean milk available, the stations alerted the public to the dangers of dirty milk. In 1902, the New York City Bacteriological Laboratory conducted an inquiry into infant feeding methods. It found that mothers were increasingly cautious about the milk they fed to their children. If they could not get pasteurized milk, they boiled the milk themselves. "It was rare," said the report, "to find an infant fed on raw milk" (Park and Holt, 1903:887).

While the milk stations dealt with the immediate problem of getting clean milk to children, public health officials looked for ways

to safeguard the entire milk supply. Though the technology for wide-scale, commercial pasteurization of milk was available as early as 1895, a controversy over the merits of pasteurization delayed its implementation for more than a decade. Pediatricians were among those who opposed the large-scale pasteurization of milk. They supported, instead, a solution to the milk problem that would have given pediatricians a central role in monitoring public milk supplies and possibly a new professional mission as milk-related problems declined. That solution was a system of milk certification.

Certification was developed in 1895 by a pediatrician, Henry Leber Coit. Coit's interest in the milk supply was roused in 1889 when, trying to get clean milk for his dying infant son, he visited a local dairy. The conditions he witnessed led him to campaign for legislative and municipal controls on milk handling. When these efforts failed, he concluded that it was a task for the medical profession.

After twenty years of experience, I believe it is hopeless to expect to bring milk up to a grade of clinical requirements by stimulating officers of the law or milk concerns, or by demands through the public press. . . . If milk fit to use for infants or for the sick is ever obtained, we must do the work necessary for its attainment ourselves. I would also express the opinion that if four physicians in any community would bend their earnest efforts to obtaining clinically clean milk, the milk millennium for that community would arrive in five years. (in McCleary, 1933:62).

Coit designed a system to guarantee the quality of raw (unpasteurized) milk by assuring the quality of its source. Special

medical milk commissions, comprised of pediatricians and other doctors, certified only raw milk produced in dairies that met the commissions' strict standards. The standards covered everything from the quality of the land and the construction of buildings to the care of the dairy herds and the production, transportation and delivery of the milk. Enlisting the services of veterinarians, chemists and bacteriologists, the commissions also conducted regular inspection of the dairies and analysis of their milk (Bremner, 1971:867-869).

Although it is little more than a historical footnote today, certification was a major movement at the beginning of the twentieth century. Coit organized the first medical milk commission in 1893 in Essex County, New Jersey. By 1906 there were 36, and by 1912, 63 commissions across the country. In 1907, the American Association of Medical Milk Commissions and the Certified Milk Producers' Association were created to standardize regulations and methods of milk production across the country. Pediatricians were heavily involved in the movement. An APS survey in 1911, showed that 26 out of 41 pediatricians sat on a medical milk commission (Carr, 1912:9). Surveys also showed that throughout this period, most pediatricians continued to oppose pasteurization. A majority of APS members, in 1898 (Waserman, 1972:372) and again in 1912 (Morse, 1935), stated that raw milk was always preferable to pasteurized milk.

To be fair, pediatricians did not oppose pasteurization simply because of the professional stake that they had in the success of certification. Though they had no way to prove it at the time, they were convinced that pasteurization altered the chemical composition of

milk and destroyed some of its nutritive properties. They had observed in their private practices, a rise in the incidence of scurvy among middle class children who had ready access to pasteurized milk. They suspected that pasteurization was to blame. (Nutritional scientists have since established that pasteurization destroys Vitamin C in milk, and have developed ways to fortify the product after pasteurization.) Some pediatricians felt that wide-scale pasteurization of milk would sanction carelessness and complacency in its production. They believed that the solution to the milk problem was to produce clean milk, not to treat dirty milk.

If the certification movement had succeeded, pediatrics could conceivably have evolved into a branch of public health, with special responsibility for milk production. After 1910, however, the movement faltered. Part of the problem was cost: the price of a bottle of certified milk was double that of pasteurized milk. Secondly, the advocates of certification began to realize that there were going to be practical and coordinational problems in its large-scale application. But the real blow came when questions arose about the possibility of completely safeguarding raw milk. In 1909, the New York City Department of Health traced an outbreak of typhoid fever to a dairyman who was a well-carrier, that is, an individual or animal who harbours and can transmit an infection without suffering its symptoms. In 1914, a well-carrier turned up in the certified herd of Coit's model New Jersey dairy. Its efficacy in doubt, the movement began to decline. By 1920, it had completely collapsed.

As the benefits of pasteurization became more apparent and its opponents less vocal, local boards of health started to institute compulsory, universal pasteurization. In 1908, Chicago became the first city to require the pasteurization of all milk. Other communities quickly followed. The effect on intestinal infections was remarkable. According to Rosen (1958:360): "scarcely a vestige remained of the great rise in infant mortality that generally came with the hot weather." In New York City, the percentage of infant mortality due to diarrheal diseases declined from 31 percent in 1889 to 10 percent in 1929 (Kramer and Kanof, 1960:774).

Commercial Food Formulas

The availability of clean milk was not the only factor in the decline of the pediatrician's baby feeding role. Improvements in commercially manufactured infant food formulas also played a part. Companies had started to produce commercial food formulas in the 1870s. The first formulas were complicated to mix and, because of the dangers of artificial feeding, they did not sell well. By the 1920s, however, they were much safer and easier to use. Manufacturers were also more skilled in marketing them. They launched sophisticated advertising campaigns extolling the virtues of their products. Mothers who could not breast feed their babies, as well as those who no longer wished to, started using the commercial formulas. Even some pediatricians, frustrated with the complexity of the percentage method, turned to these products. One pediatrician, Eugene Darley (1911:747) admitted: "It is no wonder that many busy practitioners have given up the whole

[feeding] problem in despair and have resorted to the use of the patent baby foods as the easiest way out of the difficulty."

Pediatricians did not relinquish their artificial feeding function passively, however. As in the case of certification, they responded to the inevitable trend by trying to salvage a role for themselves in infant feeding. They struck a deal with the manufacturers of the formulas (Apple, 1980). As the popularity of the formulas grew, the manufacturers were eager to neutralize any medical opposition to their product. They recognized that their interests were better served if they worked with, rather than against the medical profession. They stopped advertising directly to the public and redirected their campaigns towards doctors. They also restricted the distribution of the instructions needed to use the product to doctors. In other words, they allowed pediatricians to retain their control over artificial feeding. As Apple (1980:417) puts it: "Manufacturers sold, but medical practitioners controlled: a mutually advantageous relationship between physicians and infant food companies had been established."

Though the deal allowed pediatricians to continue to advise and supervise the artificial feeding of young children, baby feeding was certainly not the onerous, life-and-death responsibility it once had been. Brennemann (1933:9-10), a pediatrician who had once used the percentage method, captured the lost aura of baby feeding:

The pediatrician is today actually embarrassed at times in deciding which one of so many simple ways of feeding a baby to choose in a given case. . . . A surgeon once asked me: "What are you feeding babies today?" and I could not logically resent the implication.

What had once been the source of status and great pride for pediatricians became a source of embarrassment and derision.

The Decline in Infectious Diseases

While the intestinal infections connected to artificial feeding were disappearing, so too was the threat of other infectious diseases. Advances in bacteriology, immunology and nutrition, made it possible to prevent most infectious diseases and to treat those that could not be prevented. More specifically, the reduced incidence of these diseases was the result of a) better living conditions, b) improved child and maternal health, c) preventive immunization, and d) effective treatments.

Better Living Conditions

Living conditions started to improve in the United States towards the end of the nineteenth century, before Pasteur discovered germs. Public health officials did not fully or correctly comprehend the causes of infections, but they had made the connection between dirt and disease. In what Winslow (1923:12) refers to as "the great sanitary awakening," they began to clean up the environment. A network of

municipal, state and federal health boards conducted sanitary surveys to locate problem areas in their communities; they installed crude water filtration systems to remove floating particles from municipal water supplies and to get rid of the dirty colour; they constructed drainage and sewage systems, and arranged for the disposal of garbage; they seized and destroyed spoiled foods and inspected tenements and slum housing.

The bacteriological revolution of the late nineteenth century rationalized and extended public health efforts. Public health boards improved sanitary measures and introduced new procedures in the areas of refuse and garbage disposal, insect control, disinfection and fumigation, food sanitation, pasteurization and water purification. The boards also broadened their mandate to include the epidemiological control of communicable diseases such as tuberculosis and typhoid fever. Using vital statistics and mandatory reporting ordinances, they traced cases of disease to their source and isolated or restricted the activities of carriers and their contacts. As a result of these measures, diseases such as typhoid fever, dysentery and tuberculosis, which are transmitted through dirty food and water, were greatly reduced in both children and adults.

Improved Child and Maternal Health

Another significant factor in the decline of infectious diseases was the improvement in children's general health and their reduced susceptibility to disease; improved maternal health led indirectly to healthier children. The child welfare movement played a major part in

these improvements by educating women about the value of "personal" public health for both themselves and their children, and by actually providing the first preventive health care services.

The movement's efforts in this area began with the milk stations that emerged around the turn of the twentieth century. Many of the activists who ran the milk stations understood the importance of proper care and feeding of children as a precaution against disease. Some stations combined the milk they dispensed with free, over-the-counter advice to mothers on basic child care. When the milk problem disappeared, they turned their efforts completely to health maintenance. Most milk stations became free well-baby or child welfare clinics and began operating year round rather than simply through the dangerous summer months.

The clinics, staffed by public health nurses, instructed mothers on the basic principles of child hygiene: diet, cleaning and clothing, fresh air, exercise and rest. The clinics translated the latest discoveries into effective practice. For example, as biochemists discovered vitamins, minerals and proteins, and their connection to disease, the clinics disseminated information on the value of good nutrition. Nutritional diseases such as rickets, scurvy, nutritional anemia, and in the southern states, pellagra, were common before 1915. They were rarely fatal, but they weakened children's resistance to infectious diseases that could kill them. With proper nutrition they became rare.

Gradually the clinics hired doctors, mostly pediatricians, to supplement the instructions for mothers with regular, routine medical

examinations for children. The clinics' services were called "well-child conferences." The conference was intended for healthy children. Clinics discouraged mothers from bringing in their sick children, partly because of the dangers of infecting other children, but also because they feared that treatment might displace prevention as the clinics' primary function.

In addition to running the clinics, the movement sponsored educational campaigns. They organized public lectures and exhibitions, sent letters and promotional literature, set up "Little Mothers' Leagues" that taught high school girls how to care for infants, and ran "better baby" contests. In 1916 and 1917, the Children's Bureau and the General Federation of Women's Clubs sponsored a "Baby Week," and in 1918, a "Children's Year" that they used as a vehicle to reach as many mothers as possible.

There were also programs for school-aged children. Public health authorities had first introduced medical inspections of schools in the 1890s. The inspections were mainly for epidemiological purposes: to detect cases of infectious disease so that they could be kept away from other students. After 1900, the programs expanded to include any health-related problem including visual, auditory and physical impairment, and the monitoring of the general health of students. In 1902, nurses began teaching health education in schools.

Children were the central, but not the only focus of the movement. When vital statistics showed that there was a direct link between infant mortality and the condition of expectant and nursing mothers, maternal health became part of its mandate. Some private

groups and health boards hired nurses to visit prospective and new mothers in their homes. If a woman showed signs of an abnormal pregnancy, the nurses referred her to a doctor for supervision and specialized obstetrical care. When necessary, they arranged for food and other forms of relief, or made referrals to social welfare agencies. By 1920, public health officials were supervising and controlling the training of midwives. Finally, believing that doctor-supervised and hospital-based childbirth would reduce complications that could threaten the health of a baby, the public health boards took steps to stamp out midwifery altogether. The reduction in maternal mortality after 1920 reflected improved maternal health, which indirectly improved infant health. The maternal mortality rates fell 90 percent from close to 80 per 100,000 live births in 1920 to 8.3 in 1950 (see Table 4-1).

Vaccines and Toxoids

Diseases such as diphtheria and pertussis disappeared only after scientists developed effective immunizing agents to prevent them. So too did poliomyelitis, which was not among the chief causes of death in the nineteenth century, but began striking in increasingly larger epidemics throughout North America and northern Europe after 1900. Some scientists believe that the increased incidence of polio was the result of improvements in living conditions. The sanitary reforms so efficiently reduced the prevalence of the polio virus, there was no longer an opportunity for children to build up a natural defense to the disease (Klein, 1972:64-65).

The idea of conferring protection against life-threatening diseases predated the bacteriological revolution by several centuries. The ancient Chinese and Arabs knew how to prevent smallpox by getting healthy individuals to inhale powdered smallpox crusts. Variolation, as the practice was called, became popular in Europe in the eighteenth century, but was replaced in the early nineteenth century by another method. In 1796, Edward Jenner, an English country doctor, noticed that milkmaids who contracted cowpox, a mild disease that struck cows, rarely suffered from smallpox and could actually nurse smallpox victims without becoming ill. Jenner learned how to produce the same protection in others by inducing a case of cowpox. Cowpox in humans took the form of a benign and limited skin infection, but protected its victims against the more threatening smallpox (Imperato, 1974:17). Benjamin Waterhouse, a doctor and professor of medicine at the newly established Harvard Medical School, introduced Jenner's technique to the United States in 1800. Through the nineteenth century, vaccination against smallpox became routine. This explains why the disease had disappeared as a major killer of children by the time pediatricians began to organize themselves in the last quarter of the century.

Pasteur's germ theory of disease finally established how the smallpox vaccine worked: The human body, he determined, has the capacity to defend itself against infections by producing antibodies that neutralize or destroy harmful germs. Moreover, injecting (weakered) or inactivated forms of the disease-causing germ incites the formation of these antibodies. Jenner's vaccine worked because it was a naturally attenuated form of smallpox. Pasteur's discoveries led to

vaccines for several diseases including typhoid fever (1896), cholera (1896), the plague (1897), tuberculosis (1921) and yellow fever (1927). However, since improved living conditions had already reduced the threat of these diseases, their use was restricted to those who lived or travelled in unsanitary areas, or who were in contact with an infected person.

The next important immunological breakthrough came in 1888, when Pierre Roux and Alexander Yersin, bacteriologists at the Pasteur Institute, discovered that some diseases, including diphtheria and tetanus, are caused not by germs, but by a toxin that they secrete. They also discovered that the body protects itself against them by producing a toxin-fighting antibody. But it was several decades before scientists found a safe way to produce these antibiotics. In 1902, S. K. Dziergowsky developed a procedure that involved injecting graduated doses of diphtheria toxin obtained from horses. The method was dangerous because of the risk of misjudging lethal dosages. In 1913, Emile von Behring learned how to neutralize the diphtheria toxin with antitoxin prior to injection. This method too was dangerous because of the difficulty of getting a correct balance between toxin and antitoxin. Too much antitoxin and the mixture was immunologically ineffective; too little and the mixture was lethal. Finally, in 1923, Gaston L. Ramon and Alexander T. Glenny discovered that toxin treated with formaldehyde becomes non-toxic without losing its immunizing properties. In 1924, they produced a neutralized toxin (toxoid) for diphtheria.

The public health boards immediately launched programs to disseminate the toxoid. First, they made it mandatory for school attendance. But they soon realized that they were reaching many children too late, and that the laws were actually discouraging mothers from getting their children immunized until just before they started school. In the late 1920s and 1930s, they turned their attention to preschoolers, using educational programs that stressed the need for early immunization. Many cities used municipal records to locate children under five years of age and sent out public health nurses to immunize them. The first supplies of toxoid came from public health laboratories. But by the late 1920s, drug companies had recognized the potential for profits and quickly developed the capacity to manufacture the diphtheria toxoid and other biological products in the quantities that were required for mass immunization.

The experience that public health authorities acquired with diphtheria stood them in good stead when the vaccine for pertussis, developed by Louis W. Sauer and Pearl Kendrick at the Michigan Department of Health Laboratory, became available in the early 1930s and when, in 1953, Jonas Salk at the University of Pittsburgh's Virus Research Laboratory developed the inactivated polio virus vaccine (IPV).

The Development of Effective Treatments

Some infectious diseases defied prevention through either environmental or immunological means. Scarlet fever, pneumonia, and many more minor, but still dangerous, infections continued to be a problem. During the 1940s, the threat of these diseases disappeared as

- scientists developed drugs able to fight infections. Unlike vaccines and toxoids, which were developed soon after the basic bacteriological discoveries of the late nineteenth century, treatments were longer in coming. When bacteriologists first discovered disease-fighting antibodies in the bloodstream in the 1880s, they used them to treat those who were already suffering from the disease. They extracted antibodies from humans or, more typically, animals such as horses, rabbits and goats, and injected them directly into infected individuals or those who were in danger because of contact with an infected person. These "antisera" worked in some cases, but not others.

On another front, chemists were studying organic chemicals that might kill, or at least destroy the reproductive capacity of harmful germs in the body. Between 1890 and 1940, they isolated many chemicals that would do the job, but none that were sufficiently safe for humans. In 1935, just as they were about to abandon the search, Gerhard Domagk, a German organic chemist, discovered that sulfanilamide worked against a broad range of germs without harming the human host. Over the next five years, chemists synthesized hundreds of even more effective analogues and derivatives of sulfanilamide including sulfapyridine (1938), sulfathiazole (1939), sulfadiazine, sulfisaxazole and sulfiguanidine (1940). The sulfa drugs provided the first real weapon against infections. But they were not a panacea. Some of the sulfa drugs interfered with the body's natural defenses against infection; others stimulated the production of sulfa-resistant strains.

In 1928, Alexander Fleming stumbled onto penicillin. Penicillin was not a chemical, but a micro-organism that could kill a broad range

of dangerous germs without toxic side effects. Fleming had difficulty purifying his new discovery. The excitement over the sulfonamides prevented further progress until 1940, when a team of Oxford University researchers, Howard F. Florey and Ernest B. Chain succeeded in isolating it and developing it for clinical use.

Through the 1940s, scientists developed thousands of antibiotics with stronger and wider germ-fighting potential than penicillin, including streptomycin (1944), chlortetracycline (1945), chloramphenicol (1947), the cephalosporins (1948) oxytetracycline (1950) and tetracycline (1952). Drug companies launched large scale production immediately. By 1950, they were manufacturing over 400 tons of antibiotics (Welch, 1958:77). Describing the impact of antibiotics, Welch (1958:85) wrote:

Hundreds of tons of these drugs are injected, fed, applied topically, inhaled or inserted into body cavities each year. The American public is like a huge sponge that absorbs antibacterial agents like water, always eager to try the new one they have read about in the daily press or latest magazine.

Since children were so vulnerable to infections of all sorts, the sulfonamides and antibiotics were a particular boon in the practice of pediatrics. The drugs made children's infections so easy to treat, they almost eliminated the need for a firm diagnosis. According to W. C. Davison, a professor of pediatrics at Duke University, most doctors used them to treat "any and all infections, regardless of the

diagnosis and often without one" (Davison, 1952:537). He condemned the practice in principle, but admitted that it usually worked:

This practice of giving sulfonamides, penicillin, streptomycin, aureomycin, chloramphenicol, etc., for several days without examining the patient, and then trying to diagnose those in whom the treatment is unsuccessful is appalling from the point of view of pediatric instruction, though it simplifies the practice of medicine. Pediatric instructions should realize that, regardless of arguments to the contrary, this practice will be continued as it usually is effective and rarely does harm. (Davison, 1952:537).

With the development of effective treatment most infectious diseases were now firmly under control.

Pediatric Subspecialties

Pediatricians were threatened not only by trends in infant and child morbidity, but by developments within the specialty, namely the emergence of pediatric subspecialists. The first subspecialties appeared on the scene during the 1930s. As infectious diseases declined, other diseases rose to prominence, including congenital heart disease and other genetic defects, metabolic and endocrine disorders, and neurological problems (see Tables 4-3 and 4-4). But these conditions were extremely rare. Through the 1930s, pediatric departments of medical schools and teaching hospitals set up special clinics and outpatient units in cardiology, endocrinology, pulmonary diseases, neurology and allergies. The rationale for these specialized

clinics was that they would facilitate the study and treatment of rare diseases by bringing cases together.

The doctors who first staffed the clinics were pediatricians with a special interest in particular areas within pediatrics. But with time, and in much the same way as their pediatric forefathers, they came to identify more closely with their specialized areas of interest. By the 1940s, many were building full-time careers in subspecialties. They acquired advanced training early in their careers, and on that basis, either obtained full-time academic and hospital positions that allowed them to teach and research, or set up practices as hospital-based consulting specialists.

While other pediatricians were still preoccupied with infectious diseases, pediatric subspecialists staked their claim to these more specialized areas of care. This meant that as infectious diseases declined, there were few opportunities left for the average pediatrician to treat serious diseases.

The Shift Towards Prevention

As they saw childhood mortality and morbidity decline, many prominent pediatricians took a dim view of pediatrics' prospects. Borden Veeder's 1935 presidential address to the APS, sounded like a eulogy for the specialty. Veeder felt that pediatrics was headed for a irreversible decline:

The pediatrician, as he exists in practice today and as he has developed so rapidly in the last few years, will find the need and opportunity for him rapidly diminishing as the general practitioners becomes able to take over his work and as public health methods continue in the form they now exist, or even as they perhaps increase. The trend towards specialization in pediatrics will decrease, and further, the type of work of the pediatrician will, to a certain extent, at least, change. . . . Above all, young medical men must not be encouraged to enter blindly into a field of practice which, as it at present exists, is rapidly becoming limited in its opportunities and future. (Veeder, 1935:9-10).

John L. Morse (1937:532), who had served as president of the APS in 1913, in his address to the Philadelphia Pediatric Society on its 40th anniversary, concurred with the prophecies of doom. He gave young pediatricians the less than edifying advice that they should consider a career in geriatrics, rather than pediatrics.

I am quite certain that the lot of pediatricians has been much better in the last forty years than it will be in the next forty. . . . It is evident that the opportunities for pediatricians will not be as great in the future as they have been in the past. Forty years ago pediatrics was a virgin field; now it is over cultivated. The other end of life now offers the greatest field of development. There are more old people than there used to be, and almost all of them are ill in some way or, at any rate, are wearing out; they like many visits; they are more interesting than children; the doctor is not blamed when they die; and the estate pays the bill. . . . My advice to young physicians is, therefore, to take up geriatrics, not pediatrics.

The predictions were entirely wrong. Pediatrics did not decline. Indeed, it continued to flourish and even surpassed its earlier rate of

growth. The number of pediatricians increased 1425 percent from 689 in 1923 to 10,507 in 1962. The growth of pediatrics far outstripped that of both other specialists and doctors in general. The number of specialists increased 743 percent and the total number of doctors increased only 76 percent through this same period (see Table 4-5). This growth was possible because pediatricians offset the diminishing need for their expertise in treating disease by providing preventive care.

Getting Into Prevention

Though pediatric rhetoric had always stressed the importance of proper care and feeding in fighting infant and child mortality, it was not until the 1920s that pediatricians themselves began to practice child hygiene and prevention. Until then, they were preoccupied with fighting a defensive battle against disease at the bedside, and especially with feeding problems. Pediatrics' foray into routine health maintenance began with their work in the well-child clinics. As I have explained, when the clinics first emerged, they offered mothers instruction in the basic principles of child hygiene. Through the 1920s, however, they hired pediatricians to provide routine examinations as part of the "well-child conference" and stressed the need for the pediatrician's expertise in monitoring the normal growth and development of healthy children. There were distinct advantages to connecting themselves in this way with the medical profession, and more specifically, with a rising and prestigious specialty like pediatrics. Pediatricians gave the clinics and the larger child welfare movement a

TABLE 4-5
MEDICAL MANPOWER TRENDS: 1923-1962

Year	Pediatricians	Specialists	Total Number of Doctors
1923	689	15,408	145,966
1938	2,205	33,618	169,629
1949	4,315	62,688	201,277
1955	6,567	84,441	218,061
1962	10,507	129,838	257,035
Percent Increase			
1923 - 1962	1,425	743	76

Source: Adapted from Stewart and Pennell, 1963:316.

valuable stamp of approval in the eyes of both the public and the government, on whom the movement relied for funding. For pediatricians, this part-time work was another way to support their private practices. At this point, pediatricians still counted heavily on institutional appointments and teaching positions. Only older pediatricians with well-established reputations and extensive contacts could attract the clientele they needed to sustain full-time private practices.

The high profile that the child welfare movement gave pediatricians in their clinics and educational campaigns created a tremendous demand for preventive child care services. The movement had established the clinics primarily for lower and immigrant classes, who had a higher rate of infant mortality than the rest of the population. But with the success of the educational campaigns, mothers of all classes were flocking to the clinics, clamouring for routine check-ups for their children.

Middle class mothers increasingly sought, and were willing to pay for, the same services from private doctors. They found that general practitioners, by and large, had no interest in preventive work. They did not see it as part of their role as doctors. Pediatricians, on the other hand, were happy to oblige. Many of them were doing preventive work in the clinics anyway. It was a small step to provide the same services in their private practices. Moreover, they discovered that if they were willing to combine their treatment of sick children with the supervision of healthy children, they could make full-time careers out of private practice. As more of them took advantage of these new

opportunities in private practice, pediatrics evolved into a primary care specialty.

The shift to prevention was accompanied by subtle changes in the specialty's rhetoric which emphasized not only the value of prevention, but pediatricians' responsibility to study and guide normal growth and development. Shaw (1919:461) spoke of a "new branch of pediatrics," one concerned with "the study of the child in health and with the prevention of sickness," rather than the study and treatment of diseases. "To cure is splendid," he wrote, "but to prevent is Godlike. Let us direct our chief energies to prevention." Helmholtz (1924:3), in his address to the AMA's Section on the Diseases of Children, claimed that the pediatrician's duties had changed "from curing the sick infant to keeping his little charge well":

I feel that a pediatrician without the preventive point of view is no pediatrician. The practice of pediatrics will become more and more a practice of preventive medicine. . . . We aim to prevent disease which formerly we were called on to treat; thus our work has changed, but not disappeared.

Pediatric training programs began to incorporate courses in child hygiene. In 1920, the APS prepared an outline for a course in child welfare or preventive pediatrics and distributed it to all medical schools in the United States and Canada. The outline included a didactic component on how to conduct a proper and thorough examination of the child. It also recommended practical experience in the well-child clinics (American Pediatric Society, 1920). Many programs

adopted the outline and joined state medical societies and public health boards in making similar courses available to those already in practice who wanted to familiarize themselves with child hygiene procedures.

Finally, the shift to prevention and the emergence of primary care pediatricians led to the development of a new, national pediatric organization, the American Academy of Pediatrics (AAP). The circumstances surrounding the creation of the AAP are worth noting, because they demonstrate pediatrics' growing commitment to preventive child care. Since the turn of the century, the APS had become an increasingly more exclusive scientific society. It limited its membership to those with an established record of teaching and research in the field of pediatrics. Younger, academically oriented pediatricians, frustrated by their lack of access, formed the Society for Pediatric Research (SPR) in 1932 and restricted membership to pediatric researchers under 45 years of age.

As primary care pediatricians emerged, they gravitated to the AMA Section of the Diseases of Children, which in 1939 had become the Section on Pediatrics. However, within the AMA they experienced the same conflicts over divergent interests that led their predecessors to create the APS. In 1922, the AMA and its Section on Pediatrics clashed over the Sheppard-Towner Maternity and Infancy Act. The legislation was the culmination of lobbying efforts on the part of the Children's Bureau, and particularly its chief, Julia Lathrop, for greater federal support for child health care. It provided grants-in-aid for a variety of maternal and child health programs, including the well-child clinics. The AMA opposed the legislation because they saw it as a case of

government interference in the business of medicine. The Section on Pediatrics supported it because it promoted preventive care, an area in which pediatricians had a growing professional interest.

At the spring meetings of the AMA in St. Louis in 1922, the AMA House of Delegates passed a resolution condemning the Sheppard-Towner Act on the very day the Section on Pediatrics passed a resolution favouring it. "The fat was in the fire with a vengeance," wrote a pediatric historian (Pease, 1952:17). "Tempers rode high and were not restrained." The House of Delegates sent a committee to reprimand the section. It also passed a ruling that barred sections from ever again adopting an independent resolution or indicating approval or disapproval on any matter having to do with AMA policy. The sections, from that point on, became politically impotent and were restricted to presenting scientific programs and organizing social gatherings for their members.

According to Pease (1952:18), this ruling made inevitable the creation of a new national pediatric society that would represent and speak freely on behalf of pediatricians. Pediatricians considered expanding the APS to incorporate primary care pediatricians, but decided finally, in 1929, to establish the AAP.

Protecting New Interests

By 1930, pediatricians clearly recognized the repercussions of declining mortality and morbidity, and the profession's growing dependence on prevention. Through the AAP they mobilized to protect their interests in prevention.

Closing the Clinics

The greatest competitive threat came, obviously, from the public well-child clinics. After pediatricians began offering preventive services in their own private practices, they became increasingly critical of the clinic system. They argued that clinic care fell short in several respects: Clinic personnel saw children in isolation; they had no knowledge of how their patients responded to disease, nor of their normal, everyday surroundings. Constant turnover in personnel was another problem; it deprived children of continuity in care. Finally, they argued that the clinics would never be able to satisfy the health care needs of the entire child population (Veeder, 1922:2228-2229).

But through the 1920s, they tolerated the clinics, at least for those who could not afford to pay a private doctor. They also recognized that the clinics served an important educational function and generated the demand for preventive care on which an increasing number of pediatricians depended. One pediatrician (Huenekens, 1923:45), admitted: "I felt and [other pediatricians] felt that free infant welfare work should be cut down after it had a good start; after the people had been educated to demand that sort of thing, that it should be cut down and given only to people in poor economic circumstances."

At first pediatricians made an issue only out of the clientele that the clinics attracted and their use by the well-to-do. They succeeded through the late 1920s, in some cities, in getting restrictions placed on clinic services on the basis of family income. But by the time the AAP was formed, they were determined to close the clinics altogether. In 1930, the Sheppard-Towner Act, which provided

funding for the clinics, came up for renewal in the form of the Jones-Bankhead Act. When Congress had first passed the Act, in 1922, pediatricians had supported it and were willing to suffer the wrath of the AMA House of Delegates to do so. In an ironic twist, the incident gave rise to the AAP, the very organization that in 1930 withheld support for renewal.

The decision was difficult for pediatricians. The AAP's Committee on the Relation of the Academy to Philanthropic Agencies, Welfare Workers, Etc., which was responsible for recommending a position, faced a real dilemma. On the one hand, pediatricians were eager to undermine the control of the child welfare movement and to eliminate the clinics. On the other, they were sensitive to the incongruity of a pediatric organization in opposition to a bill promoting child and maternal health. As one participant in the discussion, Henry F. Helmholz (in AAP, 1932:129), noted:

The question we have to consider and the basis on which we will be judged by the public is: an organization organized to develop the care and protection of the health of children is opposed to a bill, the underlying principle of which is the fostering of the care of the mother and child. We cannot go before the public as opposed to this bill.

The Committee recommended approval, but attached two telling qualifications: a) that a time limit of five or ten years be placed on the existence of the clinics, and b) that the clinics restrict themselves to educational programs. No clinic should compete with private doctors. Even with these qualifications, the AAP Executive

Board turned down the recommendation and decided to take no position at all.

The equivocation of pediatricians was not the only factor involved in the ultimate defeat of the Jones-Bankhead Act. Rothman (1978:190-193) argues that the AMA launched a more effective attack on the Bill because it had the support of a larger proportion of general practitioners. General practitioners, though still not keen on prevention, felt that they had to provide routine check-ups to maintain public confidence in their skills, and to compete with specialists like pediatricians and obstetricians. But by withholding their support, pediatricians dealt lobbying efforts to re-enact the Bill a severe blow, and contributed to its ultimate defeat.

Without funding, the well-child clinics could not survive. At their height in 1930, there were 1,511 clinics in urban centers and another 2,667 in rural areas, for a total of more than 4000 clinics (White House Conference on Child Health and Protection, 1932). By 1945, the public clinic system had collapsed and pediatricians had a virtual monopoly on preventive care. The lower classes suffered most as a result of the disappearance of the clinics. Middle class families could afford private doctors; lower class families did without routine examinations for their children.

Moving into Child Advocacy

The AAP did not stop at closing the clinics. According to its constitution, one of the major purposes of the AAP was "to create reciprocal and friendly relations with all professional and lay

organizations that are interested in the health and protection of children" (Pease, 1952:23). Instead, it set out to wrench control for prevention away from child welfare workers.

Since the emergence of their specialty, individual pediatricians had participated in the child welfare movement. A survey of APS members showed that a vast majority (39 out of the 41 pediatricians responding), belonged to organizations that were trying to improve the conditions of early life (Carr, 1912:8). But they did not take the lead. Nor did they consider such activity part of their professional task.

Moreover, as a specialty, they were ambivalent about whether they should engage in child welfare work. The APS had no formal links with any organization in the movement. In 1909, Thomas Rotch presented a paper to the APS entitled, "The Position and Work of the APS Toward Public Questions." The paper dealt with the proposed child labour laws. Rotch pleaded with pediatricians to play a more active part in guiding child welfare policy. In the discussion that ensued, many pediatricians disagreed with Rotch that such activity was appropriate for the APS. "I should feel sorry," argued Holt (in Rotch, 1909:37), "to see a large part of the work of this society devoted to subjects of this kind which, though of sociologic interest, are not so much along the line of work of most of us as other matters more strictly medical." Isaac Abt (in Rotch, 1909:36) added: "It seems to me that it is our mission to stimulate and encourage scientific work to the very highest degree. It should be farthest from our purpose to become entangled in political or legislative questions."

Once pediatricians became interested in prevention, however, they defined their duties as extending beyond the provision of prevention services in their private practices, into the area of child advocacy and policy-making. Speaking on behalf of children became part of the pediatrician's role. They were no longer willing to take a back seat in the child welfare movement. In his first address to the AAP, Arthur Abt (1931:875) stated: "[The AAP] should avoid the odium that comes from partisan or selfish politics. It should, however, courageously defend its medical prerogatives."

The AAP justified their claims to child advocacy in two ways. First, they challenged the competence of child welfare workers, arguing that as experts in the normal growth and development of children, pediatricians, and not the "laymen" of the child welfare system should formulate policy. Explaining the factors that gave rise to the AAP, its historian (Beaven, 1955:25) wrote: "Should the policies of child welfare be the province of physicians other than pediatricians, of laymen, health officials, of welfare administrators. . . . We were faced with an intolerable situation. Policies affecting children for whose benefit we were working could not be made by us." The profession had allowed child welfare officials to predominate for long enough. In the words of Henry Dietrich (in Beaven, 1955:77), president of the AAP in 1936, it was "high time for the pediatrician to take his proper place at the head of the procession."

These themes permeated the presidential addresses of the AAP throughout the 1930s. In 1932, Morse urged pediatricians to take a more

active role in prevention and was surprisingly candid about the stakes involved for pediatricians:

In the past, [measures on behalf of the welfare of children] have been undertaken and carried out largely by laymen without adequate medical advice. They will be in the future, unless the pediatricists bestir themselves and take a more active part. . . . It is not only our privilege and duty to take part in these movements, but it is necessary for our own preservation to do so. . . . Unless the physicians do take part in this work and help to lead it, they will soon have no work to do. (in Beaven, 1955:22).

Second, they linked the movement to the larger issue of private versus state medicine. The AMA had always been wary of government involvement in medical and health matters. But during the 1930s, as a result of the Depression, the medical profession became even more protectionist. Pediatricians had traditionally stood apart from their medical colleagues in this respect. They had consistently supported the child welfare movement and its work, even when it meant, in 1922, taking a stand in contradiction to the AMA. During the 1930s, however, pediatricians joined the medical chorus and opposed welfare programs as harbingers of a dangerous trend towards state control. Morse (in Beaven, 1955:23) painted an ominous picture of a growing and power-hungry bureaucracy out to usurp the pediatrician's turf:

This country is rapidly tending toward "state" medicine." The federal, state and municipal authorities are continually taking over more and more functions of the family physician. . . . The tendency is for them to increase the scope of their work and to include in it such matters as child

welfare and general immunization. . . . They will continue to go on, taking over one thing after another, unless the pediatricists and physicians themselves do the work that must be done.

Relations between pediatricians and the child welfare movement took on a combative tone, and deteriorated even further through the 1940s. Pease (1952) claims that in 1945, the situation between the federal Children's Bureau and the AAP became so strained, the two organizations almost broke all formal contact.

Establishing a Certification System for Pediatricians

There was one final step that pediatricians took to secure their interests in the area of prevention, and that was to establish a system to certify doctors with pediatric training. Thanks to the child welfare movement, the public connected prevention with pediatricians. But there was no control over standards of training, nor, more importantly, over who could use the title. Pediatricians feared that as the demand for preventive services increased, more doctors, including those with no preparation in pediatrics beyond their undergraduate experience, would call themselves "pediatricians." Other specialties, facing a similar problem, were beginning to develop a mechanism to identify those with specialty training. They created boards that set standards of training, conducted examinations and issued certificates to those that passed. The boards did not prevent doctors from limiting their practices to particular areas. But they did restrict the use of the specialist label. Ophthalmologists were the first group to organize a specialty

board, the American Board of Ophthalmology, in 1917. They were followed by obstetricians and gynecologists in 1930, and dermatologists in 1932 (see Table 4-6). By the 1930s, specialty boards were the new measure of an area's specialty status (Stevens, 1971:222).

The first goal of the AAP was to organize such a board for pediatrics. Under its initiative, members of the three major pediatric organizations, the AAP, the APS and the AMA Section on Pediatrics, met in 1933 to establish the American Board of Pediatrics (ABP). The ABP ruled that all applicants for certification had to complete a three year residency in pediatrics. Between 1933 and 1938, it issued over 1200 certificates to qualifying pediatricians (Faber and McIntosh, 1966:193).

The Growth of Prevention

The extent to which prevention sustained pediatric practices after 1930, is evident in the amount of time that pediatricians devoted to preventive work (see Table 4-7). C. Anderson Aldrich (1934), a practitioner in Winnetka, Illinois, was one of the first pediatricians to publish data about the composition of his practice. Aldrich is not clear about the time period his records cover, indicating only that they extend back over "the past few years." The records show clearly, however, that 39 percent of all the cases that Aldrich treated involved what he described as routine care of infants (which included such activities as prescribing formulas, handling teething difficulties,

TABLE 4-6
SPECIALTY BOARDS AND YEAR OF ORGANIZATION

Board	Year of Organization
1. Ophthalmology	1917
2. Obstetrics-Gynecology	1930
3. Dermatology	1932
4. Pediatrics	1933
5. Psychiatry-Neurology	1934
6. Otolaryngology	1934
7. Radiology	1934
8. Orthopedic Surgery	1934
9. Colon-Rectal Surgery	1934
10. Urology	1935
11. Pathology	1936
12. Internal Medicine	1936
13. Plastic Surgery	1937
14. Surgery	1937
15. Anesthesiology	1937
16. Neurologic Surgery	1940
17. Physical Medicine and Rehabilitation	1947
18. Preventive Medicine	1948
19. Thoracic Surgery	1948
20. Family Medicine	1969

Source: Geyman, 1971:4

TABLE 4-7

DISTRIBUTION OF PATIENT VISITS BETWEEN WELL CARE AND DISEASE

Author	Years Surveyed	% Well-care	% Disease
Aldrich (1934)	1933-1934	39	61
London (1937)	1937	39	61
Boulware (1958)	1930-1955	40	60
AAP (1950)	1950	54	46
Deisher et al. (1960)	1958	49	51
Jacobziner et al. (1962)	1958-1959	57	41
Breese et al. (1966)	1959-1960	39	61
Bergman et al. (1966)	1964	50	50
Hessel/Haggerty (1968)	1966	49	51
Mean	Before 1952	39	61
Mean	After 1952	49	51

Source: Adopted from Hessel and Haggerty, 1968:276.

cultivating appetite and weaning), routine examination of children one year of age and over, and preventive treatment (vaccination and immunization). The remaining 61 percent involved treatment of such conditions as upper respiratory infections (23 percent), other acute infectious diseases (22 percent) and gastrointestinal disorders (4 percent).

Other composition studies of the same period showed a similar pattern. Arthur H. London (1937), a practitioner in Durham, North Carolina, recorded that 39 percent of the first 1500 children he had treated required only routine (23 percent) or preventive (16 percent) care. Another pediatrician, J. R. Boulware (1958), surveyed the clinical records of his Lakeland, Florida practice over the years 1930 to 1955. For comparison purposes, Boulware followed Aldrich's system of categorization. That is, he prepared tables summarizing the total number of cases in each of several major categories of treatment and disease. The tables showed that 40 percent of all the cases he had managed over the 25-year period entailed routine and preventive care. Unfortunately, it is not possible to explore longitudinal trends in the tables. However, Boulware (1958:555) did observe the considerable change in the character of pediatric practice over the course of his career: "Practice in the early years consisted of difficult feeding problems, preventive injections and the time-consuming treatment of children severely ill with such diseases as lobar pneumonia, empyema, infectious colitis and diphtheria. Now there is a greater percentage of time devoted to well-baby care, and general health conferences."

By 1950, preventive work had risen to approximately 50 percent. National and regional surveys, as well as analyses of individual practices, reflected the trend. An AAP (1950) national survey found that 54 percent of all visits to pediatricians were for health supervision; 46 percent were for the care of the sick children. A state-wide survey of Washington pediatricians in 1958 (Deisher et al., 1960), showed that they spent 49 percent of their time doing well-child care as opposed to 51 percent doing sick-child care. The same survey revealed not surprisingly, that general practitioners were more likely to treat sick children in the pediatric component of their practices, than were pediatricians. Seventy one percent of all pediatric care that general practitioners provided, consisted of treatment for illness, while only 29 percent involved well-child care. Jacobziner et al. (1962) found that 57 percent of all visits to pediatricians in New York City by children under six years of age involved well-child care; 43 percent involved treatment of sick children. The corresponding figures for general practitioners were 31 and 69 percent. Among 19 pediatricians in Monroe County, New York, 49 percent of patient visits had to do with well-child care, while 51 percent involved sick-child care (Hessel and Haggerty, 1968).

Figures for individual pediatric practices were, for the most part, consistent. Bergman et al. (1966) conducted a time-motion study of four pediatricians in Seattle, Washington, following and carefully recording their activities over five non-successive days in 1964. They found that on average, they spent 50 percent of their time in well-child care. The next largest category was respiratory infections which

consumed 22 percent of their time. The authors noted that none of the pediatricians encountered a serious case of disease. The sickest patient was a child with a persistent case of croup. The pediatrician decided to hospitalize the child as a precaution. A study of a three-pediatrician group practice in Brighton, a residential community outside of Rochester, New York, produced slightly aberrant results, although the amount of preventive work was still high at 39 percent (Breese et al., 1966).

When the proportions of well-child to sick-child care in the pre- and post-1950 studies are averaged, there is an increase of slightly over 10 percent from 39 to 50 percent in the distribution of visits for well-child care and a corresponding 10 percent decrease from 61 to 49 percent in the distribution of visits for sick child care. The difficulties that this created for the specialty are discussed in the next chapter.

Summary and Discussion

The erosion of pediatricians' traditional functions in artificial feeding and the treatment of disease, and their consequent shift to prevention and primary care provide insight into the process of professional transformations. Structural changes both within and outside the specialty prompted the transformation. The wide-scale pasteurization of milk, improvements in living conditions, better nutrition, the availability of vaccines and effective treatments, and the improved general health of children, all contributed to the

resolution of the problems around which pediatrics revolved. In Bucher's terms, the specialty was on its way to becoming "ploughed out." Internal processes of development were also threatening. Pediatric subspecialists were rapidly establishing their claim over the serious diseases that remained, leaving the general pediatrician with little to justify their existence.

General pediatricians survived the loss of their mission by adopting prevention as their revitalization formula. The shift involved several steps. First, the specialty redefined itself in a way that justified its practitioners' new interests. The professional ethos now proclaimed that pediatricians were more than baby feeders and healers of disease. They were guardians of child health. Second, there were changes in training programs to prepare practitioners to provide the new service. Third, the specialty created a new organization to represent the interest of the growing body of general, prevention oriented pediatricians.

This last step is not necessarily typical of transforming segments. In most cases of transformation, an already existing organization is more likely to perform the task of forging new paths and facilitating the work of the profession. In the case of pediatrics, however, the APS had always seen itself more as a scientific society, and felt uncomfortable functioning as a political group speaking out on behalf of pediatricians. There was already a perceived need for such an organization in pediatrics. The growing number of primary care pediatricians merely provided the incentive for its formation.

In her discussion of professional development, Bucher (1980:15-16) observed that emerging segments often have to deal with territorial disputes that arise because the areas to which they are laying claim are already occupied by other groups. They handle these disputes through a variety of means including cooperation, co-optation and "silent truces." A tactic that works particularly well with lower-status competitors is denigration and accusations of "quackery."

The case of pediatrics demonstrates that transforming segments can face the same problem. A revitalization formula may take a profession into uncharted waters - areas that are unexplored and in which no other group has an expressed interest. More likely, it will take the profession into an area where it will have to compete with others who are already dealing with the problem in some way. They are forced to either eliminate their competition or work out an arrangement that both groups find tolerable.

The case of pediatrics also illustrates the conditions under which different strategies might be adopted. Initially pediatricians supported and cooperated with child welfare workers. These bonds remained strong even after pediatricians got into prevention, first in the clinics and later in their offices. For a while, both groups benefitted from the alliance - the movement in terms of its legitimacy, and pediatricians in terms of new opportunities for practice. The more dependent pediatricians became on prevention, however, the more the relationship tended in the direction of a classic struggle between doctors and a lower-status medical group. Pediatricians used the typical strategy. They impugned the movement's ability to run the

well-child clinics effectively, or even to lead the child advocacy movement. They also took advantage of the current debate about the role of public agencies in the delivery of health care services. There was no doubt, given the unequal distribution of power between the two contestants, as to who would prevail.

With prevention a part of the pediatric mandate, the re-organization of the specialty around primary care practices, and the elimination of any significant competition in prevention, the future of pediatrics looked more secure. Few pediatricians anticipated the trouble that lay ahead.

CHAPTER 5

THE SHIFT TO THE NEW PEDIATRICS

To the outside observer, the prospects for organized pediatrics looked bright during the 1950s. Birth rates were climbing in the aftermath of World War II. Between 1946 and 1956, the birth rate rose almost 20 percent from 20.4 to 24.1 per 1000 population. It rose another 10 percent to 26.6 per 1000 the following year and continued to hover around 25 until the late 1950s (see Table 5-1). There was a corresponding surge in the demand for child health care. Much of the demand was directed towards pediatricians because the number of general practitioners had been steadily declining since the 1930s. Pediatricians were rapidly becoming the general practitioners among the young. They could barely keep up with the demand for their services. Yet the specialty was on the verge of a serious organizational crisis, a crisis that pediatricians referred to as the "dissatisfied pediatrician syndrome." Many pediatricians were disgruntled and frustrated with their practices. They began leaving pediatrics for other areas of medicine. The specialty was demoralized. Its appeal among medical students began to suffer. Familiar predictions about the end of pediatrics resurfaced.

Once again, the specialty began to transform itself. Pediatricians began to describe a "new" pediatrics, one that did not restrict the specialty to the treatment and prevention of physical disease. The new pediatrics adopted a more comprehensive approach to child care that gave pediatricians responsibility for the child's total

TABLE 5-1
LIVE BIRTH AND BIRTH RATES: 1945-1984

Year	Live Births*	Birth Rate**	Year	Live Births	Birth Rate
1945	2,858	20.4	1965	3,760	19.4
1946	3,411	24.1	1966	3,606	18.4
1947	3,817	26.6	1967	3,521	17.8
1948	3,637	24.9	1968	3,502	17.5
1949	3,649	24.5	1969	3,600	17.8
1950	3,632	24.1	1970	3,731	18.4
1951	3,823	24.9	1971	3,556	17.2
1952	3,913	25.1	1972	3,258	15.6
1953	4,965	25.0	1973	3,137	14.8
1954	4,078	25.3	1974	3,160	14.8
1955	4,104	25.0	1975	3,144	14.6
1956	4,218	25.2	1976	3,168	14.6
1957	4,308	25.3	1977	3,327	15.1
1958	4,255	24.5	1978	3,333	15.0
1959	4,245	24.0	1979	3,494	15.6
1960	4,258	23.7	1980	3,612	15.9
1961	4,268	23.3	1981	3,629	15.8
1962	4,167	22.4	1982	3,681	15.9
1963	4,098	21.7	1983	3,614	15.5
1964	4,027	21.0	1984	3,697	15.7

* In thousands

** Live births per 1,000 population

Source: U.S. Bureau of the Census, 1975:49
U.S. Bureau of the Census, 1985:56

physical, mental, and emotional well-being. Not all pediatricians shared this vision of pediatrics. Pediatric educators in particular, resisted efforts to move the specialty in this direction. What brought on the dissatisfied pediatrician crisis and why did the specialty experience such a crisis during what should have been a time of growth and prosperity? Why did some pediatricians feel that the answer to the crisis lay in expanding into new areas of practice, while others resisted the expansion? These are the questions this chapter explores. The chapter follows the same structure as Chapter 4. I begin by describing the conditions of transformation, more specifically, the origins and nature of the dissatisfied pediatrician syndrome. Then I look at the emergence of the new pediatrics as a response to the crisis and the difficulties that it generated. The chapter ends with a discussion of how this phase of pediatric history increases our understanding of professional transformations.

The Dissatisfied Pediatrician Syndrome

The dissatisfied pediatrician crisis can be traced directly to primary care practice after 1950. As Chapter 4 demonstrated, prevention at first only supplemented the pediatrician's role in treating disease. By 1950, however, prevention dominated pediatric practice and pediatricians saw mostly children with minor, easily treated, self-correcting problems. The heavy preventive thrust of primary care practices soon began to create problems.

Through the 1950s "vague rumblings of discontent" permeated pediatric ranks (May, 1959:253). Letters of complaint and frustration from bitter and disenchanted pediatricians appeared regularly in pediatric journals. The letters spoke of poor remuneration, long hours, overwhelming work loads, and fatigue.

The income of pediatricians was, in fact, comparatively low. Since preventive services are generally lower paying than treatment, pediatricians earned less than any other major specialty and barely more than general practitioners. A 1959 survey (Medical Economics, 1961) showed that the net earnings of pediatricians averaged 20,700 dollars, compared to 32,700 for orthopedic surgeons, 27,900 for general surgery, 27,900 for obstetricians/ gynecologists, 25,900 for otolaryngologists, 24,800 for ophthalmologists, 24,800 for dermatologists, 24,300 for psychiatrists and 22,300 for specialists in internal medicine. The net earnings of pediatricians was only about 700 dollars more than that of general practitioners (see Table 5-2).

The disparities were even more pronounced through the 1960s. In 1967, the net earnings of general practitioners superceded that of pediatricians. Pediatricians earned only 27,600 dollars while general practitioners earned 31,400. In 1968, the net earnings of the two groups were equal at 32,900. But in 1969 and again in 1970, general practitioners overtook pediatricians in average earnings (see Table 5-3).

Yet, pediatricians worked longer hours and saw more patients than the average doctor. In 1965, 39 percent of pediatricians reported working 70 or more hours per week, in comparison to 17.5 percent for

TABLE 5-2
NET EARNINGS FOR GENERAL PRACTICE AND NINE SPECIALTIES: 1959

Specialty	Net Income
Orthopedic Surgery	32,700
General Surgery	27,900
Obstetrics/Gynecology	27,900
Otolaryngology	25,900
Dermatology	24,800
Ophthalmology	24,800
Internal Medicine	22,300
Psychiatry	20,700
Pediatrics	20,700
General Practice	20,000
All Specialties	24,800

Source: Medical Economics, 1961:90

TABLE 5-3NET EARNINGS* FOR ALL DOCTORS AND SELECTED SPECIALTIES: 1965-1970

Specialty	1965	1966	1967	1968	1969	1970
All medical doctors	28.9	32.1	34.7	37.6	40.5	41.5
General Surgery	32.5	35.6	37.7	40.7	42.9	45.0
Obstetrics/Gynecology	30.5	33.9	37.4	39.7	43.8	47.0
Internal Medicine	27.7	32.3	32.5	38.8	38.4	41.3
General Practice	25.1	27.7	31.4	32.9	35.1	37.4
Pediatrics	25.2	28.1	27.6	32.9	34.4	35.9

* In thousands of dollars.

Source: U.S. Bureau of the Census, 1972:68.

all doctors. Only eight percent of pediatricians reported working 49 hours per week or less, in comparison to 26 percent for all doctors (see Table 5-4). Pediatricians averaged 3 home visits, 116 office visits and 17 hospital visits per week, while other doctors averaged 1 home visit, 87 office visits and 17 hospital visits (see Table 5-5).

But the real problems, as the letters made clear, were boredom, tedium and frustration. Many were written by pediatricians who were leaving pediatrics for other areas of practice. They were prepared to do some prevention. But with prevention and well-child care consuming an ever-larger proportion of their time, they were unhappy with pediatrics. They longed for the challenge and intellectual excitement of treating sick children. Instead, their long days were filled with routine check-ups and minor illnesses.

The letters captured their bitterness and resentment vividly. Frank L. Tabrah graduated from the University of Buffalo Medical School in 1943. After completing a pediatric residency at the Buffalo Children's Hospital and Children's Orthopedic Hospital in Seattle, Tabrah ran a private pediatric practice in Bellingham, Washington for several years. In 1956, he gave up his practice and joined the staff of the medical department of the Kohala Sugar Company, in Kohala, Hawaii. Explaining his decision, Tabrah emphasized the monotony and low status of pediatric practice, and the lack of intellectual rewards:

TABLE 5-4
WORKING HOURS PER WEEK FOR PEDIATRICIANS AND ALL MDs: 1965

Working Hours	Pediatricians	All Doctors
70 or more	39.1	17.5
60 - 69	36.8	28.0
50 - 59	16.1	28.4
49 or less	8.0	26.1

Source: White, 1965

TABLE 5-5
PATIENT VISITS PER WEEK TO PEDIATRICIANS AND ALL MDs: 1965

Type	Pediatricians	All Doctors
Home Visits	3	1
Office Visits	116	87
Hospital Visits	17	17

Source: White, 1965

Pediatrics, during the first half of this century, has been a brilliant part of our whirlwind social advance. Improved infant feeding, the abolition of the contagious scourges . . . the understanding of growth and development . . . and antibiotics have revolutionized our work. Gone is the day when it took a genius to feed a normal infant. Our early gems of knowledge and techniques have fortunately become almost public knowledge. . . . The pediatrician is indeed low man on the totem pole, his position comparable to that in which the general practitioner imagines himself, but without the satisfactions and interests of the generalist's broad attack on the whole of medical practice, not to mention his income from surgery and obstetrics.

. . . It is inconceivable that any physician with intelligence and interest in the unusual can long survive the routine of playing grandmother for years on end in a well-baby practice. A few years ago this colorless job was relieved by challenges of frequent and severe disease, and the physician was continually called upon to exercise his ingenuity. He felt deep satisfaction in his work, a satisfaction which is waning today because of the changed nature of our practice.

. . . My former pediatric practice in a Northwest city is a good example. With a population of about 60,000, well supplied with competent general practitioners and top quality specialists, the daily routine was monotonous in the extreme. Upper respiratory infections, infant feeding, the endless discussions with endless mothers of problems that are self-righting anyhow, all of it except for the occasional emergency not sufficiently stimulating for a steady diet. . . . Those intending to do only pediatric office practice should be made aware of its enforced preoccupation with trivia largely unrelated to disease. . . . Routine pediatric office practice is today a dull anachronism. (Tabrah, 1957:745-747).

Thornton Vandersall, a pediatrician in Long Island, New York, described his disappointment on entering private practice, his efforts to try to recapture the "lost glory" of the days he had spent, as a

resident, studying and treating the exotic childhood diseases found in a hospital setting, and finally, his decision to leave pediatrics:

One year ago, after 3 years of practice, I left pediatrics and began a 3-year fellowship in psychiatry. In the belief that my thoughts about leaving have more than purely personal validity, I am submitting them here.

I began with the stark realization that I did not like practice. Having reveled in hospital pediatrics, I was surprised. I first complained that the work of practice was not essential (compared to "sick child" care in hospital). . . . Perhaps it is essential, but to me it is dull and routine. I thought of the original choice on leaving medical school. I chose to take care of, and was well trained to take care of sick children. Three busy and important years were invested in this. . . . On entering practice I found that I was not trained for what I was doing.

. . . My next step consisted of additional familiar maneuvers. These might be called "attempts to reclaim the lost glory." They consisted of such things as returning to the "center" one day a week to be the 99th wheel, reading the journals so that I could discuss the pathology that I rarely saw, and spicing my conversation with that one annual "good case of ____." Although this behavior now seems almost irrational to me, it was the familiar ex-resident pattern.

Sooner or later we must realize that we have made a major intellectual, physical and emotional investment in the treatment and understanding of serious organic pathology and that we simply are not working in that area. Because we are not trained for, and do not understand the tasks that are presented to us, we end frustrated, discontented and angry. (Vandersall, 1962:465).

A pediatrician (Coddington, 1959) practicing in Red Bank, New Jersey, described the pediatrician's dilemma as a double-bind: on the

one hand, there was the temptation to relieve the burden of oppressively long hours spent on routine problems by encouraging mothers to deal with such matters on their own; but without the multitude of routine problems that mothers typically brought to the pediatrician, few pediatricians, especially those just starting in practice and eager to establish a stable clientele, could sustain their practices.

A conflict of interests arises in the young pediatrician's mind, when on the one hand, he wants to encourage the mother to return as often as necessary in order to build up his practice while, on the other hand, he is attempting to help her develop independence. If he truly helps her to handle the many vexing problems of child rearing and minor illnesses, he will develop a pleasant practice with a limited number of frustrating telephone calls and few night visits. However, this is poor economics for the pediatrician starting out in practice. He would do better financially if he permitted the parents to have a little anxiety and encourage them to depend on him through frequent office visits. (Coddington, 1959:1008).

Another pediatrician, Kenneth Gould, left pediatrics after eight years in private practice. His experience convinced him that he was not alone and that the future of the specialty was in peril:

My reasons for this decision were many and varied. I felt that most of them were unique with me. However, as I have continued my training in psychiatry I have met several other pediatricians who have taken a similar course and surprisingly enough characteristics common to us have emerged. We all found the experience of hospital pediatrics exciting, challenging, and rewarding in a personal and professional way. We enjoyed the wards, the children, the families of our patients, and probably above all the feeling of accomplishment. The

private practice of pediatrics was looked forward to with pleasure and anticipation . . . The features of private practice in pediatrics in most cases were neither shown nor discussed with us. We were sitting on top of a very happy professional cloud.

The problems [in practice] are fairly well known to most practitioners. The heavy case load, the majority of visits concerning well-baby care and simple, self-limited respiratory and gastrointestinal illnesses, the oppressive telephone, the frequent nights and weekends on, and the relatively low remuneration for such work present real difficulties.

I have written this letter because I am deeply concerned with the future of American pediatrics. I do not believe that pediatrics can survive in the direction it is going. There must be an "agonizing reappraisal" of the future of private practice in this country.

These difficulties that present a crisis to our specialty (I can't bring myself to say "former specialty") must be discussed, rediscussed and finally solved within the profession . . . If this is not done, the future of private practice in America is indeed gloomy. (Gould, 1964:789).

Initially, there was a tendency among pediatricians to attribute the dissatisfied pediatrician phenomenon to the personal unsuitability of certain individuals for pediatric practice. Borden Veeder, editor of the Journal of Pediatrics, which published many of the letters, prefaced them with this editorial comment:

While it is unfortunate when a physician makes a wrong choice and as a result finds himself unhappy and discontented, the fault almost always lies in the individual and blame cannot be shifted to the particular field. "Look within thyself when things go wrong" is a wise maxim, even if it is unpleasant to the ego. (Veeder, 1958:769).

Some of the commentaries and responses that the letters drew, echoed Veeder's sentiments, in more or less generous terms. "Those who find pediatrics monotonous and boring," wrote one pediatrician (Cole, 1959:642-43), "are practicing with their eyes shut. They are lacking in awareness of what pediatrics is. They are miscast and should be in some other type of work. Of the thousands of times I have discussed with a young mother her perfectly normal baby, I have never once found it boring. She may have memorized Dr. Spock's excellent book from cover to cover, but she needs something more, the personal touch." Another pediatrician (Parmelee, 1957:753) stressed the "privilege of watching children grow and develop . . . sharing their happiness and their problems, observing their reactions . . . knowing their families and domestic trials."

But other pediatricians rejected these explanations as facile and challenged the specialty to face the fact that there was no basis for pediatrics' continued existence as a primary care specialty. Wineberg (1959), a practicing pediatrician from Waukegan, Illinois, wrote:

When one becomes dissatisfied, the argument is that he has defects of personality, and after all, it is very wonderful to watch children grow and have patients invest so much faith in their doctor. Regardless of such rationalizations as these, if a man spends two years devoted to acquiring a highly specialized skill and then enters a practice which 90 percent of the time does not require this skill, then he has not really been trained for a specialty. . . . *To admit that we are in a field which has less to offer than we have been taught is distressing. To continue to mislead fine young men into a specialty that does not exist is more than unfortunate.* (Wineberg, 1959:1008; emphasis added).

Moreover, evidence mounted that the discontent was not isolated. A survey conducted by Medical Economics (1956) showed that pediatricians were medicine's most frustrated specialists and confirmed what many of the letters suggested, that some pediatricians were switching to other areas of medicine. Ninety-five percent of those surveyed were glad they had chosen medicine as a career, but only 63 percent were satisfied with their chosen specialty, the lowest proportion of satisfied practitioners among the specialists surveyed.

In Washington state, Deisher et al. (1960) found little correlation between the professional interests of pediatricians and the content of their practices. They had a low to moderate interest in the types of cases they mostly saw, including well-baby care, minor respiratory infections, vomiting and diarrhea; the types of cases that they had most interest in, including viral diseases, rheumatic fever and prematurity, occurred infrequently, if at all.

A national survey of 2000 pediatricians who had graduated since 1945, tapped the same disaffection. Sixty four percent of the pediatricians surveyed, stated that pediatrics had not met their expectations. In response to questions about the unanticipated differences and problems of pediatric practice, they observed (Aldrich and Spitz, 1960:74):

I never realized that it would be so demanding of my time.

It is practically a 24-hour daily job and seven days a week.

The main professional problem in pediatrics is how to remain a well-informed child specialist when the nature of modern pediatric practice in terms of the kinds problems one sees (well-baby care in office and respiratory infections at home) takes so much time that it is not possible to continue to grow and develop in this specialty as I believe we should.

Like all newly practicing pediatricians, I suppose I expected to see more "exotic" or at least more really problem cases than has been the case.

The amount of referral work is much less than I expected.

More of a "general practice" than a specialty.

Low income in comparison to other specialties.

I had anticipated practicing pediatrics, not placating parents.

One commentator summarized the survey's findings by saying:

"There is no need to cut butter with a razor. . . . What the questionnaire has done is to confirm what people have said in other contexts, that pediatricians apparently do have problems" (in Spitz, 1960:17).

Pediatrics was also losing its appeal among medical students. Samuel Levine, president of the APS in 1960, observed in his presidential address that for the first time in its history, pediatrics was having trouble attracting promising candidates. AMA directories confirm that pediatrics, along with other low-status specialties such as anesthesiology, pathology and psychiatry, had among the highest number of vacant residency positions. A survey that the Association of Medical Colleges conducted in 1956 among graduating seniors in 21 medical schools found that of the 103 seniors indicating a desire to specialize

in pediatrics before their year of internship, only 56 were still interested in the specialty after their internship (Gee, 1960:37). The dissatisfied pediatrician syndrome was rapidly becoming a problem that the specialty could not afford to ignore.

A Response to the Dissatisfied Pediatrician Syndrome: The New Pediatrics

In an address to the Pediatric Section of the California Medical Association in 1935, Henry Stafford (1936) warned that if pediatricians were going to survive the declines in mortality among children, they would have to be "on the alert" for new fields of endeavour. "Most of these fields," he wrote (1936:378), "deal with borderline problems, shades of difference between health and disease, conditions whereby the child is not invalidated, but his social and individual efficiency is decreased." Stafford turned out to be right.

In response to the dissatisfied pediatrician crisis, leading pediatricians promoted a new image of the specialty that they called the "new pediatrics" (White, 1955). The new pediatrics focused not on the diseases of children, but on children themselves and their total well-being. "The goal of pediatrics," wrote Waldo Nelson (1955:112), a professor of pediatrics at Temple University School of Medicine, was "to assist the child to become an adult able to compete at a level approaching his optimal capacity and to assume his share of responsibility within the community." To fulfil that mandate, the specialty could not restrict itself to children's physical problems. Its scope of practice included anything that might threaten the

development of children into healthy, happy, responsible and productive adults. The pediatrician's duty was to ensure children's complete physical, mental, emotional, psychological and social growth and development. Defined in this way, Nelson (1955:112) insisted, pediatrics was "just coming of age rather than having fulfilled its mission."

Its proponents disagreed as to how "new" the new pediatrics actually was. While some pediatricians recognized it as a fundamental redefinition of the specialty, others saw it as an extension of pediatrics' traditional concerns. They maintained that pediatrics had always been a specialty devoted to the welfare and well-being of children, not merely to the treatment and prevention of diseases. Pediatricians of the past may have concentrated their efforts on treatment, but only because the high mortality and morbidity rates among children demanded it. Davison (1952) referred to the new pediatrics simply as a "pediatric shift." The participants at a conference where the issue of the new pediatrics arose (Spitz, 1960) concluded that the term was a misnomer. There was nothing "new" about pediatricians adopting a broad and comprehensive interest in children's lives. The "new" pediatrics was simply an opportunity to practice better pediatrics now that the life-threatening diseases of childhood were out of the way.

However they conceived of it, supporters of a more comprehensive pediatrics agreed that it had the potential to alleviate the problem of the dissatisfied pediatrician. Grover Powers (1955:692), a contributing editor to Pediatrics, wrote: "I believe that general child care . . .

in all its possible ramifications may be developed in such manner as to offer a challenge to mind and personality as rewarding and satisfying to the physician who loves children as the drama of care restricted to the sick child."

Samuel Levine, president of the APS in 1960, shared Power's optimism. "If the role of the practicing pediatrician is to promote child health, and not just to cure or even prevent organic illness," he stated in his presidential address (1960:653), "then his task is far more challenging, exciting and important than it was even in the heyday of curative pediatrics." He encouraged the profession to respond to the disenchantment among pediatricians by promoting this new image of the pediatrician as a guardian of child health in its broadest possible terms:

The young pediatrician today, if he engages in private practice, faces a real opportunity to promote all aspects of child life and health in his community - mental, emotional and social as well as just physical. If we can point out this challenge . . . and make the challenge sufficiently exciting and rewarding, pediatric practice, it seems to me, can face an era as golden as any we have known in the past. (Levine, 1960:656).

So too did George Wheatley (1961a: 836), president of the AAP. Wheatley rejected the suggestion that pediatricians abandon primary care as "unrealistic, defeatist, and unimaginative." Wheatley pointed to the high demand for pediatricians as an indication that the public wanted the profession to play a greater role in routine child care. Pediatricians had an obligation to respond to public needs. They also

- had an obligation to children that extended beyond their physical diseases. "The dimension to which we have given nearly all our attention so far," he wrote (1961a:837), "is the physical . . . The pediatrician of tomorrow must be prepared to serve the "whole" child." He urged progress "toward that ever-new concept of our specialty as yet unrealized - care of the "whole" child." There were many problems in child care that demanded understanding and solution.

New Areas of Care

What were some of these problems? Nathan Talbot, a professor of pediatrics at Harvard Medical School, suggested the pervasive instability in the adult population furnished important clues as to where pediatricians' services were most needed. "There is perhaps no better way to gain insight concerning the health problems of children," he wrote (1963:910), "than to look at the condition of those who have just reached late adolescent or early adult years." He cited statistics that during World War II, between January 1944 and August 1945, the armed services rejected 12 of every 100 applicants due to mental disease. This figure was twice as large as the most frequent physical cause of rejection, back problems. He cited epidemiological evidence (Srole et al., 1962) that 15 percent of young adults in Midtown Manhattan had mental health problems of marked intensity and that another 24 percent had moderate emotional difficulties. The third and fourth most common causes of death in the 15 to 25-year age group, he observed, were homicide and suicide.

Talbot, who had a reputation in nutritional deficits in children, argued that "psychological malnutrition" was replacing diseases such as rickets and scurvy. He proposed that pediatricians apply the fundamental principles of nutrition to mental health. With simplistic optimism, he believed that it would be possible "to define in statistically valid terms the minimum maintenance needs and maximum tolerances of healthy and sick individuals for affection, discipline, approval and other social nutrients" (Talbot, 1963:914). Once these were determined, pediatricians could detect and treat the symptoms of behavioral illness before they became so deep seated as to require intensive psychotherapy. Talbot and his colleagues (Kearsley et al., 1962) correlated "psychological difficulties" (i.e., thumbsucking, stealing, stubbornness, tantrums, weepiness, destructiveness, biting, kicking, nervousness, being picked on, head banging, nail biting, nightmares, soiling, bullying, lying, school problems, trouble with authority, overweight, stealing and truancy) with parental contact, approval and authority. The results, based on a survey of 721 children, showed that children who were behaviorally disturbed had a significantly higher degree of parental contact and authority than their symptom-free counterparts but significantly lower parental approval scores.

Other "pressing childhood needs" were identified by Carl C. Fischer (1957), a professor of pediatrics at the Hahnemann Medical College in Philadelphia, and a key proponent of the new pediatrics. In an address to the Pediatric Society of Northwestern Pennsylvania, Fischer argued that the specialty was entering an era "in which the pediatrician widens his world to include many things in the environment

of his "little people" of which he had previously been largely unaware" (Fischer, 1957:595).

Fischer's list included several areas where he felt pediatricians should be playing a greater role: 1) Observing that since 1950, accidents had climbed to the top of the list of major childhood killers, Fischer insisted that pediatricians could do much more to prevent poisonings, burns, home accidents, and bicycle and pedestrian accidents. 2) In the area of adoption, the pediatrician's role extended far beyond merely providing medical care for the child. Pediatricians should advise the natural mother, protect her moral and legal rights and help her reach a decision she could live comfortably with for the rest of her life, making sure the adoptive home was suitable for the child, exploring the motivations of families seeking to adopt, acting as intermediary in arranging adoptions, and guiding adoptive parents through their unique difficulties. 3) Pediatricians could provide much needed assistance to handicapped children by familiarizing themselves with the resources available for them, by teaching these children and their families how to adjust, and by fostering more accepting attitudes towards the handicapped in the community. 4) In the area of school health, there was a good deal that pediatricians could do beyond the traditional annual medical examination. They could promote individual and community health, as well as foster "healthful school days" (1957:600) and good student-teacher relations. The pediatrician should be appraised of any problem that the child might present in school so that they could assist in its interpretation and correction. 5) Lastly, Fischer outlined a role for pediatricians in combating juvenile

delinquency. They should reach out to children who were causing trouble at home or at school, and to those with psychosomatic problems. These children were prime candidates for delinquency. But if pediatricians identified them early, they could address their problems and guide healthy and normal personality development.

In seeking new challenges, pediatricians looked beyond the traditional age group of pediatrics. An area the specialty had barely begun to exploit, they argued, were the health problems of children over 12 years of age. After all, adolescence was a natural extension of childhood, a continuation of the growth and development process that was the basis of pediatric practice. The pediatrician's task was not complete till children had progressed through their adolescent years. Samuel Levine (1960:655) recommended to the members of the APS, that a "special effort be made to understand the puzzling problems and potential of adolescence." George Wheatley (1961b:160) made the same argument to the members of the AAP:

This is a twilight zone in medical practice, upon which more light needs to be shed. I hope that pediatricians will take the initiative to study the needs of this group. The important point is that these children should be encouraged to visit pediatricians and more pediatricians should be equipping themselves to understand and cope with teen-age health problems.

Though pediatricians stressed that they were responding to public demands for increased involvement, the new pediatrics was as much about constituting a market for comprehensive care as it was about providing

it. An important dimension of the new pediatrics was "anticipatory guidance," which Lee Forest Hill (1960:301) defined as: "the anticipation for parents and interpretation to them of expected normal patterns of behavior in children as they occur in various age groups." To properly fulfil their obligation to children, pediatricians had to ensure a rich and rewarding parental experience. Pediatricians were not to wait for parents to raise questions about child rearing spontaneously, but "facilitate" discussion of potential problems. A practitioner from Greenville, South Carolina, William R. DeLoache (in Deisher, 1960:21), recommended that after a cursory physical examination, "the baby can be held by a nurse or maid, and the parent can be given the time to ask questions and raise problems that are disturbing." DeLoache scheduled parents who claimed to have no problems and "who really don't want to talk very much," at longer intervals, on the assumption that these were the parents with the "real problems." Another pediatrician (William G. Crook in Deisher, 1960:21) suggested that the child might be left at home on some visits so that there would be more time for anticipatory guidance.

Anticipatory guidance was even more important, according to Hill (1960), during the adolescent years. The adolescent's need for independence and parents' reluctance to "loosen the apron strings" often made relations between them tense. There was also the issue of sexual maturation and the responsibilities that went along with it. Few parents or adolescents would bring these matters up on their own, Hill maintained (1960:302). But they would be happy with any counsel that the pediatrician could provide. It was up to pediatricians to "take

the lead." He suggested that the development of secondary sex characteristics, noted on a routine office visit, provided a good opportunity to broach these subjects.

Eliot Freidson (1970a) has argued that foremost among the prerogatives that the medical profession enjoys is the power to define what constitutes a medical problem. The profession does not only treat conditions that may be pathological in some objective sense. Conditions become problematic when the medical profession assumes control over them. By practicing anticipatory guidance, pediatricians were doing more than giving parents the opportunity to discuss problems with their children's behavior. They were educating parents to understand these behaviors as medical problems, and to expect the pediatrician's assistance in handling them. In other words, they were generating a demand for a new type of service they hoped primary care pediatricians would provide.

Besides expanding their scope of practice, pediatricians also formulated a justification for this expansion which involved rationalizing why they, and not psychiatrists, psychologists, educators and social workers, were the most logical group to deal with children's behavioral and social problems. They emphasized first, their unique, global perspective on the child. They contrasted this view with the more limited interest of other groups. Each of these groups had its own area of expertise, they argued, and could conceivably meet certain of children's non-physical needs. But the different dimensions of a child's growth and development were interwoven in a complex way. It did not make sense to parcel out the responsibility for physical,

behavioral, intellectual and social development to different experts. The pediatrician, as the child's doctor, was in "the most opportune position to monitor the overall growth and development of children and to intervene when full realization of a child's potential was in jeopardy" (Friedman, 1970:172). Indeed, the pediatrician was "the best qualified person the culture has yet produced" for this task (Tompkins, 1959:1015).

Pediatricians also emphasized the unique relationship that they shared with the families of their young patients after years of close association and care-giving. Parents were accustomed to seeking and following the advice of pediatricians. They would be able to speak more comfortably and openly to pediatricians than they would to other experts. "There is something special," wrote Barbara Korsch (1960:54), "about having the pediatrician counseling parents and handling minor behavioral disturbances in the child because of the relation he has to the family. This relates to what the family expects of him. They go to him for advice, do not feel there is a stigma in presenting problems to him, and already have accepted him as an authority."

For their part, the other groups did not perceive the new pediatrics as a threat. On the contrary, they welcomed the pediatrician's interest in behavioral problems. Child psychiatrists were particularly supportive. As they saw it, child psychiatrists were interested in serious cases of mental illness and maladjustment; pediatricians would be dealing with minor behavioral problems. Moreover, child psychiatry, as a subspecialty, was still in a nascent stage and concerned with establishing that children could indeed suffer

from psychic disturbances. The interest of a well-established specialty like pediatrics, supported their case. There were more direct benefits as well. Child psychiatrists expected the new pediatrics to generate new opportunities for them in both teaching and practice. They expected that they would play a major role in educating pediatric students to practice the new pediatrics. They also assumed that pediatricians would act as children's portal of entry into the mental health delivery system, referring those who needed specialized care to child psychiatrists.

Experimental Programs:

A clearer picture of the new pediatrics can be gleaned from the descriptions of experimental programs that several forward-looking pediatric departments introduced during the 1950s and 1960s (Deisher, 1953a; 1953b; 1955; Green and Senn, 1958; Rose and Ross, 1960; Rogers, 1960). These programs served as "showcases," demonstrating the kind of training that pediatricians would need to play their new role. There were two departments that were particularly active in this area.

The University of Washington School of Medicine in Seattle, Washington, offered its residents a three-month rotation in a non-hospital setting, the University's Child Health Center. The Center, staffed by a variety of professionals including a public health nurse, a nutritionist and a social worker, provided care for healthy children and had connections with many community agencies dealing with children (Deisher, 1955).

The rotation began with a four week orientation period which stressed the role of the pediatrician in the growth and development of normal children. The orientation covered the evaluation of physical growth as well as anticipatory guidance and discussion of behavioral functioning with the child's mother. The well-child interview, the students learned, was critical as far as determining where the trouble spots were. Deisher (1955:542), the program's director, noted that "these patients [those coming in for a check-up] do not come with either chief complaint or present illness. It is pointed out that by making systematic inquiries into important areas such as eating, sleeping, elimination and general development and activity, the physician helps mothers to bring up questions which they might not ask spontaneously."

Through the orientation period their supervisors also encouraged residents to refer and discuss as many problems as possible with other staff members so that they could learn, for example, how a public health nurse deals with a new mother's anxiety about the care and handling of their infants, how a nutritionist deals with a mother who cannot get her child to eat properly or drink milk, and how a social worker handles a mother who cannot control her child. The residents would not always have these resources once in private practice, Deisher explained, but the experience and knowledge they gained in training, would allow them to assume more responsibility for this type of work themselves.

Following the orientation period, residents participated in the regular program of the Center, and followed certain cases through the duration of their training. They also attended seminars given by pediatricians, psychiatrists, nutritionists, social workers and

dentists, visited a nearby nursery and public school and various child-related community agencies such as juvenile court, an adoption agency, the child welfare department, the Crippled Children's Program, a child guidance clinic and a family service agency.

The Department of Pediatrics at Yale University, in conjunction with the Grace-New Haven Community Hospital, tried to integrate the new pediatrics into various levels of training (Green and Senn, 1958; Senn, 1956; Solnit and Senn, 1954). The Hospital's supervisory staff included a child psychiatrist and a social worker who were responsible for sensitizing trainees to the psychosocial aspects of both inpatient and outpatient care. They often accompanied students on their ward rounds within the hospital and participated in the supervision of students in the hospital's general pediatric outpatient clinic, emphasizing that psychosocial factors were an integral part of every case, not only those where there was no possibility of organic disease.

In 1953, pediatric residents began undergoing training in the longitudinal supervision of children (Green and Stark, 1957). At the beginning of their training, the staff social worker assigned each resident to one family. The students provided complete pediatric care for the family. The Yale program taught residents that the pediatrician's responsibility began not after, but prior to the birth of a child. Most of the "families" that the residents supervised were, in fact, first-time prospective parents. The residents conducted at least one prenatal interview with the parents to answer questions, allay fears and establish rapport. They visited the mother while she was in the hospital and were present at the delivery of the child. They visited

the family at home to "gain an appreciation of a mother's feelings and problems at the time" (Green and Stark, 1957:500). Thereafter, they saw mother and child once a month at the hospital's outpatient clinic.

Like the program at the University of Washington, Yale's program stressed the significance of the well-child interview as a "potent diagnostic and therapeutic tool" (Green and Stark, 1957:502). The interview focused on the management of different situations including breast feeding, weaning, sleep problems, toilet training, preparations for the birth of a sibling, problems of separation, negativistic behavior, discipline, the working mother, the parent who obtains no pleasure from parenthood, the dependent parent and the aggressive parent.

After each visit, the trainees had an opportunity to discuss cases with their pediatric supervisors and teachers in the University's Child Study Center, representing the fields of nursery education, social work, psychiatry, psychology and sociology. The representative of each discipline assessed what was happening in the families with particular reference to how these experiences influenced the health and behavior of the child (Senn, 1956:618-619).

Academic Intransigence

Though the experimental programs were touted by those who believed that the future of the specialty lay in practicing a more comprehensive pediatrics, they did not set a trend. Most pediatric departments continued to focus on rare and complex diseases and provided

little preparation for the new pediatrics. As the specialty debated the dissatisfied pediatrician syndrome and the new pediatrics as a solution to the problem, educators came under fire. Critics charged that they had not been sufficiently sensitive to the ways that children's needs and pediatric practice had been changing. "While a major revolution has taken place in community and child health needs during the past couple of decades," wrote Samuel Levine (1960:653), "our pediatric educators would appear to be still plugging along in the pattern of the late 1920s, or at the best, the early 1930s." As Levine saw it, the challenge of the dissatisfied pediatrician crisis was, first, to admit that the emphasis in pediatrics had shifted from curative to restorative pediatrics, and then to translate that admission to students in the form of radically updated training programs.

J. Philip Ambuel (1959:1008), the director of a hospital outpatient clinic in Columbus, Ohio, claimed that pediatric training programs "were no more designed to prepare the physician for pediatric practice than a life of ease would prepare a man for duty on the frontline trenches." Ambuel recounted the story of a graduate of an "excellent" training centre who had returned to complain to his professor that "while he had been trained to race at the Hialeah race track, he was now out pulling the chuck wagon like any old dray horse" (1959:1009-1010). Ambuel argued that the student had missed completely the point of pediatric practice. He blamed the student's instructors for this distorted attitude. They were not preparing pediatricians for the primary care practices that most would find themselves in; they were

preparing second-rate subspecialists doomed for a career of boredom and frustration.

Milton Senn (1956:614), who developed the comprehensive program at the Yale University School of Medicine, was also critical of his academic colleagues. They were scientists of the highest rank and superb clinicians in hospitals and laboratories, he wrote. But they were unrealistic and out of touch with "life outside the ivory tower." There needed to be a closer association between the problems that primary care pediatricians could expect to encounter and the training they received. Pediatric academics needed to learn how to train pediatricians "not in their own image" (Brent and Morse, 1969:805).

Though the criticisms often construed academic intransigence as benign insensitivity to the new realities of pediatric practice, there was much more at its root than mere insensitivity. The academic community rejected the new vision of pediatrics. They felt that the new pediatrics took the specialty too far away from the traditional medical mission - to treat and prevent physical diseases - and that the image and stature of pediatrics as an academic specialty would suffer as a result. They sympathized with the problems of practicing pediatricians but were not willing to sacrifice their own interests to give practitioners a new lease on life. Pediatrics was already having trouble attracting high caliber students to its programs. The new pediatrics would only aggravate the problem. Robert E. Cook, the director of the Pediatrics Department at the Johns Hopkins University School of Medicine, argued that to try to solve the problem of dissatisfied pediatricians by teaching the new pediatrics would only

produce dissatisfied students. "To substitute, in the limited hours we have, much more of the behavioral approach, he maintained (in Korsch, 1960:52), "would mean . . . loss of interest for pediatrics by those students for whom it has some appeal."

Evidence suggested that Cook was right. Those programs that tried to teach a comprehensive and behaviorally oriented pediatrics found that students resented spending time on anything other than experiences they regarded as directly relevant to the treatment and prevention of disease. Students in a comprehensive care program at the University of Colorado felt cheated with respect to medical knowledge, compared with students in traditional pediatric programs: "They thought they weren't seeing enough sick patients and were seeing far too many patients who really didn't have anything wrong with them, from whom they weren't learning anything" (Hammond, in Spitz, 1960:27).

For many of the residents who went through the experimental program in the new pediatrics at Yale University, according to Green and Senn (1958:490), "the prototype of the pediatrician in their mind is one who is concerned with physical disease alone." The residents applied a double standard to organic and non-organic aspects of a medical problem. They were extremely concerned about overlooking organic pathology, but less concerned about missing important psychosocial factors. Many did not believe that knowledge about the psychosocial aspects of pediatrics would be important in their practice or research careers. Green and Senn (1958) felt that this attitude was a "major deterrent" to the full integration of the new pediatrics into their program.

Charles D. May (1960), a professor at the Columbia University College of Physicians and Surgeons, expressed the concerns of the academic community clearly. May insisted that pediatricians had no business embracing the emotional and behavioral problems of children. They were transgressing the bounds of their legal license, as well as their technical competence. According to May, pediatricians had a unique contribution to make to the welfare of children not as counselors, but as doctors. In the area of behavioral development, they had little to offer except their love of children. But a sound specialty, he continued (1960:662), "cannot be based on the sentimental appeal of a fondness of children." He warned:

. . . the pediatrician, as a member of the medical profession, must not allow his ambition to outstrip his abilities, lest he take on greater responsibilities than he can manage or find to his liking. . . . The unique role of most pediatricians for the foreseeable future will be as physicians, rather than as psychologists or general counselors. They should not delude themselves by supposing they can become a priestly class of counselors on all things. Let those who would choose to be primarily counselors set themselves apart, or enter the ranks of other professions. Unless limits are set, the primary task of physical care will be diluted and dislocated beyond recognition and the pediatrician may no longer be considered a physician. (May, 1960:662-663).

May advised pediatricians to put the needs of the specialty ahead of those of practicing pediatricians. "The problem facing pediatrics," he suggested (1960:662), was to "do something to elevate the status and appeal of the practice of pediatrics to that of a genuine and

significant specialty and to make certain that the prestige and validity of academic pediatrics are unquestioned, *regardless of how the domestic care of children may be accomplished*" (emphasis added).

May recommended that the profession sharply curtail the number of residencies available for specialty training in pediatrics so that "no more pediatricians are produced than can find place as genuine specialists" (May, 1960:666). By "genuine specialists," he presumably meant consulting specialists. He also suggested that pediatricians set limits on their already meager research efforts in the area of children's behavioral problems. Otherwise, he predicted, contributions from the field of pediatrics "will be characterized by superficiality and receive less serious respect from investigators in other branches of medical science" (May, 1960:669).

L. Emmett Holt Jr. expressed similar views the following year in his presidential address to the APS. He described eloquently and sympathetically the plight of the practicing pediatrician: "They were intrigued by medicine; they wanted to be doctors; they wanted to treat sick children, and they were trained to do just that. Now they find that the sick child is the exceptional one they are asked to see" (Holt, 1961:675). But he had serious reservations about the new pediatrics as a response to the problem. The "wonder drug" that Holt recommended for pediatricians' woes was foreign service. American pediatricians, he argued, were "painting lilies," "struggling with refinements," and becoming "more and more engrossed in minutiae," while children overseas were dying of smallpox and starvation. The solution, as Holt saw it,

was obvious: "We must take our tools abroad and apply them to our neighbour's problems" (Holt, 1961:676).

Deficiencies in Training

These attitudes were sufficiently prevalent to block significant education reform in pediatrics through the 1950s and 1960s. Survey after survey showed that pediatricians did not feel adequately trained to deal with problems that were not physical. In 1954, 55 percent of all members of the Texas Pediatric Society stated that they would have been better practitioners had they received further training in the "psychiatric" aspects of child behavior and in areas such as the management of parents, how to live together, the exceptional child, community responsibilities in child care and adoption (Hansen, 1954:82). Haggerty and Janeway (1960) asked 152 pediatricians who had gone through the program at Boston's Children's Medical Centre between 1948 and 1960, how their training might have been improved. Thirty-six percent of the pediatricians responded that they would have liked more emphasis on understanding and managing common pediatric problems, preventive, outpatient and ambulatory care. Twenty-seven percent said there should have been more emphasis on the behavioral aspects of practice, including psychiatry and social pediatrics. The study's authors concluded: "it is evident that many believe that being of "good will" and having an interest in these areas of preventive pediatrics is not enough to enable a physician to do a good job and that careful training under guidance is

just as important here as in any other field of medicine" (Haggerty and Janeway, 1960:860).

In the national sample of 1,227 pediatricians that Aldrich and Spitz (1960:71) surveyed in 1960, 42 percent indicated that they would have liked to have received further training in behavioral problems.

Pfundt (1961) found that among pediatricians who had completed their pediatric residencies in six southern universities between 1950 and 1957, community, service and child guidance were among the lowest rated of all training areas. Among the areas respondents felt needed additional stress were behavioral training, adolescent medicine and counseling experience.

North (1965) surveyed 162 former pediatric house officers at Strong Memorial Hospital, which was affiliated with the Department of Pediatrics at the University of Rochester. The respondents identified the following as major weaknesses and areas of deficiency in the program: inadequate teaching in the outpatient clinic (21 percent), behavioral problems (17 percent), everyday problems (12 percent), well-child and developmental testing (10 percent), family and community influences (9 percent) and continuity of patient care (8 percent). Asked how the program might be improved, 45 percent recommended more training in outpatient specialty clinics, particularly those that dealt with psychological problems, 45 percent suggested a greater emphasis on general outpatient pediatrics and 30 percent mentioned more time in the well-child clinic. Only 20 percent felt greater stress should be put on inpatient pediatrics.

Even more disturbing, from the point of view of those who favored the new pediatrics, was evidence indicating that pediatricians were overlooking developmental and behavioral problems in their practices. A study at the Department of Pediatrics at Cornell University Medical College showed that because of their lack of specific training, pediatricians were poor at assessing the developmental status of their patients. Moreover, experience in primary care practices made no difference in performance. In other words, these were not skills that pediatricians seemed able to acquire on their own through practice (Korsch, 1960:51).

Another study (Starfield and Borkowf, 1969) showed that pediatricians were more sensitive to parental complaints about their children's physical problems than their behavioral problems. The mothers of 155 out of 333 children screened at the Pediatric Medical Care Clinic of the Johns Hopkins University, spontaneously reported being worried about some aspect of their child's health: 115 had physical complaints; 48 had behavioral complaints. Pediatricians picked up on 78 percent of the physical complaints, but only 42 percent of the behavioral complaints. The study's authors attributed the discrepancy to several factors: pediatricians' reticence to define the problems as "medical," their feelings of inadequacy when it came to handling such problems, the unrewarding nature of working with behavioral problems when they were accustomed to rapid results with specific therapies, and the time involved. They intimated that the blame rested on the shoulders of pediatric educators. "It behooves the clinician and teacher," they wrote (1969:171), "to encourage students at all levels to

sharpen their awareness of patients' needs, even if they cannot solve all the problems at the present time." If pediatricians were not willing to treat behavioral problems, an "alternative type of service to deal with them will have to be made available." The problems were too serious to ignore.

Yet the academics remained steadfast in their opposition. As a result, practicing pediatricians found themselves in the curious position of being exhorted by the specialty's leadership to explore new and ostensibly rewarding areas of care, but lacking the skills and training to do so.

Summary and Discussion

The dissatisfied pediatrician syndrome and the shift to the new pediatrics provide yet another example of professional transformation. There are both parallels and differences between pediatrics' earlier shift to prevention and its shift to the new pediatrics. In both cases, the specialty faced an uncertain future and sought to revitalize itself by redefining its professional mandate. In both cases, that redefinition meant a broader scope of practice.

However, the conditions that gave rise to these transformations were different in important ways. In the case of prevention, it was the loss of their original mission that forced pediatricians to look for new professional tasks. In the case of the new pediatrics, it was prevention, as a revitalization formula, that created the difficulties. This demonstrates that professional revitalization formulas are not

always successful, and that they can generate as many problems for a specialty as they solve. Prevention allowed pediatrics to grow after 1920, but by 1950 threatened to undermine its existence as a primary care specialty.

Why did prevention become a such a problem? Its external legitimacy was certainly not an issue. The public accepted the need for professional supervision of their children's normal growth and development. With the elimination of the well-child clinic system and the steady decline of general practitioners, pediatricians faced little competition in this area. In any case, the public preferred these preventive services from pediatricians. Moreover, the size of the child population was growing rapidly as a result of the baby boom.

Unfortunately, prevention lacked legitimacy for those who mattered most - the primary care pediatricians who were supposed to be delivering it. Primary care pediatricians were willing to do some prevention. But they did not feel that in doing prevention, or even in treating children's minor illnesses, they were truly practicing their specialty. They saw prevention and well-child care only as a way to subsidize the "real" work of the specialty, which in their minds, continued to be the treatment of serious diseases. As their letters indicated, once prevention came to predominate their practices, they experienced their work as boring and "ploughed out" (Bucher, 1980:28). From their point of view, pediatrics had exhausted its mission. Most children were safe from the perils of disease. Those who were seriously sick had hospital-based subspecialists to treat them. Prevention did not justify the continued existence of primary care pediatricians.

Primary care pediatrics had become, as Wineberg (1959:1008) put it: "a specialty that does not exist."

A successful revitalization formula then, requires more than external legitimacy, the acceptance of the profession's client groups and institutional arrangements that make the transition possible. Those within the profession must accept the formula as a valid redefinition of their professional task. They need to feel that the work they are doing is useful, worthwhile and appropriate for them. Revitalization formulas are often forged by those within a specialty who have climbed to positions of leadership and whose careers are, for the most part, behind them. They are less likely to be affected by the decisions they make than those who are just beginning their professional lives and those yet to enter the specialty's ranks. The case of pediatrics shows how important it is to anticipate how the actual work of the specialty will change and to consider whether future generations will be prepared to play these roles.

These considerations may take on special significance when the specialty's new mission involves prevention. Prevention has traditionally been a low-ranking area of medical practice. Doctors prefer the drama of disease over the routine of preventive medicine. When pediatricians began to express their ennui, they complained not about the value of preventive work, but about its lack of excitement and challenge, and about "being low man on the totem pole" (Tabrah, 1957:745). The work needed to be done; but they did not want to do it.

There are several specialties today that are responding to professional crises of their own by turning to prevention. As a result

of water fluoridation, improved dental hygiene and the decline of dental cares, dentists are doing much more preventive and reconstructive dentistry. More recently, gynecologists have become concerned about the encroachment of surgery and pediatrics into their traditional areas of practice. Among the options they are considering, is the possibility of becoming a primary care specialty catering to the complete health needs of women. If they follow this course, a large component of their work will be preventive. Neither dentistry, nor gynecology has ever enjoyed much status in medical circles. Dentistry has always had to contend with its image as the second choice of those who have failed to attain entry into medical school (Sherlock and Morris, 1971). Gynecologists have suffered the stigma attached to their work with the reproductive system. Perhaps their marginality will make the transition to prevention more tolerable for these specialties. On the other hand, they may develop problems analogous to the dissatisfied pediatrician syndrome.

The new pediatrics, the revitalization formula that pediatricians hoped would resolve the dissatisfied pediatrician syndrome, also had problems of internal legitimacy. This time, it was the specialty's academic elite that resisted the transformation. No revitalization formula can succeed without corresponding adjustments in professional training programs. If a profession asks its recruits to perform certain functions, it has to equip them properly. This involves more than simply passing on specific skills and bodies of knowledge. As Everett Hughes (1961:341) has pointed out, it is the responsibility of educators to socialize recruits into the culture of the profession, to

dispel the idealistic impressions that they bring to their training and to expose them to the realities of professional work. Indeed, in preparing students, Hughes maintained, educators have to look forward and have some vision of where the specialty is going. "One of the functions of people engaged in professional education," he wrote (1961:342), "is to be a long way ahead of students."

But this assumes that educators merely respond to the needs and demands of the larger profession. It ignores the fact that they have may have their own needs and opinions about how things should be done. Pediatric educators could see where primary care pediatrics was going. However, they did not share the vision of the "new pediatricians" and refused to incorporate their concerns into pediatric training programs. They did not feel that behavioral and social problems qualified as medical concerns. Moreover, they were convinced that by overstepping the bounds of medicine and moving into less "scientific" areas of practice, the new pediatrics would damage the image of the specialty as a whole. They were concerned about its effect on their own status vis-a-vis other specialties. They were also concerned that it would hamper their ability to attract and meet the expectations of bright, high caliber, scientifically oriented students. In other words, the new pediatrics threatened their separate interests. They had no objection, in principle, to primary care pediatricians seeking new fields of endeavour. But they refused to support changes that undermined their position in medical academia.

The difficulties that pediatricians encountered in implementing the new pediatrics suggests that the fate of a revitalization formula

will depend, to a large extent, on how it affects other segments within the specialty, particularly those that are in a position to facilitate or hinder the transition. If other segments are not seriously implicated in the proposed changes, or if they see the changes as consistent with their interests, they are not likely to resist and may actively support the changes. If, on the other hand, the changes run counter to their interests, they may attempt to block them. The more power the opposing segments wield within the profession, the more likely they are to succeed.

CHAPTER 6

THE SUPPLY CRISIS

While pediatricians debated the the dissatisfied pediatrician syndrome through the 1960s, another threat loomed. The birth rate began to fall. At the same time, the number of pediatricians was climbing and new groups were emerging to meet the health care needs of children. These developments added a new dimension to the specialty's problem. The question was no longer simply whether pediatricians were going to be able to find satisfaction in the work that they were doing, but whether they could survive as a primary care specialty in an increasingly competitive child health care market. This competition pushed the specialty even further in the direction of the new pediatrics, a process I explore in the next chapter.

In this chapter I focus on the trends themselves and their impact on pediatrics. I begin by considering the declines in the birth rate. Then I turn to the huge increase in the supply of child health care providers, paying special attention to the evolution of pediatric nurse practitioners (PNPs) and family practitioners. I also describe how pediatricians responded to the possibility of being squeezed out of primary health care. In particular, the conflict between pediatricians and family practitioners provides a good opportunity to examine the strategies that professional segments use in competing within overlapping areas of expertise. The chapter concludes with a discussion that elaborates further on the conditions that give rise to professional crises.

Declining Birth Rates

Much of the overwork that pediatricians complained about through the 1950s and 1960s, resulted from the surge in the number of births after World War II - the baby boom. After 1957, however, the boom leveled off, and both the birth rate, which represents the number of births per thousand population, and the actual number of live births began to decline (see Table 5-1). The birth rate fell six percent from 25.3 per 1000 population in 1957 to 23.7 in 1960, another 22 percent to 18.4 percent in 1970, and a further 14 percent to 15.9 in 1980. The number of live births fell from 4,308 in 1957, to 4,258 in 1960, 3,731 in 1970 and 3,612 in 1980.

Several inter-related trends contributed to the declines: the role of women was changing as a result of the women's liberation movement; social mores about reproduction and ideal family size were being reassessed; there was a growing concern about world population growth; and in 1970 the Supreme Court legalized abortion. But the most significant factor was the shift towards more effective means of contraception, especially the pill.

Though the idea of an anovulant agent had been around since the 1930s, it was not until the late 1950s that the pill was developed. The Federal Drug Administration approved it for sale in 1960 (Reed, 1978:365). It rapidly became the most popular method of contraception, despite the debate about possible side effects. A national fertility study showed that by 1970, the pill accounted for 34 percent of all contraceptive practices. The next most common method was sterilization

at 16 percent. The pill was especially popular among women under 35 years of age. In 1970, 49 percent of women in this age group who practiced contraception used the pill, compared with 21 percent of women over 35 years of age (Westoff and Ryder, 1977:21).

However, the pill was not the only contraceptive method to rise in popularity. The use of sterilization and interuterine devices (IUDs) also increased. In 1965, these three methods combined, accounted for 37 percent of all contraceptive practices; by 1970, they accounted for 58 percent. Demographers have referred to the 1960s as the "era of the contraceptive revolution" (Westoff and Ryder, 1977:29).

The decline in unwanted fertility and reduced birth rate reflected themselves first in the absolute number of children below five years of age, which dropped from 20.3 million in 1960 to 17.2 million in 1970, and then in subsequent age categories. The total number of children under 20 years of age rose until 1970, because it continued to include the baby boom cohort. In 1960, there were 69 million individuals under 20 years of age; in 1965, there were 76.7 million and in 1970, 77.1 million. In 1975, however, the figure dropped to 74.4 million and in 1980 to 72.5 million (see Table 6-1 for the actual and projected total number of children, and breakdowns by age). The market for pediatric services was clearly shrinking.

The declines in the birth rate were greatest in precisely those groups that were at the highest risk for premature and low birth weight babies, conditions associated with illnesses during childhood. These groups included women with several children, older women and unwed mothers. The percentage of births to women with five or more children

TABLE 6-1
NUMBER OF CHILDREN AND ADOLESCENTS BY AGE AND YEAR

Year	Age Ranges				Total
	0-4	5-9	10-14	15-19	
1960	20.3	18.7	16.8	13.2	69.0
1965	20.2	20.5	18.9	17.1	76.7
1970	17.2	20.0	20.8	19.1	77.1
1975	16.2	17.4	20.0	20.8	74.4
1980	16.5	16.6	18.2	21.2	72.5
1985	18.5	16.6	16.8	18.4	70.3
1990*	19.2	18.6	16.8	17.0	71.6
1995*	18.6	19.3	18.8	17.0	73.7
2000*	17.6	18.8	19.5	18.9	74.8

* In millions
 * Projected

Source: AMA Council on Long Range Planning and Development, 1987:242;
 Gorwitz and Smith, 1975:595.

decreased 70 percent from 17 in 1960 to 5 in 1973. Conversely, the percentage of first-order babies increased 58 percent from 26 in 1960 to 41 in 1973 (see Table 6-2). In the same years, the number of births to women 30 years of age and over decreased 55 percent from 1.14 million to 518,855 (see Table 6-2). The legalization of abortion accounted for much of the reductions in both the number and percentage of births to unwed mothers. Between 1970, the years the legislation came into effect, and 1971, the number of legal abortion in the United States jumped from 200,000 to 500,000. Three fifths of all those who received abortions were under 25 years of age and two thirds were unmarried (Sklar and Berkov, 1974:909).

Predictably, the mortality rate in all childhood age groups fell after 1950. The infant mortality rate declined from 29.2 in 1950, to 26.0 in 1960, 20 in 1970 and 12.6 in 1980, a 57 percent drop over thirty years. There was a 57 percent drop in mortality among children between one and four years of age, from 1.4 in 1960 to .6 in 1980. For children between five and 14 years of age, there was a 50 percent drop from .6 in 1950 to .3 in 1980 (see Table 4-1).

TABLE 6-2
SELECTED DATA ON LIVE BIRTHS: 1960-1973

	1960	1973	Percentage Change
Total	4,257,850	3,144,198	- 26.2
By Birth Order			
1	1,090,152	1,319,126	+ 21.0
2	1,022,356	985,726	- 3.9
3	797,402	441,404	- 44.7
4	511,308	183,925	- 64.0
5>	715,234	176,693	- 75.3
By Age of Mother			
Under 15	6,780	12,642	+ 46.4
15-19	586,966	582,238	- .8
20-24	1,426,912	1,093,676	- 23.4
25-29	1,092,816	936,786	- 14.3
30-34	687,722	375,500	- 45.4
35-39	359,908	115,409	- 67.9
40-44	91,564	26,319	- 71.3
45-49	5,042	1,628	- 67.7
50>	140	--	- 100.0

Source: U.S. National Center for Health Statistics, 1960:2-10, 2-22;
 1978: 1-70, 1-73, 1-226.

More Child Health Care Providers

While the number of children declined, the number of health care providers for children increased dramatically. The increase was part of a large expansion in medical personnel in the United States through the 1960s and 1970s. During the 1960s, there was widespread concern throughout the country about the inadequacies of the health care system. Biomedical researchers were making great strides in their understanding of how to treat and prevent diseases. Yet there were many groups that were not benefitting from this knowledge. In particular, the disadvantaged, the poor, the minorities, and those living in rural areas, were grossly under-serviced. Health care analysts and policy makers saw the issue largely as a manpower problem. There were too few doctors, especially at the primary care level, to deliver medical services.

The response was a massive government-sponsored effort to improve access to health care, most of it directed at increasing the supply of primary care providers. Federal expenditure in health manpower programs grew astronomically from \$65 million in 1963 to \$536 million in 1973, and \$1.7 billion in 1977 (Journal of the AMA, 1980). The number of medical schools increased from 86 in 1960 to 126 in 1980 (see Table 6-3). Established medical schools expanded and increased their capacity, particularly through the 1970s. The total enrollment in medical schools more than doubled between 1960 and 1980, from 30,288 to 64,195; so too did the number of graduates, from 6,994 in 1960 to 15,135

TABLE 6-3
EXPANSION OF MEDICAL EDUCATION:
NUMBER OF MEDICAL SCHOOLS, STUDENTS AND GRADUATES

Year	Number of Schools	Total Enrollment	Graduates
1950-1951	79	26186	6135
1955-1956	82	28639	6845
1956-1957	85	29130	6796
1957-1958	85	29473	6861
1958-1959	85	29614	6860
1959-1960	85	30084	7081
1960-1961	86	30288	6994
1961-1962	87	31078	7168
1962-1963	87	31491	7264
1963-1964	87	32001	7336
1964-1965	88	32428	7409
1965-1966	88	32835	7574
1966-1967	89	33423	7743
1967-1968	94	34538	7973
1968-1969	99	35833	8059
1969-1970	101	37669	8367
1970-1971	103	40487	8974
1971-1972	108	43650	9551
1972-1973	112	47546	10391
1973-1974	114	50886	11613
1974-1975	114	54074	12714
1975-1976	114	56244	13561
1976-1977	116	58266	13607
1977-1978	122	60456	14393
1978-1979	125	62754	14966
1979-1980	126	64195	15135
1980-1981	126	65497	15667
1981-1982	126	66485	15985
1982-1983	127	66886	15824
1983-1984	127	67443	16327
1984-1985	127	67090	16347

Source: Journal of the AMA, 1980:2813; 1985:1568.

TABLE 6-4
TOTAL NUMBER OF DOCTORS (IN THOUSANDS)

Year	Total Number Doctors	Year	Total Number Doctors
1950	203.4	1970	334.0
1951	205.5	1971	335.8
1952	207.9	1972	344.8
1953	210.9	1973	371.4
1954	214.2	1974	379.7
1955	218.1	1975	393.7
1956		1976	409.4
1957	226.6	1977	421.3
1958		1978	437.5
1959	236.8	1979	454.6
1960	274.8	1980	467.7
1961		1981	485.1
1962	270.1	1982	502.0
1963	289.1	1983	519.5
1964	297.1		
1965	305.1		
1966	313.6		
1967	322.0		
1968	330.7		
1969	338.9		

Source: U.S. Bureau of the Census, 1975; Statistical Abstracts
1970-1983.

in 1980. The number of doctors rose from approximately 274,800 in 1960 to 467,700 in 1980 (see Table 6-4).

Pediatrics, as a primary care specialty, profited greatly from the increased funding that became available. The number of pediatricians increased from 14,273 in 1964 to 23,959 in 1977 (AAP, 1980:20; Gorwitz and Smith, 1975:20). But so too did other groups, particularly paramedical workers. One of the strategies that the government adopted to ameliorate the shortage was the establishment of training programs for hundreds of new types of allied health care workers, or as the medical profession "medicocentrically" (Lewis, 1982:251) refers to them, "physician extenders." The idea behind the programs was to increase the productivity and efficiency of doctors by training other groups to do much of the work that did not require the doctor's skill.

In pediatrics, there were several categories of such workers, including pediatric aides, pediatric assistants and child health associates (CHAs). Pediatric aides were typically high school graduates with on-the-job training that allowed them to carry out routine, non-skilled tasks, perform clerical duties and assist pediatricians. Pediatric assistants completed a special two-year college program that emphasized technical skills. But in the performance of their duties they did not assume responsibility for their decisions. CHAs received more extensive training. Their programs required two years of general undergraduate training as a prerequisite, and consisted of three years of special college training, including one internship year. CHAs could take a direct role in patient care and could make independent decisions,

but only under the supervision of a doctor (Ott, 1975:42-45). However, the largest single allied health care group in pediatrics was the PNP.

Pediatric Nurse Practitioners

The "dissatisfied pediatrician syndrome" of the 1950s and 1960s coincided with a growing desire among nurses to redefine their traditional role and broaden their scope of practice to include medical as well as nursing services. Nurses felt that, particularly at a time when the need for primary health care services was so great, they could perform many of the routine tasks normally reserved for doctors.

Under different circumstances, pediatricians might have perceived an expansion of the nurse's role as an encroachment into their territory. But at the time, they were eager to unburden themselves of many of the day-to-day functions they found so monotonous and boring. They saw the PNP as a potential solution to their problem. Their mutual interests aligned in this way, pediatricians and nurses came together to establish the first nurse practitioner programs in the country.

In 1964, Henry Silver, a pediatrician, and Loretta Ford, a nurse, organized a four-month pediatric nurse practitioner (PNP) program at the University of Colorado.¹ The program provided registered nurses with intensive training in pediatric theory and practice. They were taught how to complete a pediatric history, perform a comprehensive basic physical examination, carry out immunizations, determine the developmental status of the child, evaluate hearing, speech and vision, perform certain basic tests, evaluate and manage the common problems of healthy children and minor illnesses, counsel parents, assist in the

management of emergencies, care for newborn infants, make home visits, and handle telephone calls (Silver, 1968).

With government support, the number of nurse practitioner programs in pediatrics and other areas of medicine such as adult care, obstetrics and gynecology, geriatrics and perinatal medicine, grew. By 1977, there were 200 such programs in the United States; 45 of these were in pediatrics; the number of PNPs reached 4000 (Breslau, 1982:389). PNPs worked either in pediatricians' offices or in medical clinics in low-income, urban and rural areas. Legally, they were required to work under the supervision of doctors. But in many clinics, particularly in ghettos or outlying areas, medical supervision meant only an occasional visit from a pediatrician. In effect then, some PNPs were practicing independently or semi-independently.

Some pediatricians had reservations about the PNP movement. William G. Crook, a practitioner in Jackson, Tennessee, commended the care that PNPs were providing to those in rural and ghetto areas with restricted access to proper medical care. "I can understand," he wrote (1969:934), "that a nurse practitioner working independently, . . . supervised only at a distance by a pediatrician is better for the people of such an area than having no health worker at all." But the practice set a dangerous precedent, he argued. What rationale would there be for increasing or even maintaining the current number of pediatricians if PNPs, in a relatively short period of time and at greatly reduced cost, could receive the training necessary to provide basic child health care:

I fear that with our pediatric manpower shortage being what it is, and the cost of providing health manpower so great, the federal government and others might seize on the nurse practitioner program as the way to get the job done at a low cost. . . . As a practicing pediatrician, perhaps like all human beings I am threatened by change. Perhaps I am needlessly threatened; nevertheless, I believe that if training programs are set up for pediatric nurse assistants and other pediatric associates who will then enter upon independent or semi-independent practice, then trouble lies ahead. (1969:933-934).

Glen Austin, a practitioner in Los Altos, California, was disturbed by the implicit message in the PNP movement. "The pediatrician is being told, in essence," he wrote (in Crook, 1969:933), "that he is wasting 80 percent of his time on trivia that can be handled well by a nurse with a bit of pediatric training." Austin rejected the PNP concept completely. "Let us cease the patchwork PNP approach," he wrote (1975:620), "and instead improve pediatric residencies . . . American children deserve the best in quality care, not poorly conceived and hastily trained part-time substitutes."

However, a majority of pediatricians supported the training of PNPs. A survey of AAP members (Yankauer et al., 1970) found that 63 percent would be willing to hire a PNP. This figure, the authors pointed out, underestimated the actual degree of acceptance because there were probably many among the 34 percent who said they would not hire a PNP because they already had one on staff. Several factors contributed to the PNP's appeal:

First, numerous studies demonstrated just how effectively PNPs could function as child health care providers.² In an urban child

health clinic in Denver, Colorado, in which 54 percent of all visits were for well-child care and 46 percent for illnesses and injuries, PNPs were able to care for 82 percent of the children on their own, referring only 18 percent to a doctor (Silver, 1968:488).

In a Denver child health clinic, the physical examinations that PNPs conducted yielded assessments that were very close to those of pediatricians. In 240 out of 278 (86 percent) cases, there was complete agreement between PNPs and pediatricians in their assessment of the patient. In 39 (14 percent) cases, there was a difference, but in only two cases (0.7 percent) was the difference significant (Duncan et al., 1971).

In a Pittsburgh health centre situated in a low income housing project, the level of performance of PNPs in the area of infant health care supervision, as measured by the number of well-child visits, the health status of infants at one year of age, and comparison with children in an upper socioeconomic private pediatric practice, rated high (Chappell and Drogos, 1972). Moreover, PNPs were able to lower the failed appointment rate markedly, from 60 percent at the beginning of the study, to 20 percent.

At St. Louis University, PNPs achieved scores on written examinations comparable to those of pediatric residents and better than those of senior medical students (DeCastro et al., 1974).

One study (Stehbens and Lauer, 1972) showed that PNPs were just as competent in specialized, as opposed to general pediatric care. When the demand for pediatric cardiology consultations in Iowa exceeded the capacity of a state sponsored clinic to provide these services, the

clinic employed three PNPs. Assessments of their performance showed that their scores on written tests of factual knowledge were comparable to those of medical students. In cardiological examinations, the PNPs achieved a 93 percent agreement rate with pediatric cardiologists. They were better than the cardiologists at picking up other medical problems. Out of 307 cardiac examinations, the PNPs identified 69 cases of problems such as mental retardation, hearing impairment, congenital abnormalities, allergies and acute respiratory infections. The pediatric cardiologists recorded only 14 problems.

A second factor in the popularity of PNPs was public acceptance of the concept of an expanded role for pediatric nurses.³ Bucher (1980:26) points out that when the medical profession fosters the creation of an auxiliary or paramedical group to handle the more routine aspects of care, they need to pay special attention to how they present these groups to their clientele. After all, clients expect and have traditionally received these services from doctors. This explains why the literature of the sponsoring group often includes research into acceptance of the new group. In the case of PNPs, pediatricians did not have to worry about client resistance. Schiff et al. (1969) observed that in their suburban pediatric practice, mothers frequently began dressing their children and preparing to leave the office before the pediatrician even had the opportunity to confirm the PNP's assessment. They also observed an increase over time in the number of appointments that parents made directly with the PNP.

Lewis Day, a Denver pediatrician, quantified the level of patient satisfaction with his PNP, Rosemarie Egli. Ninety-four percent of his

- patients were happy with the services they received; 57 percent stated that the joint care provided by Day and Egli was better than the care they received from Day alone. Respondents' comments were also revealing:

I feel that the nurse practitioner is very beneficial to Dr. Day and to the community.

I feel Miss Egli is the greatest thing to happen to pediatrics. Nurse practitioners should surely become a trend in the future.

I believe this is a wonderful innovation. I wholeheartedly endorse this program and feel everyone would benefit by such excellent care. (Day et al., 1970:207).

Among the positive factors that patients stressed were the accessibility and approachability of PNPs and the advantages of dealing with more than one health care professional:

The main point I like is calling and getting questions answered that I normally wouldn't have bothered Dr. Day with.

I think that the two of them together make my visit shorter and much more informative than I have experienced with any other doctor.

When seeing two people it gives you a chance to think of all your questions that you would ordinarily forget and later wish you had remembered to ask.

As parents we receive more information than formerly.

I think the child gets a more thorough examination, and between the two of them they are less apt to miss something that might be wrong (Day et al., 1970:207).

In the Stehbens and Lauer (1972) study described earlier, PNPs scored higher than the pediatric cardiologists on all measures of patient satisfaction, including completeness of the examination, time spent with the patient, explanations provided, opportunity to ask questions and perceived competence.

Thirdly, PNPs were not only affordable, but profitable. Schiff et al. (1969) found that their PNP increased the number of patients seen in their group practice by 18.8 percent. She reduced the average amount of time that pediatricians had to spend with each patient from 14 to 4 minutes.

Yankauer et al. (1972) calculated the income generating potential of PNPs in more precise terms. On the basis of their study of 26 graduates of the PNP program of the Bunker Hill Health Centre at the Massachusetts General Hospital, they determined that the total cost of educating a PNP was \$3,197 per nurse; the average PNP saw 65 children per week; the average annual salary of PNPs was \$9,100 per year. Their net income generating potential over and above their salary averaged \$2,500 per nurse, per year. Fourteen of the 26 PNPs in the study were capable of generating \$3000 per year over and above their salaries (Yankauer et al., 1972:878).

Family Practitioners

Another group that benefitted from government support for primary care providers was the budding specialty of family practice. Family practice offers an interesting case within a case of professional transformation. Family practitioners can be described as a "transformed" version of the traditional general practitioner. General practice experienced a slow and steady decline over the first half of the twentieth century. There were several reasons for the decline: First, the more attractive the specialties became over the course of the twentieth century, both in terms of prestige and income, the less able general practice was to compete. Second, the composition of medical school admission committees worked against the selection of students committed to general practice. The committees were comprised of scientifically oriented specialists who were biased towards candidates who expressed an interest in specialty training and research. Third, medical school culture taught students to value the rare and interesting specialty problems over the more common clinical problems that might make a career in general practice appealing.

While the number of specialists increased, the number of general practitioners declined. In 1900, there was one general practitioner for every 600 people. By the late 1960s, there was one for every 3000 people. The ratio of general practitioners to specialists reversed itself from 80:20 in 1930 to approximately 20:80 in 1970 (Geyman, 1985:4). Many health care analysts predicted the eventual elimination of general practitioners everywhere except in isolated, outlying areas, and the commensurate growth of primary care specialties like pediatrics,

internal medicine and obstetrics/gynecology as the main source of health care.

In some ways, the dilemma of general practitioners resembled that of pediatricians. Both groups were concerned about their imminent decline and possible disappearance as a distinctive professional group. Both were eager to find some way to rejuvenate themselves. However, in one important respect their circumstances were different. Pediatricians saw their original mandate as being largely fulfilled and in response, set out to find a new mission. General practitioners on the other hand, remained convinced that there was still a place for the generalist in medicine. They sought not a new mission, but a way of re-asserting the value of their original mission. In Bucher's terms, the distinction represents the difference between a "decimated" and a "ploughed out" field.

While the approach that general practitioners espoused towards medical practice was strongly generalist, the strategy they adopted to advance these generalist interests involved seeking specialty status. On the face of it, the designation of general medicine as a specialty seems to be a contradiction in terms. However, general practitioners believed, given the allure of specialism, the structure of American medical education, and particularly the organization of medical schools according to specialty departments, that the only way to compete with other specialties for curriculum time, resources and recruits was to become specialists themselves.

In 1947, general practitioners created their own independent professional association modeled on the many specialty organizations

that had arisen since the turn of the century, the American Academy of General Practitioners (AAGP). The AAGP was in part, the product of the growing fear of annihilation, but more immediately a reaction to general practitioners' negative war-time experiences. During World War II, general practitioners had suffered the humiliation of receiving lower ranks and salaries, and fewer privileges than board-certified specialists. They were often sent to the front, while specialists received field hospital assignments (AAP, 1950:515; Stevens, 1971:277-280). They came out of the war protesting vociferously and determined, through the AAGP, to protect their interests.

Through the 1950s, the AAGP organized hospital residency programs in general medicine. But the idea did not work. The residencies were unpopular and attracted few students. There were neither financial, nor academic incentives to enroll. Those students that started the program often left after one year, a move that even the advocates of general medicine could understand. As one of them (Silver, 1963:188) put it: "no sensible student wants to spend three or four years becoming a general practitioner in order to work harder, earn less [than a specialist] and be banned from the hospital." Those who completed the residency were no further ahead than the general practitioners who started practicing right after their internships.

In the 1960s, the AAGP changed its tact. Capitalizing on the growing dissatisfaction with the fragmented nature of specialty care, and the concern about the lack of primary care doctors, the AAGP began promoting a new image of the generalist in medicine, the "family practitioner." Family practitioners shared with general practitioners

of old, all those qualities that people still valued in a doctor: the concern for the total individual, the accessibility and the personal touch. But according to advocates of the concept, they were not simply general practitioners with a new name. They had characteristics that distinguished them. In contrast to the traditional general practitioner and specialists who offered episodic, therapeutic care for the sick patient, the family practitioner offered coordinated, continuous, comprehensive care to all family members. The family, and not the individual patient, was the unit of care. And unlike general practitioners, who had the image of well-meaning, but antiquated anachronisms in the modern age of medicine, family practitioners would be trained to apply the latest advances to total family health. To reflect its new orientation, the AAGP changed its name in 1971, to the American Academy of Family Practice (AAFP).

Family practice received a major boost in 1966, with the release of three major national reports on health care and medical education. The first was the report of the National Commission on Community Health Services (the Folsom Report); the second was written by the Citizens' Commission on Graduate Medical Education (the Millis Report); the third was the report of the Ad Hoc Committee on Education for Family Practice of the Council on Medical Education (the Willard Report). All three reports clearly identified the need for better comprehensive care at the primary level and strongly recommended that medical schools make a greater effort to prepare doctors for this role.

The AMA responded by granting family practice specialty status. On February 8, 1969, the American Board of Family Practice (ABFP) became

the twentieth specialty board in existence (see Table 4-6). The ABFP was comprised of five representatives of the AAGP, five representatives of the AMA Section on General Practice and one representative from each of the following specialties: internal medicine, pediatrics, surgery, psychiatry/neurology and obstetrics/gynecology. Like other specialty boards, it did not have the power to restrict practice. But it could certify those who met the Board's requirements, including a three year family practice residency, and gave family practice official specialty status. In a gesture that could not more graphically illustrate Bucher's notion of professional transformation, the ABFP chose as its insignia the legendary phoenix that sets itself ablaze only to arise, rejuvenated, from its own ashes. The government responded to the Folsom, Millis and Willard reports by generously funding family practice programs. In 1971, Congress passed the Comprehensive Health Manpower Training Act, Section 767 of which specifically encouraged the development, expansion and upgrading of residency programs in family practice. Between 1971 and 1977 alone, the government provided over 33.5 million dollars for these programs. Family practice achieved remarkable success in a relatively short period of time. By 1978, 85 percent of all U.S. medical schools either had, or were in the process of developing, a department or division of family practice (see Table 6-5). Residency positions proliferated. In 1969, there were 15 programs in family practice. By 1977, the number had increased to 325. The number of residents increased from 0 in 1969 to 5421 in 1977. After 1976, the number of residents in family practice exceeded those in pediatrics (see Table 6-6).

TABLE 6-5
ORGANIZATIONAL UNITS FOR FAMILY PRACTICE IN MEDICAL SCHOOLS: 1978

Unit	Number
Departments	84
Divisions	13
Other Programs	4
Departments Under Development	9
Schools Without Activity	21
Total	131

Source: Geyman, 1978:595.

TABLE 6-6NUMBER OF FAMILY PRACTICE RESIDENCY PROGRAMS AND RESIDENTS

Year	Number of FP Residency Programs	Number of FP Residents	Number of Pediatric Residents
1969	15	0	
1970	45	290	2592
1971	62	532	2844
1972	117	1015	3238
1973	164	1771	4231
1974	205	2671	4784
1975	232	3720	4906
1976	278	4675	5028
1977	325	4966	4734
1978	343	6000	5331
1979	366	6352	5603
1980	380	6344	5171
1981	385	7004	5961
1982	388	7040	5720
1983	388	7236	6140
1984	386	7588	6091

Source: Geyman, 1973:595; Journal of the AMA, 1982:3271; 1984:1546, 1548; 1985:1587, 1589; 1986:1586.

The growth of family practice programs was accompanied by a steady improvement in their popularity. A survey of students at the State University of New York Upstate Medical Centre (Oates and Feldman, 1974) found a shift between 1967-1968 and 1972 in career interests from other specialties to family practice. The percentage of students expressing an interest in family practice rose from 4 percent in a series of 1967-1968 surveys, to 17 percent in 1972. Family practice, along with internal medicine, was the only specialty that gained in popularity. Other specialties, including pediatrics, declined during the same period (see Table 6-7).

At Jefferson Medical College in Philadelphia, the percentage of students interested in family practice as a specialty increased from 6.3 in 1971 to 7.1 in 1972, and 7.4 in 1973. It almost doubled to 14.7 in 1974 and rose again to 17.3 in 1975 (Herman and Veloski, 1977). No other specialty experienced an increase. Pediatrics declined from 9.2 percent in 1971 to 8.7 in 1975 (see Table 6-8).

Fishman and Zimet (1972) studied the perceptions of first-year medical students towards five medical specialties and found that family practice ranked the highest at 25 percent, followed by surgery (23 percent), internal medicine (20 percent), pediatrics (19 percent) and psychiatry (13 percent).

Another indicator of the popularity of family practice was the demand for residency positions. In 1978, 94 percent of the 2183 first-year residency positions in family practice were filled. Given the logistical problems of matching applicants with positions, anything over 90 percent usually qualifies as complete (Willard and Ruhe, 1978).

TABLE 6-7
SUNY MEDICAL STUDENT CAREER CHOICES IN TWO SURVEYS

Choice	1967-1968 [⌘]	1972	Change
None	33	30	- 3
Surgery	20	16	- 4
Internal Medicine	14	21	+ 7
Pediatrics	10	7	- 3
Psychiatry	6	2	- 4
Family Practice	4	17	+ 13
Radiology	4	1	- 3
Obstetrics/Gynecology	3	1	- 2
Other	6	4	- 2
Total	100	100	

* In percentages

⌘ This figure represents averages calculated for the 1967 and 1968 surveys.

Source: Oates and Feldman, 1974:563.

TABLE 6-8
DISTRIBUTION OF RESIDENCY PREFERENCES OF STUDENTS AT
JEFFERSON MEDICAL COLLEGE*

Residency Preference	Year of Graduation				
	1971	1972	1973	1974	1975
Family Medicine	6.3	7.1	7.4	14.7	17.3
Internal Medicine	30.4	31.1	32.8	32.7	29.3
Pediatrics	9.2	8.8	6.2	6.2	8.7
Surgery	21.3	19.4	19.8	19.2	12.0
Obstetrics/Gynecology	5.2	7.1	5.6	5.1	5.3
Psychiatry	6.9	0.6	8.6	6.8	2.4
Other	17.8	21.2	19.6	11.9	23.1
Undecided or None	2.9	4.7	0.0	3.4	1.9
Total	100	100	100	100	100

* In percentages

Source: Herman and Veloski, 1977:103

In fact, there were more students applying for the residency positions than the programs could accommodate. In the same year, medical schools reported that between 15 and 35 percent of their graduates were entering family practice (Geyman, 1978:596).

The caliber of students that family practice was able to attract improved. Through the 1950s and 1960s, students opting for general practice were not as capable as their colleagues. Schumacher (1964) compared the aptitude of interns in five groups: those intending to do 1) general medicine, 2) internal medicine, or 3) surgery, and those intending to combine part-time practice with academic careers in either 4) medicine, or 5) surgery. He measured aptitude in terms of the student's performance on the verbal and scientific parts of the standardized Medical College Admissions Test (MCATs). He found that those with career plans in general medicine were at the bottom of both scales; those aspiring to academic careers were at the top; those wanting to pursue full-time specialty careers were in the middle.

A decade later, Herman and Veloski (1977) found that the aptitude of students indicating a preference for family practice, as measured by their academic performance and their scores on the National Board Examinations, the exams that medical students take at the end of the undergraduate medical training, was comparable to that of all other students with the exception of those interested in internal medicine (see Table 6-9).

Finally, studies showed that once in practice, family practitioners, unlike their pediatric counterparts, were generally satisfied with their training and career choice. In a national survey

TABLE 6-9
RESIDENCY PREFERENCES AND ACADEMIC PERFORMANCE OF STUDENTS
AT JEFFERSON MEDICAL COLLEGE

Residency Preference	Mean Grade-Point Average By School Year			Mean National Board Scores		
				Part		
	First	Second	Third	I	II	III
Family Practice	83.1	81.3	83.3	513	530	521
Internal Medicine	84.8*	83.1*	84.7*	542*	560*	559*
Pediatrics	83.5	81.4	84.4*	519	541	513
Surgery	83.5	82.1	84.6	521	522	504
Obstetrics/Gynecology	82.1	80.5	83.5	472 ^α	495 ^α	451 ^α
Psychiatry	80.9 ^α	79.4 ^α	82.3 ^α	467 ^α	473 ^α	428 ^α
Other	83.8	82.4*	84.2*	519	537	500
Overall Mean	83.7	82.1	84.2	522	536	516

* Significantly greater than family practice
^α Significantly less than family practice

Source: Herman and Veloski, 1977:103.

of 876 residency-trained family practitioners, McCranie et al. (1982) found that 72 percent were very satisfied with the adequacy of their training; another 22 percent were moderately satisfied; only 6 percent expressed dissatisfaction. Sixty percent were very satisfied with their work in general; another 35 percent were moderately satisfied; 5 percent were dissatisfied.

From Shortage to Surplus

The rapid expansion in medical education through the 1960s and 1970s, resulted in a complete turnaround in the physician supply problem. By the mid 1970s, health care analysts were no longer talking about a shortage of doctors, but a surplus. In 1976, the Carnegie Commission on Policy, an influential advisory group, reversed the position it had taken in 1970, and warned of an upcoming oversupply. In the same year, the Department of Health, Education and Welfare established the Graduate Medical Education National Advisory Committee (GMENAC) to systematically study the health manpower situation. The Committee predicted, on the basis of current trends, an overall surplus of close to 70,000 doctors by 1990. A small number of specialties, child psychiatry, emergency medicine, preventive medicine and general psychiatry, would experience a shortage. The rest, including pediatrics and the pediatric subspecialties, were headed for a surplus.

GMENAC calculated a surplus of almost 5000 pediatricians (see Table 6-10). But this figure included both general pediatricians and pediatric subspecialists. The breakdown according to areas of

TABLE 6-10
PROJECTED REQUIREMENTS AND SUPPLY FOR SELECTED SPECIALTIES

Specialty	Supply	Requirements	Surplus (Shortage)
All Doctors	535750	466000	69750
General Psychiatry	30500	38500	(8000)
Child Psychiatry	4100	9000	(4900)
Emergency Medicine	9250	13500	(4250)
Preventive Medicine	5550	7300	(1750)
Anesthesiology	19450	21000	(1550)
Physical Medicine and Rehab.	2400	3200	(800)
Haematology/Oncology/	8300	9000	(700)
Dermatology	7350	6950	400
Gastroenterology	6900	6500	400
Otolaryngology	8500	8000	500
Thoracic Surgery	2900	2050	850
Infectious Diseases	3250	2250	1000
Allergy-Immunology	3050	2050	1000
Osteopathic General Practice	23850	22000	1150
Plastic Surgery	3900	2700	1200
Rheumatology	3000	1700	1300
Urology	9350	7700	1650
Endocrinology	3850	2050	1800
Nephrology	4850	2750	2100
Neurosurgery	8650	2650	2450
Family Practice	64400	61300	3100
Neurology	8650	5500	3150
Pulmonary Diseases	6950	3600	3350
Pathology	16850	13500	3350
General Internal Medicine	73800	70250	3550
Ophthalmology	16300	11600	4700
General Pediatrics and Subspecialties	41350	36400	4950
Orthopedic Surgery	20100	15100	5000
Cardiology	14900	7750	7150
Radiology	27800	18000	9800
Obstetrics/Gynecology	34450	24000	10450
General Surgery	35300	23500	11800

Source: Adapted from AAP, 1981a:589

pediatrics, indicated that while most of the pediatric subspecialties would experience a shortage, general pediatrics would experience a surplus of 7500 practitioners (see Table 6-11). Matched with projections about the number of children, estimates showed that the ratio of pediatricians to children would more than double between 1975 and 1990, from 1:3273 to 1:1356 (see Table 6-12; the ratios are plotted in Figure 6-1). Pediatricians could scarcely believe their predicament. "It seems like just yesterday," wrote Abraham Bergman (1974:533), a professor of pediatrics at the University of Washington and Director of Outpatient Services at the Children's Orthopedic Hospital and Medical Centre in Seattle, "[that there were] dire pronouncements about the child-health manpower shortage. The 'pediatric numbers game' was worked to prove that since fewer kids' doctors were going to be around to see more kids, pediatricians couldn't possibly carry the whole load." Bergman admitted that he had been among those who were calling on "others" to become involved in child health care. "Well, it's worked;" he continued (1974:533), "the crisis cries were heeded. . . . Such profound changes have taken place in the manpower game, that general pediatricians in the United States may well be teetering on the threshold of a museum."

Besides the increased number of child health providers, pediatricians were also disturbed by developments in the PNP movement. Up until the mid-1970s, the movement had focused principally on establishing itself, legitimizing the concept of the nurse practitioner in the eyes of the medical profession and the public, and proving that

TABLE 6-11
PROJECTED REQUIREMENTS AND SUPPLY FOR PEDIATRICS

	Supply	Requirements	Surplus (Shortage)
General Pediatrics	37750	30250	7500
Pediatric Allergy	900	900	
Pediatric Cardiology	1000	1150	(150)
Pediatric Endocrinology	250	800	(550)
Pediatric Haematology/Oncology	550	1650	1100
Pediatric Nephrology	200	350	(150)
Neonatology	700	1300	(600)
Total Pediatrics	41350	36400	4950

Source: Adapted from AAP, 1981a:589.

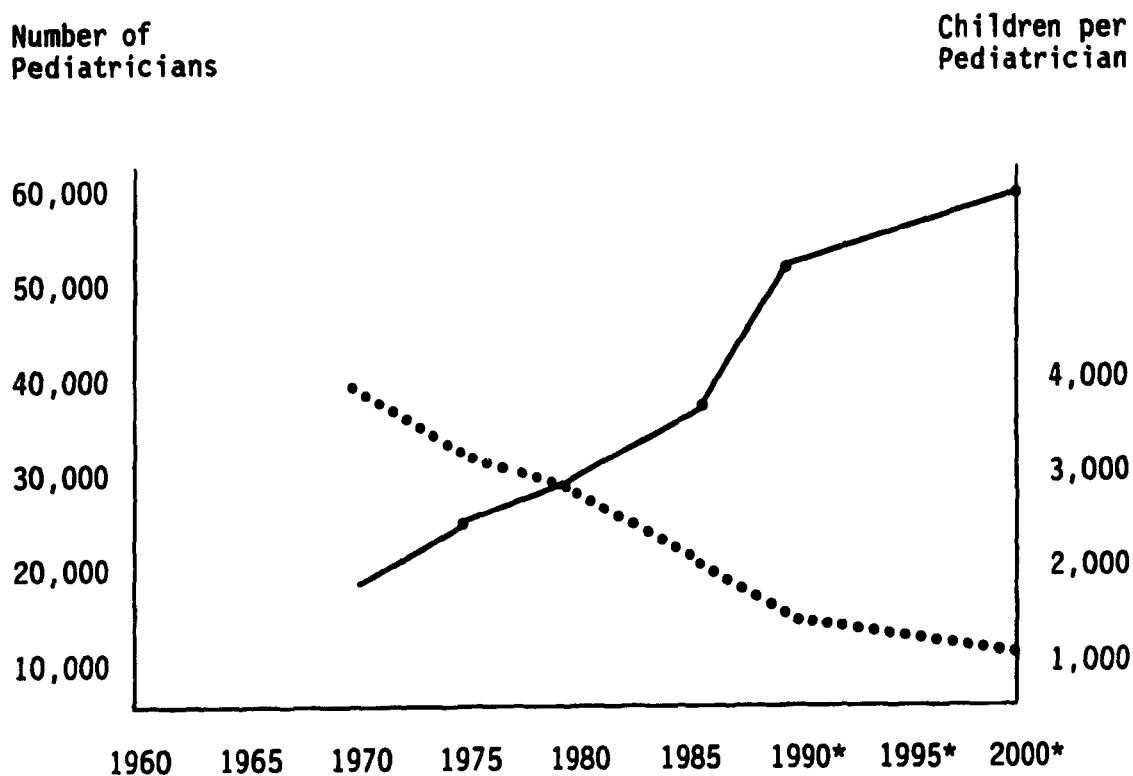
TABLE 6-12
NUMBER OF PEDIATRICIANS, NUMBER OF CHILDREN* AND RATIO

Year	Pediatricians	Children	Ratio
1960	-----	69.0	-----
1965	-----	76.7	-----
1970	18,819	77.1	4,096
1975	22,730	74.4	3,273
1980	29,462	72.5	2,460
1985	35,617	70.3	1,973
1990 π	52,780	71.6	1,356
2000 π	59,659	74.8	1.254

* In millions

π Projected

Source: AMA Council on Long Range Planning and Development, 1987:242; Budetti, 1981:599,601; Gorwitz and Smith, 1975:592.

FIGURE 6-1**NUMBER OF PEDIATRICIANS AND RATIO OF PEDIATRICIANS TO CHILDREN**

* Projected
 — Number of Pediatricians
 ... Pediatrician to Child Ratio

Source: AMA Council on Long Range Planning and Development, 1987:242;
 Budetti, 1981:599; Gorwitz and Smith, 1975.

nurses could deliver quality health care. To achieve these goals, it needed the support and sponsorship of pediatricians.

As the movement acquired confidence and strength, however, PNPs felt prepared to move into the next phase of their professional development. They sought to consolidate their foothold in pediatric care. Their central focus shifted from recognition to greater status, income and security (Ford, 1982). Nurses began to assume greater control over the education of PNPs and used that control to up-grade their training. The first PNP programs started as clinically-oriented, continuing education courses operated by pediatricians and nurses in a variety of settings including hospitals, schools of medicine and schools of nursing. By the mid-1970s, there was a discernible trend towards programs in schools of nursing leading toward a Master of Science in Nursing (Kahn, 1979). Many graduates of these programs rejected the idea of doctor supervision and sought the legal right to practice independently.

Pediatricians could see a confrontation coming: "A struggle for patients and dollars," wrote Bergman (1974:534), "couched, of course, in more "respectable" terms, appears inevitable." To forestall the possibility, they asserted their professional dominance, as doctors, over the PNP. In 1975, the AAP clearly specified the PNPs scope of practice: "The scope of practice of the PNA/P is based on a common understanding by physicians and nurses providing child health care, that an appropriately educated nurse can competently deliver certain medical services traditionally performed by the physician. The provision of these services is still the responsibility of the

physician and must be performed under his direction, supervision and review" (AAP, 1975:1). In the meantime, it created an Ad Hoc Committee to re-examine its policy with respect to nurse practitioners and other "physician extenders." Acting on the Committee's recommendation, the AAP reaffirmed its support for PNPs, but emphasized strongly that they continue to work under pediatricians and "not in free-standing, independent practice" (AAP, 1978). Sensitive now to the dangers of aspiring auxiliary groups, and concerned about the effects of an increasingly crowded pediatric turf, the policy statement went on to stipulate that pediatricians were opposed to the development of any additional category of pediatric personnel (Van Gelder, 1978:8).

Pediatricians Versus Family Practitioners: The Battle for Primary Care

Family practitioners, as members of the medical profession, were more formidable opponents than the PNPs. The Department of Pediatrics at the University of Rochester Strong Memorial Hospital Medical Centre sponsored a debate in 1984, on whether pediatricians or family practitioners should be providing primary care to children. That the debate occurred at all shows how seriously pediatricians took the threat posed by family practitioners. But it is also interesting because it covers the arguments that the two specialties made in asserting their respective claims to child health care.

James Strain spoke on behalf of pediatricians. At the time, Strain had been in private pediatric practice for 33 years. He taught clinical pediatrics at the University of Colorado, and was serving as

president of the AAP. Michael Klein, a pediatrician-turned-family practitioner, spoke for family practice. The circumstances of Klein's conversion to family practice are worth noting because they so clearly illustrate the pediatrician's fundamental dilemma. Klein received his medical degree from Stanford University in 1966, and did a pediatric residency at the Montreal Children's Hospital. Between 1971 and 1975, he served as the medical director of a community health clinic in Rochester, New York. As director, he employed several family practitioners. He felt that a multispecialty practice model, with family practitioners and a nurse practitioner serving on the front line and pediatricians, obstetricians, internists and community mental health workers handling referrals, would maximize the efficiency of the clinic. Along with his administrative duties, Klein expected to provide part-time pediatric consultation for the family practitioners on staff, and also to do some well-child care.

It did not take him long to discover that the family practitioners rarely needed his assistance. Of the few consultations that did come his way, Klein observed:

I had the feeling that [they] were really designed to make me feel good, because I was there and they didn't want me to be unhappy. If I hadn't been there, they could have gone to Strong Memorial Hospital and gotten a proper pediatric subspecialty consult without any problem. They needed pediatric subspecialists, not pediatric generalists. (in Hoekelman et al., 1984:468).

He felt no more useful in the area of well-child care. At first he had been alternating well-child visits with the clinic nurse practitioner. But she was increasingly able to manage on her own. The family practitioners provided whatever "backup" she needed for diagnostic and serious problems. Feeling squeezed out of any significant role in actually providing health care, Klein considered his options, and decided ultimately to switch to family practice:

I could quit; I could administrate full time; or I could dig in and become a proper family doctor. I chose the latter, and over the next four years, I had personal tutorial from family doctors whom I'd hired. I did the rare consultation for them, but the tables were decidedly turned. (in Hoekelman et al., 1984:468).

Klein formalized the switch by seeking certification from both the College of Family Physicians of Canada and the recently formed American Board of Family Practice. At the time of the debate, he was the Director of the Department of Family Medicine at the Sir Mortimer B. Davis Jewish General Hospital in Montreal, and a professor of both family medicine and pediatrics at the McGill University School of Medicine.

The Case for Pediatrics

Pediatricians were unequivocally opposed to sharing child health care with family practice. In 1975, John MacQueen (1975:25), president of the AAP, stated that pediatrics would not "support or participate in a restructuring or artificial stratification of American medicine to

conform to the stated expectations of the generally trained physician." He proposed as a goal for the Academy, that "within the next twenty years, the great majority of all children in this nation shall have access to the quality care provided by pediatricians." This was the same position that R. D. Blim, president of the AAP in 1980, argued before the Select Committee on the Promotion of Child Health in Washington, D.C.

Strain, presenting the case for pediatrics, expounded on the rationale for this position. Strain's argument was strongly reminiscent of those that pediatricians had made a generation earlier to establish their specialty's claim to child care in the first place. He insisted that a broad, general training in medicine was no match for the pediatrician's knowledge of children. He contrasted the three years of specialized training that pediatricians received, all of it concentrated on the health care of children, with the six months or less that most family practice programs devoted to the pediatric component of their students' training. He cited data showing that pediatricians spend 98 percent of their time treating individuals 21 years of age and under, while family practitioners spend only 24 percent of their time with this age group. This continuous exposure to children and their problems, he reasoned, gave the pediatrician an edge over the family practitioner. It produced a "sixth sense" that family practitioners lacked.

In their continuing education, family practitioners had to keep up with the literature on the health problems of all age groups while pediatricians were free to focus on children and adolescents. This

concentration on the needs of children and the greater exposure to their problems, meant that pediatricians were "uniquely qualified to deliver primary health care to children" (1984:464).

He advised family practitioners to look elsewhere. With the rapid aging of the population, there would be a tremendous need for health services among the elderly, he observed. Family practitioners, with the bulk of the training and experience in the care of adults, were the "logical" providers of these services.

The Case for Family Practice

Family practitioners were split between those who favoured cooperation, or at least peaceful co-existence, with pediatricians and those who preferred a strategy of co-optation. Edmund Pellegrino (1978) for example, a leading family practitioner, advocated an aggressive tact. He insisted that family practitioners were better doctors for children than were pediatricians. With their extensive training in family relationships and environmental influences on health, they could provide more complete and comprehensive care. If pediatricians wanted to continue in the field of primary care, he suggested, they would have to abandon the pediatric model, which treated the child as an individual patient, and augment their knowledge and skills in the area of family care. In other words, they would have to become family practitioners. In considering the relationship between family practice and not only pediatrics, but internal medicine, where a similar turf battle was playing itself out,⁴ Pellegrino (1978:134) predicted: "It is more likely that general

internal medicine and pediatrics will merge gradually with family medicine, and that much of the current stress among them will be slowly dissipated."

In presenting the case for family practice in the debate, Klein took a more moderate line on the question of who should be providing primary care for children. Klein did not challenge pediatricians' competence. He maintained that pediatricians and family practitioners should be working together to secure the best possible health care for children. He did challenge, in very harsh terms, pediatricians' motives for opposing the development of family practice. The conflict between the two specialties, he argued (1984:468), was not an issue of the quality of care they provided to children, but one of politics and economics: "dividing up the shrinking pie."

Pediatricians, he observed, were concerned about the future of general pediatrics. They were threatened in the area of primary care by PNs and family practitioners, and in the area of treating sick children by pediatric subspecialists. But in response to those threats, he charged, pediatricians were guilty of putting their own interests before the good of the children they professed to serve. "Dr. Strain has told you," he said (1984:467), "that all children need or deserve a pediatrician. Perhaps what he really means is that all pediatricians need or deserve enough child patients to make a living."

Klein singled out the AAP specifically for escalating the unhealthy competition between the specialties. The policies of the AAP aimed to keep child health care the exclusive preserve of pediatricians, despite the evidence that other groups could function

just as effectively and with a higher level of satisfaction than most pediatricians seemed to derive from their work. He accused the AAP of abandoning its long and noble tradition in child welfare. Referring to the AAP's campaign against family practice, he wrote (1984:469): "This is not child advocacy; this is pediatrician advocacy, and I don't think the Academy ought to feel very good about that." He suggested that pediatricians re-assess their priorities, and put community needs and the interests of children before those of the profession:

I believe that unless we move in positive ways and do more than deal with the issue by means of public relations, there will be a level of interspecialty conflict that will diminish the effectiveness of all physicians and lead to increased cost to society. We are all too aware that physicians naturally expand services to maximize or maintain an acceptable income. The challenge is to resist this and look to the needs of society. (in Hoekelman et al., 1984:475).

Pediatric Options

As pediatricians confronted increased competition for the child health market, the questions about the fate of primary care pediatrics inevitably resurfaced. As early as 1972, Robert J. Haggerty, posed the question: "Do we really need more pediatricians?" Notwithstanding the talk of a pediatrician shortage, Haggerty felt that current trends militated against the production of more pediatricians. If pediatricians continued to do what they had done in the past, he

argued, there was decidedly no need to graduate more of them. On the other hand, there were "those needs of children never yet adequately met - the consequences of developmental, behavioral and social problems" (1972:683). If pediatricians were willing to take on new roles, Haggerty suggested, and were prepared to meet these unmet behavioral needs of children, the specialty could continue to grow.

In a special symposium on the future of primary care pediatrics, Ivan Pless (1974), an associate professor of pediatrics, prevention and community health at the University of Rochester, identified the specialty's options more clearly. "From the viewpoint of the epidemiologist's ivory tower," he wrote (1974:223), "the future of pediatrics looks bleak." The falling birth rate, the decline in infectious diseases, the referral of many difficult but interesting cases to subspecialists, the consequences of increasing pediatric manpower, and finally the growth of family medicine and allied health personnel, all made an examination of primary care pediatrics, in Pless' words, "a matter of urgency."

According to Pless, there were three directions that pediatrics could follow: increased, shifting, or decreased professionalization. Obviously versed in the sociological literature on professions, and citing the work of Eliot Freidson, Pless used the concept of "professionalization" to refer to the amount of technical expertise connected to the profession's work. Increased professionalization involved the evolution of pediatricians into consultants, working on a referral basis, on problems that required highly specialized skills and technical competence. This would mean leaving primary care to family

and general practitioners and various types of allied health personnel. Although a consultative model did not necessarily imply sub-specialization, Pless felt that for most young pediatricians this would be advisable. He also observed that this option would require little restructuring in medical training, since control over pediatric education was in the hands of pediatric subspecialties anyway.

Shifting professionalization referred to greater involvement in treating the family, rather than simply children. Pless conceded that there were advantages to the family practice model with its emphasis on the interaction between health and illness, and the family, the community and the environment. He advised pediatricians not to be too hasty in dismissing this option.

Decreasing professionalization meant that pediatricians would expand their activities to meet what Pless called "the full spectrum of children's health needs" (Pless, 1974:237). He identified several areas of expansion, including many of those that other pediatricians had described as the "new pediatrics": learning and behavioral problems, school health, accident prevention, child abuse, sudden infant death syndrome, drug, sex and family counseling, and management of the psychological and social consequences of chronic illness.

Pless referred to this option as "decreasing" professionalization because it would involve pediatricians in activities that did not fit the familiar mold of medical care. There was the possibility, therefore, of reduced professional status, certainly in the eyes of their more "hard-nosed, subspecialty colleagues" and possibly even among the public, who might not accept

pediatricians in this role. But of the three alternatives, only decreasing professionalization offered any hope of preserving pediatrics as a primary care specialty. This may explain, why, despite its attendant risks, it was the route that organized pediatrics ultimately chose to follow.

Summary and Discussion

The previous chapter described a crisis within a profession that can lead a segment to seek out a new mission. While conditions through the 1950s and 1960s were conducive to pediatrics' growth, primary care pediatricians were not satisfied with their largely prevention-oriented practices. This chapter discusses an externally precipitated crisis. The increased competition within the child health care market threatened to deprive pediatricians of their role in primary health care, whether they wanted it or not.

The competition came from other segments within the medical profession and on its periphery. In the case of PNPs, a lower status paramedical group took advantage of a favorable climate to branch out into new areas of responsibility. The chances of such a group succeeding are minimal unless some segment of the medical profession sponsors or, at least, does not block this expansion. Pediatricians were eager to provide that support for PNPs as long as it suited their purposes. They believed that PNPs, by taking over some of the "scut work" of pediatrics, would free up the pediatrician's time for more serious problems and ease the burdens of the dissatisfied

pediatricians. However, as soon as PNPs, as part of their own professional development, began lobbying for the right to practice independently, pediatricians "pulled rank" over them. They insisted that PNPs had neither the training nor the expertise to function independently, despite the fact that their own studies, produced to sell the PNP concept in the first place, showed that PNPs could manage much of the day-to-day work of primary care pediatrics effectively, at a lower cost, and to the satisfaction of most parents. All the same, pediatricians took a risk in creating and establishing the legitimacy of a group that did, and continues to challenge the specialty's claim to primary child health care. Pediatricians learned to be cautious about the auxiliary groups they create, lest these groups one day acquire the strength to compete with them.

In the case of family practice, another professional segment attempting to secure its survival, posed the danger. General practitioners felt that the only way to reverse the trend towards their gradual extinction was to distance themselves from their traditional image and to create a new breed of generalist - the family practitioner. While some family practitioners wanted only to join pediatricians as primary care providers for children, others had more ambitious goals to transform their specialty. They wanted to displace pediatricians entirely. Pediatricians conceived of their competition with family practitioners as a zero-sum game. To the extent that family practice succeeded as a specialty, pediatrics lost. This explains why the AAP took such an uncompromising stand against family practice. The conflict between the two specialties demonstrates how

the revitalization of one specialty can create a professional crisis for another.

Finally, it is important to note that the conflict between pediatricians and both PNPs and family practitioners occurred within the context of a perceived oversupply of child health care providers. Pediatricians did not oppose the initial organization of the family practice movement in the 1960s, possibly because they did not anticipate its rapid growth and popularity, but more probably because there were too few pediatricians to meet the demand for pediatric services. As Bergman (1974) noted, pediatricians were eager for other groups to help them pull the primary care load. Only when birth rates and the size of the child population fell and the demand for pediatric services declined, did the AAP begin to challenge family practice.

The influence of supply and demand is even more evident in the changing relationship between pediatricians and PNPs. Pediatricians made it possible for the first PNPs to emerge and tacitly, if not openly, approved of independent PNP practices in areas where pediatricians preferred not to work. Independent PNP practices became an issue only when PNPs sought to officially legalize them. It is unlikely that pediatricians ever would have endorsed the unconditional legalization of independent PNP practices. However, were it not for the impending supply crisis and the fact that pediatricians began to see PNPs as a force to be reckoned with, there may have been more room for compromise and pediatricians may have been willing to formalize the arrangements that already existed in slum and rural areas.

These observations suggest that interprofessional relationships are connected to the balance between demand and supply in particular areas of work. As long as demand exceeds supply, and each group can function without endangering or hindering the professional development of others, the level of strife between the groups will be minimal despite the overlap in interests and practice. There may even be opportunities for cooperation and collaboration between groups in pursuit of common goals. As competition increases, so too do the possibilities for conflict as each group strives to protect its own interests and secure an advantageous position. Support for other groups, once given, may be withdrawn, and alliances, once formed, may be broken. With the growing surplus of doctors and cutbacks in medical manpower funding there will be ample opportunity to test this hypothesis in the coming decades.

FOOTNOTES

1. For a more detailed description of the PNP program at the University of Colorado, see Silver et al., 1967:756-758.
2. For a comprehensive review of the literature on the effectiveness of nurse practitioners, see Edmunds, 1978.
3. Parents were also receptive to other types of allied pediatric health workers. Patterson et al. (1969) found in a survey of 145 mothers of varying classes and backgrounds in Seattle, Washington, that 75 percent approved of the concept of a pediatric assistant; 94 percent stated that they would be willing to try a system of care that included a pediatric assistant. Skinner (1968), found in his practice, that 22 out of 24 families accepted the option of alternative visits with a pediatric assistant for a reduced price; all 22 families found the arrangement satisfactory.
4. For a discussion of the tensions between family practice and internal medicine, see Petersdorf (1975).

CHAPTER 7
INTEGRATING THE NEW PEDIATRICS

In Chapter 5 I described the conditions that led pediatricians to expand their scope of practice to include children's non-physical problems, and how they justified this expansion by stressing the unmet needs of children and the unique contribution that the pediatrician could make in safeguarding the total well-being of the child. I also explained the resistance that proponents of the new pediatrics encountered from the academic community and how this hindered pediatric practitioners from taking full advantage of opportunities within the new pediatrics. Due to their lack of training, practicing pediatricians felt insecure and ill-equipped to deal with children's behavioral and social problems.

In this chapter I look at how the proponents of the new pediatrics overcame these barriers and made the new pediatrics an integral part of pediatric practice, especially after the emergence of new categories of child health care providers and the supply crisis of the 1970s aggravated the specialty's problems.

The chapter is organized around their two main strategies. First, the AAP tried to make the new pediatrics a formal component of proper pediatric practice. Second, they tried to overcome academic intransigence and reform pediatric education so that it conformed more closely to the needs of primary care pediatricians. I also provide an assessment of the results of these efforts at educational reform.

The Role of the AAP

Through the years that pediatric education lagged behind changes in the direction of pediatrics, it was the AAP that promoted a new image of the specialty and established the new pediatrics as the standard or model of pediatric practice. In 1964, the AAP created a Council on Pediatric Practice, mandating it to "update" the definition of pediatrics in light of the "dramatic and complex changes during the past three decades" (AAP, 1967:i), and to identify desirable standards of practice. The Council produced a manual, entitled Standards of Child Health Care, that became the "official" definition of pediatric's proper scope of practice. The manual incorporated virtually every avenue of activity that the proponents of the new pediatrics had advocated since the 1950s, and more.

The manual specified that the purview of pediatrics began before birth and extended into adolescence: "Instead of the period from birth to 12 years, pediatrics now extends from the time of conception through the adolescent years and includes genetics and antenatal life" (AAP, 1967:ii). The pediatrician's responsibilities began with genetic and family planning counseling. Between conception and birth they were to counsel parents either through individual discussion or group conferences, letting them know what to expect, preparing them for the changes that a child would bring, answering their questions, instilling confidence in their natural abilities to care for a child, and making them aware of community resources. After the birth of the child, in addition to looking after the physical needs of the newborn, the

pediatrician was to reassure the new mother about the condition of her child, assess her emotional state, provide general instructions in the care of the child and stress the importance of continuity in pediatric care (AAP, 1967:1-2).

There were several subjects that the manual suggested pediatricians broach in their discussions with parents: the dangers of accidents, particularly poisonings among young children, the dangers of athletic injuries in older children, feeding techniques, toilet training, the need for and appropriate methods of discipline, and the value of sex education, not only for adolescents but younger children as well. Ideally, it was the parent's responsibility to educate the child on sexual matters, although the pediatrician could instruct them on how to answer their children's questions at various age levels. But if the parents could not answer or cope with these issues, the pediatrician should do it.

The manual highlighted the importance of looking beyond those behaviors that might be distressing to parents. The unsophisticated parent might attach importance only to non-conforming behaviors. The alert pediatrician was to watch for excessive conformity, excessive dependence, and a tendency to be "too good" or "too unemotional," traits that could be symptoms of disturbance.

A special section on the treatment of adolescents discussed the need to bring to the patient's attention the hazards of smoking, drinking and drug use. The more interesting aspect of the discussion, however, focused on how pediatricians might increase the adolescent component of their practices. The manual hinted that the pediatrician's

traditional image as a "baby doctor" was a problem. Youths were likely to assert their growing sense of independence by refusing to see the pediatrician, and insisting instead on an "adult doctor." The manual offered helpful hints for overcoming the problem. Pediatricians could set up special hours for adolescent patients so that they would not have to share the waiting room with toddlers. They could set up separate examining rooms with a more "dignified" decor. They could also satisfy adolescents' desire to be treated like adults by examining them without their parents in the room. This did not mean a diminished role for parents in the tradition doctor-patient relationship in pediatrics. The manual suggested that pediatricians could meet with parents either before or after the visit, in order to keep them informed.

Finally, the manual reminded pediatricians that their duties extended beyond their private practices to the community level, and that if they did not involve themselves in child welfare work, there would be other groups only too willing to fill the void: "Every pediatrician is obligated to the limit of his time and ability, to maintain an active interest in all matters which pertain to the welfare of children in his own community if he does not wish others to assume this role" (AAP, 1967:64). Practicing pediatricians, it asserted, should know about the health and welfare agencies and programs in the community. Where facilities were lacking or inadequate, they should participate in fostering their establishment or improvement. If laws were inadequate, as for example in the case of adoptions, pediatric societies should cooperate with bar associations to change them.

Subsequent versions of the Council's manual, which appeared in 1972 and again in 1977, continued to reflect the strong emphasis on the behavioral and social aspects of pediatrics. They also demonstrated the tendency for the new pediatrics to subsume ever larger spheres of pediatric responsibility. The 1972 version set the age limit of pediatrics more precisely at 21 years of age (AAP, 1972:463). It identified problems pediatricians might confront in providing emotional guidance, and specified in more precise and inclusive terms, the role that the pediatrician should play in managing these problems. It is difficult to imagine a more exhaustive list. It included not only children's misbehaviors, but parental difficulties as well: maternal insecurity with the child, reactions to congenital malformations, crying, the working mother and her feelings of guilt, fatigue and family fun, the adopted child, the hyperactive child, the mentally retarded child, temper, the gifted child, the whiny child, deviations in appetite, jealousy, disobedience, selfishness, lying, parental fears, fear of lightning, the dark, animals and peers, destructiveness, enuresis (bed wetting), stealing, fighting with siblings and peers, bullying, inability to make friends, overconformity, being too tall, short, thin, or heavy, psychogenic soiling, setting fires, inattention at home or school, underachievement at school, parental overprotection, parental rejection of child, acceptance of gender (boys acting in a feminine manner, tomboys), depression, alcoholism in parents, family discord, divorce and the child, adolescence (the struggle for independence, sexual adjustment, obtaining jobs, drug usage, and smoking) and sex education.

The pediatrician could bring most of these problems to light, the manual noted (AAP, 1972), with a few routine questions. Its appendices included a behavior questionnaire for preschoolers that pediatricians could have mothers fill out prior to the well-child interviews. As far as their management was concerned, the manual suggested that pediatricians might find it useful to refer the child to other experts, but added: "The problems usually will not warrant psychiatric referral but can be handled adequately by a pediatrician. Consequently, the pediatrician should prepare himself to handle many of these problems...He should be prepared to discuss these problems with parents and to give advice and counsel" (AAP, 1972:14).

Another significant feature of the 1972 issue was its discussion of sex education in various age groups. Reacting to a public backlash against sex education in schools, it affirmed the AAP's commitment to sex education programs, not only in schools, but churches and other community institutions. It put individual pediatric practitioners in the role of "moral entrepreneurs" (Becker, 1963), recommending that they use their professional authority and standing in the community to convert a resistant public to the merits of family life and sex education programs:

Pediatricians, with their position of acceptance and trust in the community, have an unusual opportunity and a responsibility to add their voices in support and direction of the family life and sex education programs. Every effort must be made to work through parents, support public school officials, and join in sponsoring and participating in public meetings which discuss the content and goals of sex education and family life programs. (AAP, 1972:17).

The same moral entrepreneurship was evident in the manual's updated discussion of family planning, which added population control to the pediatrician's already long list of professional duties. Pediatricians, it stated, should be aware of the social, health and demographic problems associated with prolific child bearing and should work with parents and teachers to give young people a proper sense of responsibility about sexual matters, marriage and parenthood. Pediatricians should provide information and advice about contraception to sexually active adolescents and counseling for unwed mothers.

The 1977 revision went further still, including the ethical development of children as part of the pediatric mandate. The manual argued that it was natural for parents to turn to pediatricians with questions about the fundamental moral and religious values they should be instilling in their children. Pediatricians, as respected members of their communities, had a duty to provide that assistance.

In a time when social issues and conflict are part of daily life, the doctor can make a meaningful contribution to the education of children and parents by sharing himself in these ways. This dimension of a child's growth is a legitimate and valued part of pediatric practice. (AAP, 1977:30-31).

There were several ways in which pediatricians might "share themselves." They could act as role models, demonstrating dedication, integrity, understanding and caring; as facilitators, helping families to explore and identify problem areas and seek their own values; as counselors, offering advice on specific issues; and as bridging agents,

- weighing for their patients, both the values and limitations of traditional views of good and evil in the context of contemporary society.

Other AAP Activities

Besides promoting the new pediatrics through its Standards of Child Health Care, the AAP also played an important role in educating pediatricians in the issues and techniques of the new pediatrics. After 1950, the AAP began setting up special sections in areas such as mental growth and development, adolescent health and community pediatrics. It also organized committees on preventing accidents and poisonings, children with handicaps, adoption and dependent care, sports medicine, environmental hazards and the psychosocial aspects of child and family health. One function of these sections and committees was to examine any child-related issue within its area (i.e., teenage suicide, television advertising directed at children, corporal punishment, PCBs in breast milk, day care centres) and to make policy recommendations to the Executive Board of the AAP. But they also prepared and distributed informational and educational material for pediatricians, and ran workshops and courses. Since most pediatricians received little preparation in dealing in these matters during their residencies, they relied heavily on the AAP's resources and programs once in practice.

Finally, the AAP used its political clout to facilitate the work of pediatricians in areas that fell within the new pediatrics. It consistently lobbied for government programs that provided support for comprehensive and continuous pediatric care. Some of the federal

programs that received AAP support included the Maternal and Child Health Program, which funded services for women during their maternity cycle, family planning, and preventive care for newborn and preschool children; the Crippled Children's Program, which funded the provision of medical, surgical and support services for children who were crippled or suffering from conditions leading to crippling; and the Children and Youth Project, which funded programs designed to meet the medical, dental and emotional needs of children and youths, particularly in areas with high concentrations of low income families.

In some cases, AAP support for government programs meant direct opportunities for pediatricians. For example, in 1967, the AAP became the first private, medical organization to sign a contract to provide medical services for a federally funded program - Project Head Start. The Project's purpose was to provide early educational experiences for disadvantaged children, in an effort to prepare them for school. But since one third of all Head Start children suffered from debilitating emotional or physical problems, the program included a health component. Through the eight-year contract, more than 700 members of the AAP across the country provided medical services for these children.

In 1972, the government initiated the Early and Periodic Screening, Diagnosis and Treatment (EPSDT) program for Medicaid-eligible children under 21 years of age. The objective of this program was to detect and treat any physical, emotional, mental or behavioral condition that might handicap the child later in life. The AAP membership, again under contract, participated in this program.

Educational Reform

As active as the AAP might have been in advancing the cause of the new pediatrics, its activities could not overcome the difficulties created by the failure of pediatric training programs to keep up with the changes within the profession. With the debate during the late 1960s about the lack of primary care doctors and pressure on pediatrics to meet primary care needs, the academic community accepted that general pediatricians were not about to disappear. They also accepted that pediatric education had to be more responsive to the needs of practitioners. But they were determined not to alter the basic, disease oriented thrust of pediatric education, and saw the new pediatrics merely as an area that could be added to the curriculum. They were also determined to retain full control over pediatric training. If the new pediatrics had to be taught, they were going to do it.

Through 1973 and 1974, an angry exchange heated the pages of Pediatrics, the official journal of the AAP. The debate began when David G. Nathan (1973) wrote a commentary on the state of pediatric education. In response to mounting criticism about the irrelevance of pediatric education for so many of the specialty's practitioners, Nathan admitted that educators would have to pay more attention to preparing students for careers in primary care practices. However, he insisted that such training could not occur at the expense of a solid background in the diseases of children. It would have to be supplementary to, and not in place of, the current emphasis in the curriculum. Without a

scientific grounding in the treatment of disease, according to Nathan, the practice of medicine would revert to the days when "personality was, in fact, the only tool of the trade."

But the "piece de resistance," as one respondent (Schiller, 1974:131) put it, was Nathan's proposal that it should be the scientifically oriented academics themselves, and more specifically, the "senior" academics, who should provide the training in primary care. The best and the brightest of pediatrics' young academics were to be reserved for serious scientific research and teaching. They did not have the time to retrain themselves in the new pediatrics. "They need more than 24 hours a day, he wrote (Nathan, 1973:771), "to solve the biomedical problems that confront them." On the other hand, those who had already made their contributions to science and were no longer "excited by laboratory investigations," might find the challenge appealing. Moreover, Nathan insisted that these older academics had a perspective and research skills that could prove useful in developing the new pediatrics. The implication was that they would bring a degree of scientific rigor that the new pediatrics currently lacked. "I somehow feel very comfortable," he continued (1973:772), "when I see a man who is capable of precise measurement of the rate at which potassium enters a red cell, applying the same sort of thinking to an estimate of the rate and extent to which primary care physicians must be deployed in the city of New York."

Nathan's remarks outraged those who saw primary care and the new pediatrics as an important function for pediatricians. They criticized his condescension and "intellectual elitism" (Pyeritz, 1974:249).

"Dr. Nathan's naivete with respect to problems outside the hematology laboratory," wrote one pediatrician (Katcher, 1974:251), "is matched only by his arrogance." Michael K. Posner (1974:249), medical director of the Woodlawn Child Health Center in Chicago, ridiculed the suggestion that aging academics should be the ones to develop programs in primary care pediatrics. "In no other area of investigation would a researcher suggest that a particularly vexing problem be tackled by those no longer productive in the areas of their choice." It was these "grand old men" who had created the problem in the first place, by emphasizing "scientific" medicine at the expense of total patient care. Posner argued that academically oriented pediatric practitioners dedicated to patient care, not "a few research warhorses sent out to primary care pasture" should be teaching primary care pediatrics.

As a result of this persistent resistance on the part of pediatric academics, studies through the 1970s showed, as they had through the 1960s, that pediatricians still did not feel qualified to handle many of the problems that fell within the new pediatrics. In a survey of 61 pediatricians in the South Florida area (Toister and Worley, 1976), 80 percent of the respondents stated that more than 10 percent of their daily calls or office visits involved specific requests for behavioral information or guidance. More than half the respondents reported that they had insufficient training or no training at all to deal with these problems.

Seventy-nine percent of 97 randomly selected pediatricians in five New England states stated that their formal training in developmental pediatrics was inadequate (Dworkin et al., 1979).

- Although 99 percent felt that their clinical experience was a valuable source of information about children with educational, emotional and other developmental problems, almost two-thirds did not regard it as an adequate substitute for formal training.

A 1978 national survey of all pediatricians who had graduated since 1964, found that 80 percent were providing services such as counseling and management of learning disorders and other psychosocial problems (Task Force on Pediatric Education, 1978). But 54 percent viewed their residency training in these areas as inadequate (see Table 7-1). Sixty six percent felt ill-equipped in adolescent medicine, 41 percent in interviewing and counseling, 64 percent in school health, 73 percent in such community programs as nursery schools, juvenile courts, and custodial institutions, and 50 percent in child advocacy related to child abuse, neglect and mental retardation.

The Task Force on Pediatric Education

While pediatric training programs had been a target for the proponents of the new pediatrics ever since they began to propose a more comprehensive definition of pediatric practice in the 1950s, it was only with the supply crisis of the 1970s that the profession finally mobilized to force educational reform. In 1976, as the number of child health care providers increased and predictions about an impending oversupply emerged, ten organizations, the AAP, APS, ABP, SPR, Ambulatory Pediatrics Association, Association of Pediatric Chairmen, AMA Residency Review Committee, Society of Adolescent Medicine, Academy of Child Psychiatry and Professors of Child Psychiatry, formed a

TABLE 7-1
PEDIATRICIANS' EVALUATIONS OF PEDIATRIC RESIDENCY TRAINING

Areas of Care	Insufficient	Sufficient	Excessive	N/A
Longitudinal care of well children as opposed to episodic care	50.4%	48.4	0.5	0.6
Care of adolescents	65.9	33.0	0.3	0.8
Care of children with chronic physical dysfunction	18.4	74.2	7.0	0.6
Care of children with chronic cerebral dysfunction	40.4	56.8	2.1	0.6
Psychosocial and/or behavioral problems	53.9	44.1	1.2	0.8
Interviewing and counseling	40.8	57.1	1.3	0.8
Ambulatory care within the medical school hospital	11.4	79.9	7.1	1.6
Ambulatory care in an extramural setting	44.8	49.6	1.9	3.7
Preparation for involvement in child advocacy (the poor, racial minorities, single-parented children, abused and handicapped children)	50.5	46.8	2.1	0.8
School Health	64.3	34.7	0.3	0.7
Community Programs (custodial institutions, juvenile courts, programs for exceptional children)	73.1	26.1	0.3	0.5

Source: Task Force on Pediatric Education, 1978:7.

17-member Task Force to assess the state of pediatric training. The Task Force concluded that there were gross deficits in pediatric programs in precisely those areas that represented what the committee referred to as the "bases of the specialty" - the biosocial and developmental aspects of pediatrics. Other areas that the Task Force regarded as underemphasized included community pediatrics, the care of children with handicaps and chronic conditions, health promotion, nutrition, medical ethics, and child advocacy.

C. Henry Kempe, the Task Force chairman, and at the time, president of the APS, was particularly annoyed with the attitude he found among program directors: "The concept that educational activities in our departments should relate to the health needs of children was not as universally accepted as you might think," he explained. "A few feel to this day that it should be the other way round, that the needs of their departments should be addressed by a ready supply of sick and funded children, each in their appropriate subspecialty" (Kempe, 1978: 1150). He suggested, "instead of moaning about whether our residents are being overtrained for what they do, why not face the fact that they are undertrained for what they are being asked to do" (Kempe, 1978:1151).

The Task Force report recommended greater stress on ambulatory care and problems that constituted the "new morbidity,"¹ including behavioral problems of preschoolers, inadequate functioning in schools and problems related to adolescence. It defined the parameters of comprehensive pediatrics in terms as least as broad as the AAP's Standards of Child Health Care.

Residents should learn to manage such family crises as death and bereavement, suicide attempts, sexual assaults, accidents, child abuse, birth of a defective child, separation, divorce, abortion, and a wide range of common behavioral disorders. Furthermore, they should be able to work with the family to resolve problems in parenting, well-child care, adoption/foster care, school management and learning. (Task Force on Pediatric Education, 1978).

As a result of the Task Force recommendations, the AMA's Residency Review Committee for Pediatrics decided in 1983, to require training programs to address behavioral and developmental aspects of child care. The Task Force had also recommended that the period of training in general pediatrics that residents are required to take before subspecializing be extended from two to three years. In 1982, the American Board of Pediatrics accepted the three-year requirement as a condition for licensure.

Financial Incentives

While the Task Force report created the pressure for reform, groups outside of pediatrics provided financial incentives. During the late 1970s, two foundations, the Robert Wood Johnson Foundation and the W. T. Grant Foundation, and the U.S. Bureau of Health Manpower, DHEW, all began sponsoring training in general and behavioral pediatrics.

The Robert Wood Johnson Foundation, incorporated in 1936, supported improvements in health services, particularly among the underserved segments of the population. In 1973, it began funding nine medical schools to establish demonstration primary care residency training programs in pediatrics and internal medicine. The objective

was to develop models for other programs to follow in the training of doctors intending to practice general medicine within their respective age ranges. Though the programs differed markedly in their approach, they all emphasized ambulatory care, and in particular, comprehensive and continuous patient care (Rosinski and Dagenais, 1978).

Another six pediatric programs in general pediatrics received funding in 1975 from the Bureau of Health Manpower. The Bureau had been lobbying for government support for primary care training in pediatrics, internal medicine and family medicine. Its intention in awarding the six grants was to ensure that once the legislation was passed, there would be a model for funded programs to follow. In 1976, the U.S. Congress passed the Health Professions Educational Assistance Act, which made it possible for the 15 programs initially sponsored by the Robert Wood Johnson Foundation and the Bureau of Health Manpower to continue. It also allowed for the establishment of another 36 programs in general pediatrics.

The W. T. Grant Foundation, incorporated in 1936, had a more focused mandate. It supported research, professional training and social policy and advocacy projects concerned specifically with the psychological and social development of children and youth. In 1978, the Foundation offered training grants to medical schools interested in integrating behavioral pediatrics into their residency programs for pediatricians. The Foundation awarded two million dollars in total grants to 11 programs. In 1981, the foundation renewed the grants at a cost of another two million dollars.

The financial support that these groups provided played an important role in educational reform in pediatrics in two respects. In a concrete sense, it covered the expenses involved in restructuring training programs, at least in those medical schools that received the grants. More significantly, it served as a signal to all pediatric departments that the movement towards the new pediatrics within the specialty had the support of the government and key policy makers who were determined to see pediatricians providing more comprehensive child care at the primary care level.

Pediatric Instructors

A final factor that was instrumental in bringing about educational reform was the growing availability of pediatricians trained and qualified to teach the new pediatrics. One of the deterrents to reform in the past, had been pediatrics' reliance on child psychiatrists. Those programs that had experimented with liaisons with child psychiatry had not found the arrangement entirely satisfactory. Pediatricians were too problem oriented to get much out of the insights of psychiatry. They found child psychiatry "rich in theory," but "short on empirical observations" (Richmond, 1967:652). Leon Eisenberg, a child psychiatrist at the Johns Hopkins Hospital who participated in a pediatric-child psychiatry liaison program, admitted that child psychiatry was too abstract and esoteric for pediatricians:

"Pediatricians, with their grounding in laboriously acquired empirical data, controlled therapeutic trials and action-oriented methods of intervention, find it difficult to swallow . . . the untestable

theories, the talmudical disputation based on an appeal to authority" (Eisenberg, 1967:645). Eisenberg agreed that "the teachers of pediatricians must be pediatricians."

During the late 1960s, several fellowships in areas related to the new pediatrics became available. In 1970, fellowships in behavioral sciences and psychiatry, adolescence, child development, community pediatrics, care of the handicapped child and mental retardation, constituted 13 percent of all fellowships in pediatrics (Friedman, 1970:173). These programs produced pediatricians committed to, and well-trained to teach the new pediatrics. As pediatric departments began to reform their programs, there was a ready pool of candidates to choose from.

Child psychiatrists, who had supported pediatricians in their campaign to expand into behavioral problems at least partly because of the role that they foresaw for themselves in pediatric training, grew frustrated. As pediatrics became better able to supply its own faculty needs in the area, child psychiatrists began to complain about the weak links between pediatrics and child psychiatry. Anders (1977), a child psychiatrist in the Department of Psychiatry and Behavioral Sciences at the Stanford University School of Medicine, conducted a survey of 56 pediatric training programs and found that while pediatricians occasionally consulted with child psychiatrists for inpatient problems, and in outpatient specialty clinics like oncology, they rarely used them for teaching or in their general outpatient clinics. He expressed dismay over the fact that "the only two medical specialty disciplines that claim to serve the health interests of children [sic], have

functioned with little communication and rare collaboration" (Anders, 1977:620). Child psychiatrists are now paying greater attention to delineating the differences in scope of practice between child psychiatry and pediatrics (Anders and Niehans, 1982).

An Assessment

The Task Force Report on Pediatric Education and other developments I have just described, succeeded in bringing about some changes in pediatric training. But these changes have not been dramatic. A 1983 survey of 29 pediatric programs, five years after the Task Force published its report, showed that the increase in the number of courses that fall within the new pediatrics has been only slight (see Table 7-2). The number of programs offering training in continuous care increased from 19 in 1978, to 25 in 1983; in child development from 19 to 20; in behavioral pediatrics, from 16 to 20; in adolescent medicine, from 16 to 22; in handicapping conditions, from 15 to 18; in genetic counseling from 11 to 19; and in extramural primary care, from 18 to 24.

The same survey showed that in a sizeable number of programs, many courses in the new morbidity were still elective rather than mandatory, an arrangement that proponents of the new pediatrics argued was a convenient "copout" for chairpersons who are ambivalent about the value of the new pediatrics (see Table 7-2). The ratio of elective to mandatory courses in child development was 7:13; in behavioral pediatrics, 7:13; in adolescent medicine 8:14; in handicapping

TABLE 7-2
NUMBER OF ELECTIVE AND MANDATORY PROGRAMS IN THE NEW MORBIDITY

	Elective		Mandatory	
	Before 1978	After 1978	Before 1978	After 1978
Continuity of Care	3	1	16	24
Child Development	8	7	11	13
Child psychiatry/ Behavioral pediatrics	10	7	6	13
Adolescent Medicine	4	8	12	14
Handicapping Condition	8	9	7	9
Ethics	--	2	1	1
Genetic Counseling	8	13	3	6
Extramural primary care	13	15	5	9

Source: Weinberger and Oski, 1984:525.

conditions 9:9; in genetic counseling 13:6 and in extramural primary care, 15:9.

A comparison of the actual content of pediatric training, in terms of the total time residents spent in different areas of pediatrics, showed even more clearly how little things had really changed (see Table 7-3). There is virtually no difference in the percentage of time that residents prior to 1978 and those after 1978, spent in mandatory disease oriented areas such as inpatient care (34 versus 34 percent), neonatal medicine (18 versus 17 percent) and subspecialty care (10 versus 10 percent). The percentage of time devoted to outpatient care actually dropped slightly from 22 percent in 1978 to 21 percent in 1983.

Another problem that the proponents of the new pediatrics have complained about has to do with the low priority that faculty and students alike, attach to outpatient aspects of their training. Friedman et al. (1983) observed in an on-site review of the model programs that the W. T. Grant Foundation funded, that few programs attempted to deal seriously with this problem. In only two out of the eight programs that incorporated training in the new pediatrics into their outpatient clinics, did the chairpersons make clear that they expected students to attend regularly and to treat it with the same degree of commitment and seriousness they brought to other aspects of their training. In those two departments, students were called if they were absent.

All of this suggests that although pediatric academics may be complying with the letter of the Task Force recommendations, they have

TABLE 7-3
TOTAL TIME SPENT DURING 3-YEAR RESIDENCY

	<u>Before 1978</u>		<u>After 1978</u>	
	(Months)	(Percent)	(Months)	(Percent)
Inpatient	12.1	34	12.0	34
Outpatient	7.7	22	7.2	21
Neonatal	6.3	18	5.9	17
Subspecialty	3.4	10	3.3	10
Electives	6.2	17	6.5	18

Source: Weinberger and Oski, 1984:525.

not wholeheartedly espoused their spirit, and still harbour doubts about the course the profession has chosen to follow. William Cleveland, chairman of the Department of Pediatrics at the University of Miami School of Medicine admitted as much: "Our own training program," he wrote (1985:910-911), "has responded to the current emphasis on primary care, with its heavy stress on the psychosocial aspects (better provided by other than physicians), and will continue to do so as long as this is the policy chosen by organized pediatrics. My personal convictions are, however, that this is the wrong direction for the long haul and that the needs of children will best be served by a gradual orientation toward use of the pediatrician as a consultant." Such reservations on the part of pediatric academics will be a major factor in the fate of the new pediatrics.

Summary and Discussion

In this chapter I have examined some of the strategies that pediatricians employed in promoting the new pediatrics and making it an integral part of pediatric practice. The focus was not on their formulation of a rhetoric that defined and justified new roles for pediatricians, which I discussed in Chapter 5, but on the more concrete steps they took to push the specialty firmly in the direction of the new pediatrics.

These arguments were addressed to others within pediatrics. Their objective was not so much to convince others that the specialty had a contribution to make, but rather, to convince those within the

profession - pediatric practitioners and the specialty's academic elite - that the new pediatrics was a legitimate area of pediatric practice.

This points to an important difference between emerging and transforming segments. Emerging segments already have a common sense of identity and purpose, although the segment's leaders may need to define and formulate them more clearly for their members. The primary concern of emerging segments is to establish their legitimacy among client groups, other doctors on whom they might depend for referrals, or organizations within which they work. The transforming segment also has to address these issues. Those who favored the new pediatrics, and particularly the AAP, in its legislative activity, did promote the new pediatrics among outside groups.

But at the same time, those within transforming segments who have a vision as to the new paths the segment might forge, have to convert their colleagues to that vision. The activities of the AAP must be viewed within this context. Through its Standards of Child Health Care and its internal sections and committees, it was encouraging the pediatric rank and file to adopt a more comprehensive definition of their core professional task. In the meantime, the movement to bring pediatric academics onside, pressed forward. The proponents of the new pediatrics recognized that educational reform was a prerequisite for successful transformation. Their efforts to get practitioners to increase their scope of practice could go only so far as long as pediatric training continued to propagate a disease oriented image of the specialty and deprived practitioners of the knowledge and skills they needed to enter new areas of care.

FOOTNOTES

1. The term "new morbidity" was first coined by Haggerty et al. (1975) in a series of surveys conducted among families in the Monroe County area of New York and its chief city, Rochester. The purpose of the surveys was to determine the "medical" care needs of preschoolers, school-aged children and adolescents. However, Haggerty et al. elicited information from parents and teachers about any behavioral or school difficulties their children and students might be experiencing. On the basis of their findings, they concluded that the major health problems of children and adolescents are not physical, but behavioral. They used the "new morbidity" to describe these problems.

CHAPTER 8
SUMMARY AND CONCLUSIONS

Summary

This thesis has traced and analyzed the development of a professional group, focusing on how it has adjusted to changes in its environment. Pediatrics emerged as an organized specialty when infant and child mortality rates were high. Though its mission was to study and treat the diseases of childhood, pediatricians became especially concerned with the problems of bottle fed babies. During a time in which bottle feeding spelled almost certain death for young children, pediatricians devoted themselves to finding safe and nutritional substitutes for mother's milk, and to managing the artificial feeding of babies.

As pediatrics grew and consolidated its status as a medical specialty, these problems disappeared. The pasteurization of milk and safe, commercial infant food formulas made pediatricians' special skills at feeding redundant. Advances in public health, nutrition and in the prevention and treatment of infectious diseases significantly reduced the mortality rate among the young. At the same time, subspecialists were emerging within pediatrics to study and treat the relatively few cases of serious childhood illness that remained. Most observers felt that the general pediatrician would disappear and that pediatrics would evolve into a small group of researching, teaching and consulting subspecialists. Instead general pediatricians found a new mission and

continued to grow. They added the supervision of healthy children to their traditional mission of treating sick children and managing difficult feeding problems.

While prevention saved general pediatrics from extinction, it soon began generating problems within the specialty. The public readily accepted pediatricians in their new role as health supervisors. But as prevention increasingly dominated their practices, many pediatricians grew unhappy. They felt that pediatrics did not provide sufficient opportunities for them to apply the specialized knowledge and skills they had worked so long to acquire. The result was the "dissatisfied pediatrician syndrome," the symptoms of which were boredom and frustration, mass defections to other specialties and vacancies in pediatric residency programs.

While the specialty wrestled with the dissatisfied pediatrician syndrome, more threats emerged for general pediatricians. Birth rates declined while the number of pediatricians increased, significantly reducing the ratio of children to pediatrician. Pediatric nurse practitioners, seeking new challenges, upgraded their training and began performing much of the routine health supervision previously reserved for doctors. General practitioners, seeking to forestall their own imminent demise, refashioned themselves into a new primary care specialty - the family practitioner. The emergence of these competing groups of child health care providers added a new and more serious dimension to the organizational difficulties of pediatricians. The question was no longer simply whether pediatricians could find contentment in practicing as primary care doctors, but whether, with the

oversupply of child health care givers, they would be able to compete with pediatric nurse practitioners and family practitioners.

The specialty responded to its latest crises by once again, transforming itself. The new mission, as the specialty's leaders and organizations proclaimed, was to monitor not only the physical growth and development of children and adolescents, but their psychological, emotional, social and spiritual development as well. The "new pediatrics" put special emphasis on the behavioral, psychosocial and school problems that impaired children's functioning and kept them from realizing their maximum potential. It offered a solution to the dissatisfied pediatrician syndrome by introducing new and exciting challenges into the pediatrician's task, and to the oversupply problem by increasing the range of services that pediatricians could offer.

Like prevention, however, the new pediatrics created problems within the specialty. This time it was pediatric academics that opposed the transformation. The academic community was not convinced that children's non-physical problems were a legitimate concern for pediatricians. They were worried that the new pediatrics would cheapen the image of pediatrics as an academic specialty. As a result, they resisted efforts to modify pediatric training. Though the pediatric leadership has forced some changes in the emphasis of pediatric training programs, the reforms have been minor and halting.

What generalizations does this case study of pediatrics allow us to make about professional transformations? In what way does it enrich the natural history of professional development that Bucher (1980) mapped out? First, the history of pediatrics provides a clearer picture

of the factors that can precipitate transformations. Bucher (1980) points out that transformations come about when a professional segment loses its mission, when its original problems are solved or when the field has undergone extreme segmentalization and generalists are left with nothing else to do. Pediatrics encountered these threats when the dangers of infant feeding and infectious diseases disappeared and pediatric subspecialists emerged to treat remaining diseases.

But in the dissatisfied pediatrician syndrome, the specialty faced a crisis of a different sort. The dissatisfied pediatrician syndrome had nothing to do with the loss of a mission or a disappearing demand for general pediatricians. On the contrary, the demand for pediatricians was at its peak. But pediatricians were not satisfied with prevention and did not accept it as a legitimate mission. Prevention was a good way to subsidize their practices, but not a justification for the continued existence of the specialty at the primary care level. In this case, it was dissatisfaction with an old mission or, more accurately, with a revitalization formula that pediatrics had adopted in response to an earlier crisis that propelled the specialty towards yet another transformation. To the list of circumstances that bring professional transformations about, we can add discontent with a current mission or problems that the segment may be encountering in fulfilling its current mission.

The dissatisfied pediatrician crisis in pediatrics alerts us to another critical point to consider in analyzing professional transformations. Bucher (1980) presented the conditions for transformation as though they were objective and self-evident. She

argued that transformations are a response to actual threats in the work environment of the segment. Indeed, throughout her model of professional development, she juxtaposes changes in the profession with the objective, structural conditions of its work. But the case of pediatrics shows that while it may be important to look at actual conditions surrounding the practice of a particular profession, it is also important to look at how the profession and its relevant public perceive these conditions. The dissatisfied pediatrician crisis emerged not because pediatrics was ploughed out in any objective sense. Clients were clamouring for pediatricians' preventive services. It was the specialty's practitioners who rejected the legitimacy of prevention as a professional mission. It is not for the analyst to determine whether there is any justification for the profession's continued existence. The professions themselves and their clients make these determinations and act upon them.

Demographic trends, their effect on the size of the patient population and the supply of professionals within a given area can also figure prominently in professional transformations. The push towards the new pediatrics that began with the dissatisfied pediatrician syndrome gained momentum when birth rates declined and the number of child health care providers increased dramatically. This increase was, in turn, the consequence of pediatric nurse practitioners and family practitioners trying to advance their own professional interests. This episode in pediatric history shows that professional segments may transform themselves in order to extend the range of services they provide, to support their increasing numbers and to mitigate the effects

of a real or impending oversupply. It also shows that segments may be forced to seek out new missions because their old missions are being appropriated by other professional groups.

With reference to the process, as opposed to the causes of transformations, the case of pediatrics demonstrates several significant points. The pattern of transformation, as Bucher (1980) suggested, resembles the pattern of emergence. Transforming segments, like emerging segments, need to formulate clear statements to describe and justify the group's work. In some cases this may involve repudiating older images. In pediatrics, both the shift to prevention and the shift to the new pediatrics merely involved extending the specialty's original mission and adding new tasks and responsibilities to the pediatrician's traditional concerns. Transforming segments also need to alter training programs so that its practitioners are prepared to play their new roles. Finally, they need to establish the legitimacy of their own mission among their clients, and with other occupations and formal organizations with which they work. Like emerging segments they may create new professional organizations to pursue these goals, although existing organizations may also play a prominent role.

Unlike emerging segments, however, transforming segments need to pay particular attention to establishing the legitimacy of their new missions within its own ranks. The greatest difficulty that pediatrics encountered in accomplishing its transformations had to do with convincing practitioners that they had a meaningful and valid role to play first in monitoring children's normal growth and development, and then in ministering to their psychosocial and behavioral problems. In

the case of the new pediatrics, there were serious problems with the specialty's academics who refused to change their training programs in any significant way, an essential prerequisite for any professional transformation. The task of transformation, then, is much more complex than emergence. While transforming segments may have an edge over emerging segments in that they are already established, they face the onerous challenge of altering well-entrenched definitions of the segment and its work, not only outside of the specialty, but within it as well.

Prospects for the Future

The question that arises naturally from this analysis of pediatrics is where does the specialty go from here? Will the new pediatrics sustain pediatrics as a primary care specialty or will it evolve finally, as many have predicted, into a relatively small group of consultants, teachers and researchers? The future of pediatrics is largely dependent on the same factors that have molded its past. Birth rates have shown a slight upward trend through the late 1970s and 1980s, as women of the baby boom generation have moved through their child-bearing years. But these rates are expected to peak in 1990 and then show another decline (Table 5-1). Matched against the growth in the number of pediatricians, the ratio of children to pediatricians is likely to continue to show a downward trend. The AMA's Council on Long Range Planning and Development (1987:242) estimates that the number of children per pediatrician will decline from 2082 in 1983 to 1254 in 2000

(Table 6-12). The problem of a serious oversupply of pediatricians persists.

Another factor is the competition in the child health care market. Those who have followed the nurse practitioner movement predict significant barriers to its development, not only in pediatrics but other areas of medicine as well (Lewis, 1982). The survival of nurse practitioners, as I argued in Chapter 6, depends to a large extent on the orientation and magnanimity of doctors. While the surplus of doctors and the climate of competition that exists between various groups of caregivers continues, pediatric nurse practitioners are not likely to gain in strength. As Lewis (1982:263) has pointed out, "In the era of too many physicians, it seems probable that only those nurse practitioners who can do some of the things physicians cannot do, or will not do, will continue to be in demand." Lewis predicts a period of even more intense conflict between the medical profession and nurse practitioners:

During the next several years, physicians will probably point to lack of efficiency, excessive costs and lack of evidence on quality of care to reduce the roles of nurse practitioners. These will provide much safer (and more ethical) grounds for debate than calling attention to their perceived economic threat - or the loss of bread syndrome.

Nurse practitioners are not acquiescing. Their leaders are urging them to fight fire with fire. Ford (1982:245) has called for the preparation of special nurses for "statesmanship." These nurses would devote themselves to fighting the political battles for legislative

recognition, reimbursement and educational funding. They would also pursue "new and creative partnerships with consumer and local community groups." By bypassing the medical profession and concentrating their efforts directly on consumers and third party payers, nurse practitioners are showing a new political astuteness. In an age of growing consumer power and cost containment, these strategies may succeed in bringing about the movement's objectives. But at this point they remain a long shot.

Family practice, on the other hand, is booming. The AAP has become so alarmed about the growing popularity of family practitioners, in 1981 it set up a special Task Force on the Promotion of Pediatrics to convince the public that pediatricians, and not family practitioners are "the best qualified providers of care for children and adolescents" (Blim, 1981:2). In 1982, the AAP retained the services of Daniel J. Edelman, Inc., a leading public relations firm, to assist in this promotional initiative.

To compete with family practitioners in primary care, pediatricians will have to continue, if not increase their involvement with the new pediatrics. Parents have accepted medical definitions for their children's misbehavior and school difficulties, and have come to expect medical intervention. There have been challenges to the medical treatment of deviant children. Since 1987, the Citizens' Commission on Human Rights, a group founded in 1969 by the Church of Scientology, and other groups have been conducting a campaign to stop the use of mood altering drugs, especially Ritalin, in the treatment of children with behavioral problems. They charge that these drugs violate the rights of

children, alter their personalities and subject them to dangerous side effects. Some parents have launched lawsuits against doctors, teachers and drug manufacturers alleging that medical treatment has caused irreparable harm to their children (Schwartz, 1988:A-3). But the thrust of these criticisms has been that the type of treatments doctors are using are drastic and dangerous, not that the medical labeling of children's misconduct is inappropriate. Parents have not rejected the idea that their children are impaired and require professional help; they simply do not like the idea of drugging them into submission.

Other opponents of medicalization have more fundamental objections. Two of the most damning indictments have been written by Shrag and Divoky (1975) and Castel et al. (1982). Shrag and Divoky, two journalists specializing in educational issues, have described the medical labeling of childhood deviance as a massive program of child control. Observing that middle class children are more likely to be treated for behavioral and psychosocial problems than lower class and minority children, they argue that medical labels for childhood deviance became popular because they were less stigmatizing, and because they absolved parents of blame and allowed them to maintain their belief that white, affluent, middle class families cannot produce children who cannot learn and do not behave. They attribute their popularity also to the need for an alternative method of child control. The rise of the children's rights movement during the 1960s, and the general liberalization of attitudes made overtly coercive means of maintaining order unpopular, if not illegal. Disease labels met "the political and social necessities of an age searching desperately for an explanation to

[the classic problem of deviance] and for a scientific replacement for the golden rule and the hickory stick" (Shrag and Divoky, 1975:48).

Castel et al. (1982) have argued that the medicalization of childhood deviance needs to be understood within the larger context of the trend towards the "technocratic control" and "psychiatrization" of all deviance, especially in children. "For children even more often than adults," they argue (1982:202), "labels are often thin disguises for difficulties in adjusting to specific social, family or scholastic situations rather than descriptions of clear-cut pathology. They are especially critical of the school system:

It is common knowledge that the American educational system is particularly insufficient in some areas. Perhaps this is why cause and effect are often reversed, and pupils are made responsible for the poor performance of the school system - a conspicuous example of blaming the victim.

Sociologists have added their voices of dissent as well, some in the form of a critique of all medicalization (i.e., Illich, 1976), others in direct reference to the medicalization of childhood deviance. In his analysis of hyperactivity, Conrad (1976:77-85) has suggested that a social system approach makes more sense than a medical-clinical approach. Hyperactivity is not an organic dysfunction but a label or status that is ascribed to individuals. These ascriptions are context-specific and depend on such factors as the significant audiences, the prevalent norms, the levels of tolerance and the sanctions that are available. Thus, it is possible to be labeled as

hyperactive in one social setting but not another. At least some hyperactive children, he insists, are better conceptualized as situational rather than clinical hyperactives. As compelling as these critiques and condemnations are, they have not stemmed the tide towards medicalization, nor are they likely to in the future. Parents and educators will probably continue to understand children's deviant behaviors as medical problems and seek the services of the medical profession in managing them.

Will pediatricians be prepared to provide these services? I have shown in this thesis that as a specialty, pediatrics is committed to providing comprehensive health care to children and adolescents, particularly in the psychosocial and behavioral areas. The specialty's leaders are arguing that it is now time for pediatricians to move into the next stage of their involvement - to establish clinical research programs into the causes of behavioral problems and the efficacy of different therapies, and to develop a more sophisticated nosology of common problem behaviors of children (Haggerty, 1988:181). They see adolescent medicine as a particularly ripe area for growth in the future. Thompson (1984:807), a former president of the AAP, predicts that pediatricians will become even more interested in their share of the 18 to 21 year-old market and that their involvement with teenage sexuality and pregnancy, pelvic examinations, drug abuse, sports medicine and the school dropout problem will increase. He also suggested that "extending beyond 21 to 25 or 30 years of age may well seem logical in a few years." In a recent statement on the age limits of pediatrics, the AAP did in fact take the position that under special

circumstances pediatricians should consider providing services for their patients past the age of 21 (AAP, 1988).

But at the level of practice there are ambiguities. There has always been an undercurrent of resistance within the specialty towards the new pediatrics. The first calls for a broader, more comprehensive pediatrics in the 1950s met with skepticism. "Has the practicing pediatrician completely mined the medical aspects of this practice," wrote one pediatrician (Harned, 1959:860), "so that he must now turn to the paramedical?" The further the specialty has ventured into the realm of psychological, emotional, social and spiritual functioning, the bolder the dissidents have become. Remarks such as the following have not been uncommon:

". . . in choosing pediatrics as a career, one expresses a real concern for young people, but not necessarily for the totality of their life and existence (Work, 1970:173).

In each issue [of AAP News and Comments] you study, discuss, council, humanize and moralize about everything from T.V. viewing to corporal punishment to utopian birthrights. Can we not just be physicians who support families and heal sick children, leaving grandiose schemes of the "Brave New World" to government bureaucrats? (Baldwin, 1979:8)

In response to a Pediatrics article on young male prostitutes and an accompanying editorial entitled "Bisexuality Gone Astray," one pediatrician (Hick, 1970:153) suggested that it was pediatrics that was going astray. He advised the journal to appoint a critic for its editorial board, to save it from "future embarrassment in its laudable

effort to broaden the pediatrician's role in society." Another pediatrician (Schmitt, 1970) voiced his concern that the specialty was becoming overinvolved in nonmedical problems and that this was a misuse of the pediatrician's time. "A nonmedical subspecialty problem," he wrote (1970:772), "is not a remedy for the pediatric disenchantment syndrome." Some pediatricians feel that the best course for pediatrics is to let family practitioners and pediatric nurse practitioners provide primary care to children, while pediatricians become specialized consultants in such areas as neurology, cardiology and neonatology. A few could practice as general pediatric consultants taking care of those cases that fall between the cracks and assisting in the training of family practitioners, pediatric nurse practitioners and pediatric students (Davis, 1975:840).

Even if primary care pediatricians accept the new pediatrics as a legitimate area of practice, they face other deterrents. Many pediatricians are frustrated by the lack of effective therapies for behavioral and psychosocial problems. Up until now, they have shown a preference for the pharmacological approach. If they diagnosed the problem as attention deficit hyperactivity disorder (ADHD), amphetamines, usually Ritalin, were the treatment of choice. But with the parental backlash against drugs and reports of damaging side-effects, drug therapy is less likely to remain a course of treatment for the future. In any case, most non-physical problems simply do not fit the traditional model of diseases to be cured. They are problems that require management in the form of psychotherapy, counseling, behavior modification, education and the promotion of coping

mechanisms and modes of adaption. These are not therapies that pediatricians feel comfortable with and they have been reluctant to use them, especially since their effectiveness has not been demonstrated.

Another deterrent has to do with reimbursement. The current fee structure favors payment for specific technological procedures, not "cognitive services" such as counseling and psychotherapy. Yet the new pediatrics calls for cognitive services and can be extremely time-consuming. Pediatricians find themselves spending large portions of time engaged in activities for which they do not feel adequately compensated.

Proponents of the new pediatrics argue that these problems will resolve themselves in time. Research will establish which treatments work and which do not. The development of a clearer nosology will facilitate better treatment. Once the effect of medical intervention on the functional ability of children can be quantified and measured, pediatricians will gain in confidence and be able to demand fair reimbursement for their services (Fulginiti, 1987:248; Haggerty, 1988; Rogers et al., 1981:780; St. Geme, 1981:734).

At the moment however, these problems are keeping pediatricians from fully espousing the new pediatrics. A recent study (Starfield, 1982:379) showed that while 10 to 15 percent of the child population are estimated to suffer from behavioral and psychosocial problems, these problems are not found within the top 10 or even the top 20 diagnoses of pediatricians. Their prevalence in pediatric practices is in the range of 1 to 5 percent. There is also evidence that pediatricians are ceding most adolescent care to family practitioners. The pediatric market

share of children between 15 and 19 years who use either a pediatrician or a family practitioner stands at only 10 percent (Nadler and Evans, 1987:22).

According to Starfield (1983), pediatrics has reached a crossroad. On the one hand pediatricians want to continue as primary care doctors. On the other hand they are not showing sufficient sensitivity to the behavioral and psychosocial problems that have become the mainstay of primary care practice. She blames this discrepancy on pediatric academics and calls for a reassessment of the specialty's goals:

In this country, pediatrics is, by custom, a primary care specialty. Continued claim to the characterization may require some hard thinking about the current status of the profession and its future. Appropriate solutions to these concerns can be addressed effectively only by a combined and concerted involvement of practitioners and academicians. The survival of the profession as a primary care discipline demands such attention. (Starfield, 1983:439).

Other analysts have concurred. Thompson (1984:807) has argued that "a further must for success is wholehearted faculty agreement as to the importance of [behavioral pediatrics and adolescence]." He suggests that certain subjects will have to be omitted to make room for these subjects and the number of electives will have to be reduced. However, as I have argued in Chapter 7, though there has been some change in the orientation of pediatric education, there is no sign that pediatric

academics will give the new pediatrics the kind of support that Starfield and Thompson insist is essential.

In the meantime, there are interesting developments within pediatrics that further threaten the general pediatrician. While general pediatricians waver over the new pediatrics, those within the specialty who are especially interested in these areas are organizing to advance their interests, and in so doing are creating the basis for new subspecialties. The trend is most visible in adolescent medicine. In 1968, a small group of doctors, mostly pediatricians, created the Society for Adolescent Medicine (SAM). In 1980, SAM launched the first scholarly journal devoted to the problems of adolescence - the Journal of Adolescent Health Care. There are separate fellowships in adolescent medicine, separate divisions of adolescent medicine within pediatric departments, and even a new term - ephebiatrics, from the Greek word meaning young adult - to describe the area (Gallagher, 1982).

The rhetoric as well as the activities of ephebiatrics resemble those of an emerging segment. They emphasize the singularity of adolescence: they have unique needs, attitudes and physical ailments; their bodies are changing; they are preoccupied with peer standards, fitting in and appearing "normal"; they are struggling with questions of independence, adult responsibility and sex; their propensity for strenuous activity makes sports injuries a special concern; gynecological problems among young women and acne are common. Ephebiatrics insist that doctors need to respect these differences and adopt appropriate styles of management. Treating adolescents is not like treating children or adults. Special knowledge and skills are

required (Gallagher, 1954; 1982). These arguments are similar to those that the first pediatricians used to establish the distinctiveness of children as the basis of a new specialty.

Also telling was a recent proposal that SAM reconsider its practice of scheduling its annual meetings to coincide with those of the AAP. Although it finally decided against breaking this affiliation, the president of SAM (Hammar, 1981) suggested that the organization periodically re-evaluate its relationship to the AAP. "Our Society," he wrote (1981:67), "is strong and healthy, and when practical, relating to other organizations or meeting independently should be considered as viable options." There is a distinct possibility that if general pediatricians do not increase their involvement in adolescent medicine, it will become either a pediatric or a medical subspecialty.

Recognizing this possibility, some pediatricians have called for a reintegration of adolescent medicine into general pediatrics before it is too late. Zack (1981), a professor of pediatrics at Rutgers Medical School, insists that:

pediatric training programs must be both explicit and implicit in their conviction that comprehensive care of the adolescent is but one part of comprehensive care of the pediatric age groups and that knowledge and skills in this area are to be considered part of the essential equipment of the general pediatrician. (1981:733).

Similar trends are apparent in behavioral pediatrics. Pediatricians in this area too have created their own organization - the Society for Behavioral Pediatrics, their own journal - the Journal of

Development and Behavioral Pediatrics, and their own fellowships. The rhetoric of this group is different from that of ephebiatricians. Though some of these pediatricians see themselves as specialists, (Haggerty, 1982:391), their goal is clearly not to establish a separate subspecialty, but to stimulate the integration of behavioral pediatrics into general pediatrics and to create a knowledge base within the specialty. However, if pediatricians continue to demur over the new pediatrics, there is the possibility that here too a new pediatric subspecialty might emerge.

This scenario would leave general pediatrics, once again, in an extremely precarious position. Pediatricians would become points of first contact, simply referring children with either physical or psychosocial problems to the appropriate subspecialist. Questions about the rationale for pediatricians in that function, over family practitioners or pediatric nurse practitioners, would resurface. Pediatricians would once again find themselves in a ploughed out situation, looking for a new mission to justify their continued existence or facing inevitable extinction.

Perhaps it is not a coincidence that some pediatricians are resurrecting and giving serious consideration to the suggestion that Morse first made, facetiously, in 1937 (see Chapter 4): that pediatricians pursue careers in geriatrics rather than pediatrics. A recent editorial in the American Journal of the Diseases of Children (McAnarney, 1986:866) proposed that in light of the growing number of elderly, pediatricians should be encouraged to "leave pediatrics, train in geriatrics, and subsequently become geriatricians." McAnarney

highlighted the parallels between the young and old that made the suggestion reasonable: both are undergoing rapid physical and psychological change; for both, identity, independence and control are central concerns; like geriatricians, pediatricians are developmentally oriented doctors who relate to "dependent persons, persons who have deficits, and persons who may be limited in their verbal communication." There are also similarities between the two in disease processes and disease treatment. McAnarney believes that a one to two year educational program could accomplish the transition. Carrying over the comprehensive approach of pediatrics, she adds that the programs would stress the strengths of "successful aging," as well as illness and death.

With pediatrics still in flux, pediatricians continue to be an interesting professional group to follow. Whether they wholeheartedly embrace the new pediatrics, and whether they survive as primary care specialists, they still have a great deal to contribute to our understanding of threatened professional segments.

Areas For Future Research

There are several other avenues for future research. The most obvious is comparative analyses of other professional groups. As I have demonstrated in this thesis, change is a perennial feature of professional life. Pediatricians have certainly not been the only group to face drastic changes in their environment and formidable challenges to their existence as a distinct group. How do other threatened

professional segments respond to such threats? What forms do their revitalization formulas take? What transformations do they undergo? Do they have the difficulty that pediatricians have had establishing the internal legitimacy of their new missions? Are internal struggles about the future course of the specialty inevitable? Under what circumstances are revitalization formulas likely to succeed? Under what circumstances are they likely to fail? What happens when they fail?

In particular, it would be interesting to look at other groups that, like pediatrics, have moved away from traditional definitions of disease and medicine's role in people's lives. Many of the problems that pediatricians experienced were rooted in the trouble that doctors have with prevention and functional as opposed to physical disorders. Had pediatricians discovered a revitalization formula that had fallen more squarely within a biomedical framework, it is doubtful that they would have faced the "dissatisfied pediatrician syndrome" or the resistance of the academic community. How do other primary care specialties deal with the preponderance of health supervision and psychosocial problems in their practices? How do they respond to the question that Charney (1974:4) has posed:

Is primary medicine really a discipline or only the comforting and supporting functions left after "scientific medicine" is siphoned off to the subspecialist? What kind of scientific discipline is possible with the "worried well" anyway?

Any research of this type should focus, as Bucher (1980:32) has argued, on the extent to which professions try to mold the structural

conditions of their work, rather than simply responding and adapting to change. While the effort of professional groups to actively influence their environment is nothing new, there is good reason to believe that the medical profession will step up its activities in this area in the coming years. Concerned about the erosion of its power and authority, and the trend towards curtailing skyrocketing health care costs, the profession is more determined, or at least more consciously determined, to gain a greater measure of control over its fate. The AMA has initiated a series of "environmental analyses," the purpose of which is to identify the factors and trends that are likely to shape the profession and its specialties' future work, but also to suggest ways of influencing the direction of change in the emerging environment. As the AMA's Council on Long Range Planning and Development (1987:245) put it:

With their substantial resources, the medical specialties need not reflect about the future only to prepare to adapt to change. Rather, organized medicine may also consider taking actions that modify the direction of environmental change.

With reference to pediatrics specifically, the Council has called on organized medicine to assist pediatricians in their efforts to increase child health and welfare programs; to find effective techniques for treating the new morbidity; and to restructure payment systems to account for the true value of medical services and child health supervision. This new resolve on the part of organized medicine provides sociologists with an ideal opportunity to analyze the complex

and reciprocal relationship between professional groups and the environments within which they work.

Another possibility for future research lies in exploring the connections between professional transformations and related sociological phenomena. Many readers will have observed the parallels between pediatric transformation and what is generally referred to in organizational theory as "goal succession." Goal succession refers to the tendency for organizations to find new goals once the old ones have been realized or when the organization realizes they cannot be met (Etzioni, 1964:13-14). A classic study on goal succession - one that is related to children - is David Sills' (1957) analysis of the Foundation for Infantile Paralysis (FIP). The FIP was one of the organizations that made up the private sector of the child welfare movement. Its goal was to raise funds to support research into infantile paralysis (poliomyelitis) and to aid victims of the disease. Once Salk developed the vaccine for polio, the FIP became redundant. Rather than disappearing however, it found a new goal in fighting arthritis and birth defects. Other examples of goal succession include religious organizations that have added social and community service to their original spiritual objectives, and the Red Cross, whose initial concerns revolved around wars and other national emergencies, but after World War I became more involved in public health (Dulles, 1950).

Other readers may be reminded of the social problems literature which describes several movements that have undergone similar transformations. Messinger (1955) reported on how the Townsend Movement, which arose during the depression to fight for national

pension plans for the aged, gradually lost its relevance but continued to exist by committing itself to the preservation of the organization as such. Townsend clubs began concentrating on recruiting new members and generating income, and became largely recreational organizations.

Gusfield (1955) analyzed how the Woman's Christian Temperance Union (WCTU) responded to the repeal of prohibition laws and a public climate increasingly hostile to the ideal of total abstinence. Though its goal did not change, the doctrine within which it was couched shifted. In the pre-Prohibition period, humanitarian reform was the movement's central theme. The movement's members viewed temperance as the solution to the problems of the lower class. After Repeal, they viewed total abstinence as behavior morally demanded, apart from social welfare considerations.

Gerber and Short (1984) documented the history of a movement to stem the dangerous and unethical marketing practices of companies supplying infant food formulas to Third World countries - the Infant Formula Action Coalition (INFACT). INFACT was formed in 1977 to initiate "a national campaign aimed at changing the practices of the American companies and the Swiss giant, Nestle" (Gerber and Short, 1984:12). INFACT led a seven-year boycott of Nestle products and eventually forced the company to alter and restrict its marketing tactics. In the aftermath of its victory, INFACT broadened its objectives. A recent mission statement describes it as a "peoples' organization building international campaigns to stop abuses of transnational corporations which endanger the health and survival of people all over the world, and particularly threaten Third World people

by creating enforceable agreements with these corporations" (Gerber and Short, 1984:26). Though their strategies for preservation differed, these movements all survived by transforming themselves in some way.

According to Glaser and Strauss (1967), theory construction in sociology should build on substantive analyses such as these. Most sociologists, they point out, limit themselves to the generation of conceptual categories and generalizations relevant to specific substantive areas such as work, juvenile delinquency, deviance or medicine. They can, and should strive for higher levels of generalization and eventually to grounded formal theory. It is important to reach for these higher levels of analysis, they insist, for all the reasons that theory is essential in a scholarly discipline: it provides interpretations, explanations, predictions and applications. As continued empirical research refines our grasp of professional transformations, these insights can be used as a point of comparison for other types of organizational transformations, and perhaps even as a stepping stone to formal sociological theory.

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