History of The Department of Pediatrics
Yale University School of Medicine

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The history of pediatrics at the Yale University School of Medicine can be divided into eight historical eras. The “Paleohistorical Era” included colonial figures such as Governor John Winthrop and Hezekiah Beardsley who wrote about children’s disease in colonial times. Eli Ives, Professor of the Diseases of Children at Yale Medical School gave the first systematic pediatric course in America in the first half of the nineteenth century. During the second era, from 1830-1920, the New Haven Hospital was opened. An affiliation between Yale University and the New Haven Hospital led to the formal establishment of clinical departments including pediatrics in the early 20th century. Six eras coinciding with successive pediatric chairman have led the department to its present respected position in American pediatrics.

The department’s 75th anniversary in 1996 is an occasion to recognize many of the department’s accomplishments and leaders over the years. It is also a time to reaffirm the mission of the department: to the health needs of the children of Connecticut and beyond, to the advancement of scientific knowledge of infants and children and their diseases, and to the training and educational of the pediatric clinicians, educators and investigators of the future.

The year 1996 marks the 75th, diamond anniversary of the Department of Pediatrics of the Yale University School of Medicine. As we celebrate this event and look into the future, it is appropriate to look back at the rich history of pediatrics in New Haven over the past 250 years [1]. I have divided this rich history rather arbitrarily into a series of eras (Table 1).

At the time the department was formally established in 1921, there was a rich “Paleohistorical Era” of pediatrics that dated back to the early days of the New Haven Colony. John Winthrop, Jr., Governor of Connecticut in the 1650s practiced pediatrics and prescribed treatments for children throughout the America of his day, using the colonial mails. In 1778, Hezekiah Beardsley, a New Haven practitioner, reported the first case of hypertrophic pyloric stenosis of infancy in the Transactions of the New Haven County Medical Society. Eli Ives held the first American Professorship of the Diseases of Children at the Medical Institution of Yale College, and between 1813 and 1852 taught more than 1500 Yale students about the diseases of children [2]. The second era — the era of institutional, political and procedural antecedents — began with the opening of the New Haven Hospital in 1833 and the subsequent affiliation between the New Haven Hospital and the Yale University School of Medicine which led, in turn, to the appointment of full-time clinical chiefs/chairmen in 1913.

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b Presented on the occasion of the 75th Anniversary, Department of Pediatrics, Yale University School of Medicine.
Table 1: Eras in Pediatrics in New Haven and at Yale

| Era                          | Dates       | Description                                                                 |
|------------------------------|-------------|-----------------------------------------------------------------------------|
| I. “Paleohistorical” Era     | 1650-1830   | John Winthrop, Jr., Hezekiah Beardsley and Eli Ives.                         |
| II. Institutional, Political and Procedural Antecedents Era | 1830-1920   | Founding of Yale-New Haven Hospital. The Flexner Report. Contract between New Haven Hospital and Yale for full-time chairman/chiefs. |
| III. Edwards Parks Era       | 1921-1926   | Founding of the Department.                                                 |
| IV. Grover Powers Era        | 1926-1951   | The Golden Age of pediatrics at Yale.                                       |
| V. Milton Senn Era           | 1952-1964   | Integration of Pediatrics and Child Psychiatry.                             |
| VI. C. Davenport Cook Era    | 1964-1972   | Expansion and Subspecialization.                                            |
| VII. Howard A. Pearson Era   | 1972-1986   | Consolidation and Outreach.                                                 |
| VII. Joseph Warshaw Era      | 1986-       | Basic and Clinical Research into the 21st Century.                          |

These two early eras were followed by 75 years of the established department. I have divided these into six successive eras corresponding to the tenures of the departmental chairmen between 1921 and today: Edwards Park, Grover Powers, Milton Senn, C. Davenport Cook, Howard Pearson and Joseph Warshaw.

The New Haven Hospital has been inextricably connected to the department and to pediatrics, and so I will begin with its establishment - the beginning of the era of procedural and political antecedents. In 1830, the faculty of the medical school, including Eli Ives, formed a General Hospital Society and petitioned the Connecticut State Legislature for a charter to build a hospital. They also pledged 10 percent of their incomes for five years to the hospital project. The State Hospital of New Haven opened in 1833. It was renamed the New Haven Hospital in 1884.

Sick children were admitted to the New Haven Hospital, but they were usually bedded on the women’s wards. This was bilaterally unsatisfactory, as pointed out by an 1886 report of the Lady Visitors, as the Hospital Women’s Auxiliary was then called, to the Prudential Committee who were the hospital’s (male!) Board of Directors:

The Lady Visitors must most urgently call attention to the great need of a separate Children’s Ward. At present, children and nervous women patients are on the same ward to the great detriment of both. Patients with nervous complaints should not be subjected to the noise which is often torture to them. Nor should the poor children, whose little lives are dull enough, be deprived of the small amount of pleasure and fun that is possible for them. [3]

These were prophetic words indeed. The immediate antecedent leading to the establishment of the department occurred in 1910 with the publication of the Abraham Flexner Report. Flexner pointed out the sorry state of medical education in the United States at the time with many marginal, for-profit, diploma-mill medical schools. He recommended that there should be a scientific basis for the medical school curriculum and he called for the appointment of full-time basic science and clinical faculty. In response to the Flexner Report, an agreement was negotiated between Yale University and the New Haven Hospital in 1913 which provided for full-time chiefs in medicine, surgery, pathology and
pediatrics who would also serve as departmental chairmen in the medical school [4]. Thus, even at this early time, the sometimes schizophrenic role of chief in the hospital and chairman in the medical school was established.

The clinical and laboratory facilities necessary to attract outstanding pediatric clinician-scientists to New Haven were inadequate. In order to provide appropriate resources, reconstruction and renovations in the New Haven Hospital established a "modern," 12 bed pediatric ward on 2 West. Beds for children with infectious diseases were available in the Isolation Building, located on the corner of Howard and Davenport Avenues which had opened in 1913. The Isolation Building was apparently something of a pest house. In the 1920s when a patient with leprosy was admitted, the townspeople, during a torch-light protest demonstration, threatened to burn it down! Twenty obstetrical beds, a nursery and formula room were located in the South Ward. The New Haven Dispensary, which provided medical care for the poor children of New Haven, was located in the Hope Building on the corner of Cedar Street and Congress Avenue which was built in 1906 with a donation from the wealthy New Haven industrialist, Oliver Winchester in honor of his wife, Jane Ellen Hope. The building was dedicated to the "relief of the poor and the advancement of medical science." This became the ambulatory service of the department. The resources were now sufficient to appoint the first professor and chairman and to usher in the six modern Eras of Pediatrics at Yale.

The man chosen was Edwards A. Park [5]. Park was a graduate of Columbia's College of Physicians and Surgeons. He had been trained in biochemical research in Germany, and then worked for nine years in John Howland's biochemically-oriented, pioneering Department of Pediatrics at Johns Hopkins and the Harriet Lane Home in Baltimore. Park was a member of the Hopkins' research team studying the causes and treatment of rickets. He was, perhaps, attracted to New Haven because rickets was endemic here at that time, as it was in many northern cities.

In an incredibly brief time, Park recruited an excellent faculty and a promising house staff, shown in the first departmental photograph taken in 1922 (Figure 1). The faculty and staff included Grover Powers, Ethel Dunham and Martha Eliot who became prominent in the nation's Children's Bureau, as well as others who went on to national leadership positions [6]. Note that four of eleven members of Yale's first Pediatric Department were women. In contrast to early pediatric departments elsewhere in the United States, Yale was well ahead of the times. Park remained at Yale for only five years, returning to Baltimore to assume the chair at Johns Hopkins following John Howland's untimely death.

Park was succeeded by Grover F. Powers who served as departmental chairman for 25 years, an era that I have called "the Golden Age of Pediatrics at Yale." Powers became one of the great figures in the American pediatrics of his day, not because of his scientific accomplishments, but because of his unique personality, clinical prowess and teaching skills. If his appointment had depended upon research or scientific publications, he never would have made it. His total bibliography contained only a handful of articles that could be called scientific. However, for 25 years he made an indelible impression and left a lasting legacy in American pediatrics.

Powers was deeply concerned with what might be called the humanistic side of pediatrics. He wrote: "It is our responsibility to understand the culturally deprived, the emotionally disturbed, the mentally retarded." Powers worked with officials of the State of Connecticut to create the Southbury Training School, an enlightened and humane facility that served mentally retarded children. It was effectively headed for many years by Herman Yannet.
Powers was an unforgettable teacher. Morris Wessel recently shared an anecdote about Grover Powers with me:

On my first day as a third-year Yale medical student assigned to Pediatrics in 1942, Grover greeted four of us new students saying “Come with me.” We dutifully followed him into a child's room. He stood silently looking at the child for several seconds, then abruptly turned on his heel and walked out. We had no choice but to follow him.

I inquired “What’s the matter? I thought we were going to examine the child.” He looked at me with a disapproving expression and commented, “That child is eating breakfast. You wouldn’t expect me to interrupt his meal would you?”

Morris continued; “Some years later I had a conversation with Ros Gallagher who remembered this exact same scenario on his first day of Pediatrics at Yale, ten years earlier.”

Over the years, Powers attracted a star-studded roster to his faculty and housestaff, many of whom became leaders of American pediatric education and investigation. To list only a few: Robert Cooke who became chair at Johns Hopkins and through his friendship with John F. Kennedy was instrumental in the establishment of the National Institute of Child Health and Human Development as well as the Kennedy Institutes; to say nothing of pediatric giants such as Daniel Darrow, Harry Gorden, Harold Harrison, Victor Vaughn, Nelson Ordway, Edward Curnen, Sidney Gellis and many, many others. Obviously Yale had an national impact on pediatrics far out of proportion to its small size. Powers evoked enormous loyalty and affection from generations of housestaff who, for the rest of their lives, referred to themselves as “Grover Boys” and rarely made a career decision without first checking with Grover.

Figure 1: Pediatric staff, New Haven Hospital, 1921-1922.
Figure 2: Physical configuration of the Department of Pediatrics in 1933.

During Powers’ chairmanship, the physical configuration of the modern department began to take shape. The Laboratory of Medicine and Pediatrics or LMP Building opened in the early 1930s. The departmental offices and laboratories were located on LMP 3 and 4 where they still are today. The Clinic Building, adjacent to LMP provided conveniently located examining rooms and became the department’s venue for both subspecialty and general outpatient pediatric care for thirty years. Equally important was the construction of the Raleigh Fitkin Memorial Pavilion which permitted expansion and consolidation of pediatric inpatient facilities in a single building, close to the departmental offices and clinic facilities. Construction of the Fitkin building was made possible by a donation from Abraham Fitkin, a wealthy New Jersey financier whose son, Raleigh, had died when he was 10 years old. A memorial plaque, which is still mounted on the wall on Fitkin 1, indicates that the building was donated specifically for the care of children. However, when it opened, only two of five floors of the Fitkin buildings were assigned to pediatrics! The Fitkin wards remained the inpatient pediatric service at the hospital until the 1980s. I clearly remember when I came to New Haven, and worked on the Fitkins in the 1970s, how cold and drafty the rooms were in the winter and how intolerably hot they were during the dog-days of August.

The physical configuration of the department in 1933 is shown in Figure 2. The departmental offices and laboratories were on LMP 3 and LMP 4. Fifty inpatient beds were on Fitkin 3 and Fitkin 4, and included two air-conditioned rooms for premature infants. The outpatient clinic had 20 examining rooms on the third floor of the Clinic Building. There were two pediatric infectious disease wards on the second floor of the Isolation Building. This set-up remained essentially the same for the next 25 years.

Grover Powers became professor emeritus in 1952 and was succeeded as chairman by Milton J. Senn who served for a decade, an era that I designate as “The Integration of
Pediatrics and Child Psychiatry." Milton Senn was trained in both pediatrics and psychiatry. He had come to Yale in 1947 to head the Child Study Center and in 1952 also was appointed as chair of pediatrics. In fact, in his annual reports of 1955 and 1956, Senn referred to these jointly as the "Department of Child Health." However, this was not officially recognized by the university as an entity. Senn appears to have felt more secure in the Child Study Center than he did on the Fitkin wards, and so he created the position of Pediatrician-in-Chief who was responsible for directing patient care, house staff and student instruction and other hospital-related functions. This position was ably filled for a number of years by Nelson Ordway.

Many of Milton Senn's interests and activities were concerned with psychological and psychiatric issues in pediatric care. He championed some very modern concepts, such as extended visiting hours for families of hospitalized children. He established a program in which pediatric house officers followed a child and family from birth over an extended period of time - clearly a forerunner of today's house staff continuity clinics. The department was enriched by the service and teaching of Morris Green, Henry Silver, Henry Kempe, Albert Solnit, Ruth Whittemore, Dorothy Horstmann and many others.

The Memorial Unit opened in 1953. It contained a 96 bassinet newborn nursery. This was the first step in a series of transfers of pediatric beds across Davenport Avenue and York Street. Departmental clinical and laboratory space and medical school support were increased very little during Senn's time.

Senn believed that pediatrics, and that he personally, were undervalued by the school. In fact there was a view, articulated primarily by Paul Beeson, the influential and powerful chief of the Department of Internal Medicine at the time, that the Department of Pediatrics should be a part of the Department of Internal Medicine. Fortunately, his opinion did not prevail.

The department's fourth chairman, C. Davenport Cook, was recruited to Yale from Harvard and Boston Children's Hospital in the spring of 1964, ushering in a ten-year era that I characterize as "Expansion and Subspecialization." Departmental space was increased about one-third, primarily on the third and fourth floors of the newly constructed Laboratory of Clinical Investigation, which was built on the site of the razed Isolation Building.

Among Dav Cook's most notable accomplishments was the expansion of pediatric subspecialty services. He recruited Yale's first full-time faculty members in pediatric hematology-oncology, adolescent medicine, endocrinology, gastroenterology, neurology and nephrology. Among other accomplishments during his tenure were the opening of the nation's first modern Neonatal Intensive Care Unit about which more will be discussed later, and an Adolescent Ward on the fourth floor of the Hunter Building.

In 1974 I was appointed as chairman. I have characterized my era as one of "Consolidation and Outreach." Most of the pediatric subspecialty divisions were only one or two persons deep. Recruiting additional subspecialty faculty greatly enhanced divisional teaching and research activities. An affiliation with the Hospital of St. Raphael was strengthened, and Yale pediatric house staff were assigned to St. Raphael under the direction of William Lattanzi. This affiliation had two important benefits. First, it assured uniform excellence of pediatric care for all New Haven children. Second, funding additional pediatric residents permitted conversion of a steep pyramidal housestaff structure into an assured three year program for all residents. A Pediatric Intensive Care Unit was constructed on Fitkin 3 that was headed by pediatric intensivists.

Significant changes were also occurring in requirements for house staff training that called for increased time in ambulatory pediatrics as opposed to the inpatient service and ICUs. The hospital administration had also begun to realize that many patients were using the Emergency Room for primary care and that more than 50 percent of ER visits were
for minor or nonemergency problems. In November, 1975 the Primary Care Center was opened to provide for the children who looked to Yale-New Haven Hospital for their continuing care. The Ambulatory Division of pediatrics was formally constituted under Daniel (Pete) Rowe and later Tom Dolan. It became an educational and training resource for the department and the site of important ambulatory research by Paul McCarthy and others [7]. An important new training activity was the establishment of house staff continuity clinics. Residents were assigned to the Primary Care Center for one half-day every week to follow a group of children longitudinally. I believe that this was one of the earliest of such programs in the country.

A major improvement in inpatient care was made possible by the construction of the New Facility, now called the South Pavilion, in 1982. This permitted true consolidation of the inpatient pediatric service on the 7th floor in a modern, bright facility. The contrast with the dingy, depressing, fifty-year-old Fitkin wards was remarkable.

The last departmental era is contemporary, that of Joseph Warshaw. I have designated this the era of "Basic and Clinical Research into the 21st Century." Joe Warshaw has had significant accomplishments during his eight years as chairman. Notable was the opening of the Children's Hospital at Yale-New Haven three years ago, even though--like the Fitkin Pavilion 60 years before--only half of the floors are devoted to children!

One of Warshaw's most exotic accomplishments has been a departmental project in Saudi Arabia. Over a two year period, many pediatric faculty members spent extended periods of time in Riyadh, participating in and contributing to the clinical and research programs at King Faisal Teaching Hospital and Research Institute. In addition, the proceeds from the Saudi contract provided most of the funding for the magnificent new Pediatric Research Center that was dedicated as part of this seventy-five year celebration.

Up to this point I have primarily emphasized buildings and chairmen, but there have been many other people who have had enormous influence on the department.

Daniel Darrow joined the faculty in 1928. Darrow studied fluid and electrolyte therapy, especially the vital role of potassium replacement in diarrheal disease [8]. He ranks beside James Gamble and Alan Butler as a giant in pediatric fluid and electrolyte therapy.

James Trask was recruited by Grover Powers from the Department of Internal Medicine. He was the departmental expert in infectious disease until his untimely death, itself from an infectious disease, in the 1940s while on a trip for the military. In recognition of Trask's service, the government named a liberty ship the "SS James B. Trask" and it was christened in May, 1944 by his widow. Trask's laboratory technician was Mildred Fusik. Many generations of Yale house staff began their daily work rounds reading bacteriologic cultures with Mildred. Unfortunately, when the hospital consolidated all bacteriology laboratories in the 1970s, this unique pediatric teaching resource disappeared.

Edith Jackson originally came to New Haven with Edwards Park. She became interested in psychosocial aspects of pediatrics and worked with Anna Freud in Vienna. She returned to New Haven, and with the enthusiastic support of Grover Powers and the cooperation of obstetricians, she developed and initiated the Rooming-In Program in 1949. The concept was simple: "to provide a hospital arrangement for maternity patients wherein a mother and her newborn were cared for together in the same space to foster the mother and child relationship. [9, 10]" Frequent visits of fathers was also a feature. Although it seems almost inconceivable today, these were revolutionary concepts and the Rooming-In Program was considered to be a research project. The program received national and international acclaim. The success of Rooming-In at Yale-New Haven Hospital dramatically changed post-partum and neonatal care and influenced the design of American maternity units, including that in the new Memorial Unit that opened in 1955. The concepts championed by Edith Jackson and the Rooming-In Project were clearly the antecedents for the
humanizing maternity services. The modern "birthing centers" are direct descendants of Rooming-In at Yale.

Ruth Whittemore came to New Haven in 1949 to set up a Rheumatic Fever Clinic and never left. This was the beginning of pediatric cardiology at Yale. She has made important contributions to the understanding of the effects of congenital heart disease on pregnant women and their babies.

Louis Gluck in 1960 designed and built the world's first modern Neonatal Intensive Care Unit. The story is a fascinating one. Because premature infants were thought to be very susceptible to staphylococcal airborne infections, units for premature infants at the time consisted of isolated individual cubicles. The cubicle design impeded access to the babies and hampered their care. Gluck's research showed that staph infections primarily were the result of poor hand washing rather than airborne contaminants. Lou Gluck still describes that transpired when he presented his plans for the Newborn Intensive Care Unit to an official of the Connecticut Board of Health. The plans violated an array of State design rules and regulations for nurseries. Gluck relates that after he had presented his plans and their rationale, the official responded: "You academic people have to do your research. Go ahead and build your unit but if anything ever goes wrong, I never met you."

Gluck received a donation of half a million dollars from a grateful grandfather of one of his preemie patients that enabled the construction of a Newborn Intensive Care Unit in a new building, adjacent to the Memorial Unit. This unit had a radical, wide-open design with open spaces and oxygen and electricity outlets that dropped from the ceiling. Lou Gluck's concepts and designs received immediate attention. In early December 1967, the National Institutes of Child Health and Human Development convened an international three-day conference of pediatricians, nurses, hospital administrators, architects, equipment engineers and government representatives. The NICHD chose Yale as the site for the meeting because it had "the most advanced facilities for perinatal care." The conference received wide attention. Walter Cronkite featured the Yale unit in his nationally televised documentary, "The Twentieth Century."

In addition to design innovations, which have served as models for Newborn Intensive Care Units around the world, parental visiting on the premature infant unit and parent participation in the infant's care were encouraged. These were revolutionary concepts and led the way to modern practices.

Lawrence Pickett came to New Haven in 1965 as the school's first pediatric surgeon. Larry Pickett was able to convince his surgical colleagues that all hospitalized children should be cared for in dedicated pediatric space with pediatric house officers participating in their care. This was a difficult concept for some surgeons to accept, but it was helped by the fact that Larry was an old Yale wrestler who stood six feet-five with broad shoulders and a booming voice. No one dared argue with him!

Norman Siegel has been an incredible resource for two chairmen, has served admirably as vice-chairman and, during the past year, has been acting chairman of the department. Norm's able leadership of the housestaff training program and his countless other contributions have been essential in making the department really work for the past twenty years.

In addition to the full-time faculty, the many private practitioners who constitute the clinical faculty, have greatly contributed to the department's success over the years.

David Clement came to New Haven and the department shortly after World War II. He established a pediatric hematology teaching service at the hospital while in private practice. For many years he was associate chief of pediatrics, and was succeeded by Joseph Zelson who has ably filled this position for more than 20 years.

Morris Wessel was a Yale medical student, who, after training in Rochester, returned to New Haven to participate in Edith Jackson's Rooming-In Program. He then entered 40
years of private practice in New Haven. Morris has received national awards for his research and writings and has been an inspiration for generations of students and house staff. One of the most admirable features of Yale pediatrics over the years has been the respect and collegiality between the full-time faculty and the private pediatric practitioners of greater New Haven.

The true soul and spirit of the department has been the scores of faculty, the hundreds of house staff and the thousands of students who have passed through and enriched the department in its mission of service to the children of Connecticut over the past 75 years.

Today's Department of Pediatrics continues 75 years of commitment and dedication to the health needs of the children of Connecticut and beyond; to the advancement of scientific knowledge; and to the training and education of the pediatric clinicians, educators and investigators of the future.

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