
History of American Pediatrics

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For Babbie
whose patience and understanding
made this book possible

Foreword

Thomas E. Cone, Jr., accomplished pediatrician, allured by the charms of seductive Clio Medica, has already regaled a wide reading audience for the past fourteen years with a series of historical vignettes in the official journal of the American Academy of Pediatrics. In addition he has prepared an attractive book, 200 Years of Feeding Infants in America, in which we meet face to face with a procession of American pediatric pioneers who were not willingly submissive to the decrees of fate or ready to accept the preachments that the reason so many babies died was because it was the will of God, but instead strove to solve the mysteries of the nutritional needs of children, which were of such fundamental importance in pediatric care and so helped to deter the inflexible Atropos.

His historical diggings have unearthed the roots of our pediatric heritage, and not only have his historical papers and lectures provided pleasant literary fare for a wide circle of pediatric readers, but also his elucidation of the relevance of the past to the present has proved to be profitably pragmatic.

The year 1979 is the International Year of the Child, and 1980 will mark the golden anniversary of the American Academy of Pediatrics. Information about the history of American pediatrics helps us to carry out the Academy's charge for all pediatricians to "Speak up for Children." It places the lessons of the past in historical perspective and reveals the obstacle course which has stood in the path of pediatrics on its way toward reaching its goals for the welfare of children. The trail as outlined by Dr. Cone winds over treacherous paths through the seventeenth,

eighteenth, and nineteenth centuries before the specialty of pediatrics emerged upon the high-speed road of the twentieth century.

During the seventeenth century the American colonies were like a fetus still attached to the mother country. The health and welfare of children depended upon European culture and tradition. The few English physicians here derived their pediatric lore from the medical teachings of the ancients and the novel ideas that filtered through from contemporary writings such as those of Pemmell and Harris on the diseases of children, and, above all, of that seventeenth-century English Hippocrates, Thomas Sydenham. The native Indian care of children, of which we vaguely learn from the inadequate hints in the writings of Josselyn and some of the other American voyagers, may have influenced colonial folk medicine to some slight degree, but it was the European connection that counted most of all.

The primary provider of care for the healthy child in all times has been the mother. Midwives, wet nurses, grandmothers, wise old women in general, all joined in to help mothers. Physicians were not much help in the seventeenth century; nor were the apothecaries, barber-surgeons, or other male health care providers who accompanied the early settlers.

The preacher-practitioners and the educated laymen like the Winthrops, father and son, were closer to the families and their medical advice was often more respected. Calvinistic colonials, convinced that the sins of the fathers were visited upon their children, believed that innocent babies were born full of sin and corruption, and so it is not surprising that devilish children had the devil beaten out of them, and when they were sick they were purged of their corruptions with tormenting purgatives, emetics, blisters, and bleedings. Now we do just the opposite. Instead of evacuating obnoxious humors by every corporeal outlet we pour doctored fluids into every available vein. But that was an age when pauperism was resented and foundlings as the fruits of sin had little chance of survival.

Infant mortality was heartrending. Doctors were unable to cope with devastating epidemics of the diseases like diphtheria, scarlet fever, or meningitis that periodically went on a rampage. Indeed, frustrated by their limitations, many of them shunned children and gladly relegated them to the care of the midwives

whom the people preferred anyway because they were cheaper. The rudimentary medical science of the early colonies is here presented in sharp contrast with our own science and technology. It must be borne in mind, however, that it formed the roots from which grew, feebly in the eighteenth century and at an accelerated pace in the nineteenth, the improvement of our knowledge and the resultant capabilities of today. But in the past, the only consolation left for desolate parents when the death of infants was inescapable was the faith that their innocent darlings made lovely angels. Thanks to a bountiful Providence, in spite of the rapacious claws of death, the fertile colonists expiated their sins with a high birthrate. Families of four, five and six were the rule, while even as many as ten or even twenty were not unknown. Some of the children did manage to survive without modern pediatric care.

The common ailments of children were worms, teething, and convulsions. Benjamin Rush once remarked that when he first commenced practice in Philadelphia he could not have retained the confidence of his patients when called upon to visit sick children unless he prescribed a worm medicine. It is hard for us today to realize the omnipresence of worms. Children then, like animals today, harbored all sorts of worms. Roundworms were passed in the stools singly and in wriggling masses; sometimes a tapeworm would protrude from the rectum in a strip a yard long or more, to the consternation of all who beheld it; and pinworms could be seen crawling about the anus as the child scratched to relieve the itch. Every imaginable disease might be attributed to worms whether or not they were visible.

So, too, from the time of Hippocrates, every undefinable disease in a child that occurred during the time of dentition could be ascribed to teething. Convulsions in particular were related to difficult dentition, as were fevers in general.

Fevers of all kinds were explained by the ancient theory of fermenting corruption. Equated with putrefaction, fever was visualized the same as rotting or putrefying organic material in which worms of all sorts were generated. A few of the fevers were already distinguished in one way or another by the seventeenth century: smallpox and measles since the time of Rhazes in the tenth century; intermittents, usually quartan or tertian malarías; continued fevers, often

typhoid; hectic, often tuberculous, which had been differentiated even in the ancient days of Greece.

Then there was witchcraft. When no other cause of harm could be thought of, then the child was bewitched. The Massachusetts witchcraft trials were a sad blight in the history of American pediatrics. Yet the good doctor Sir Thomas Browne, loved and revered by all the English medical profession, as well as even more scientifically mature medical men of his period, accepted witchcraft as gospel truth. There is great risk in too much dependency on authority, so dear to the hearts of today's bureaucrats.

Throughout the ages, right up to the eighteenth century, in fact, childbirth and attendance on young infants were women's business. Thereafter an increasing galaxy of man-midwives invaded the lying-in rooms. To the midwives they were often considered interlopers. By the end of the eighteenth century they had captured a large portion of obstetrics. The midwives and wise old women, as a rule, were trained only by oral tradition and example; by the middle of the nineteenth century the male obstetricians instituted midwifery schools for men only, first privately and soon afterward in the medical schools. Midwives were thus an older breed of medical specialists. Among the functions of the midwife which the man-midwife usurped was included the care of young infants in health and in sickness. But the obstetricians, in contrast to the midwives of old, rendered only perfunctory service to children. They concentrated all their attention on the problems of labor and sadly neglected the infantile rewards of their labors. Nevertheless, another century passed by before the child could be wrenched free from the obstetrical hold and embraced within the care of the fledgling brood of pediatricians late in the nineteenth century.

Abraham Jacobi was among the first of these in America. He was a radical and was repeatedly slapped down when he first began to speak up for children. He exerted a powerful influence in this country and abroad along unconventional lines that raised many hackles in his time but enlisted many disciples.

Job Smith, his friend and colleague, shy bookworm that he was, through his research, teaching, and writing spoke up in his own way. Neither of these two trailblazers had the prestigious backing of a Harvard University like Rotch nor of a fabulously wealthy Rockefeller family like Holt, yet each in his own way

was able to play effective roles in the advancement of pediatrics. In their day, children, like dolls, were to be seen and not heard. When Jacobi cried out in anguish against the plight of the dying waifs in his institution, the well-meaning benevolent ladies running the hospital fired him; and as for Smith in 1866, he had to worm his way into the Bellevue Hospital Medical College faculty at first as a lecturer in morbid anatomy in order to satisfy his teaching penchant and the eager appetite of the students for his instruction.

While the newborn and young infants traditionally came under the care of the midwives, the older children fell within the legitimate province of the physicians. This was true even in antiquity. There were, it is true, doctors in all times who had a special reputation of being good with children, but it was not until medical practice was fragmented into specialties late in the nineteenth century that children were released, reluctantly, by the internists to the pediatricians. Up until the middle of the nineteenth century there were no hospitals for children in America. Except for a few scattered orphan asylums (foundling hospitals were frowned upon in this predominantly Protestant nation), the almshouses offered the only haven for destitute, sick children. General hospitals were still few in number before the Civil War and these were geared to adults, accepting children only in case of emergency. The first hospital to devote all its attention to sick children opened as a benevolent institution in Boston in 1848 but had to close its doors within three or four years for lack of money. It was not until 1855 that the first hospital that limited its admissions strictly to sick children was established in this country. It was followed by a second in 1869. These institutions were decidedly a factor in the advancement of pediatrics as a specialty.

The succinct accounts of the important early pediatric texts are also informative in this regard. They show that American doctors were not only in step with their European colleagues, but also at times led the way, contributing their fair share to the advancement of pediatrics.

Research was mostly clinical. Children were readily available subjects for experimentation. When Nathaniel Chapman, during the first decade of the nineteenth century (when immunization against smallpox had achieved enthusiastic popular acceptance) experimented with measles immunization

on children in his institution without success, God only knows what other diseases he transmitted to them. But no one thought of the ethics of using children for such research at that time. The need for more knowledge was more pressing then.

The transition of infant feeding from crude empiricism to a scientific footing began in the mid-nineteenth century with the chemical investigations of milk by Vincent Meigs. These were almost simultaneous with those by Biedert in Europe and were the basis of Rotch's efforts in this country to modify cow's milk so that it would more nearly resemble that of women. Evaporation of milk and canning methods for foodstuffs began also in the early nineteenth century and were likewise a part of the evolution of the commercial infant food preparations of today.

All these evolutionary steps in the development of

pediatrics as a specialty may be discerned in Dr. Cone's story of American pediatrics. The diseases of children had to be unraveled and mastered; the hygienic and nutritional problems of infants and children had to be solved; social, economic, and environmental disadvantages had to be fathomed and corrected; and advancing scientific knowledge and technological skills had to be disseminated and applied to the health and welfare of children in order to stay the grim reaper's hand. All this, along with the outstanding spirits who led the way are graphically displayed by Dr. Cone in the light of his practical experience, historical acumen, and scholarly attainments.

Here again he has responded to the call of the American Academy of Pediatrics to "Speak up for Children."

Samuel X. Radbill, M.D.

Preface

For years I have thought of writing a history of American pediatrics but whenever I set my mind to it Ernest Caulfield's remark would discourage me. In 1952 he wrote: "Sometime someone will write the history of American pediatrics but not immediately, I hope, because it is much too soon to appraise properly many of the revolutionary changes of the past few decades."

Now, almost three decades after Caulfield's comment, I believe the time has come to prepare a historical survey of pediatrics as it has evolved in our country. Two reasons have persuaded me to attempt the task. The first and more compelling is that it will fill a wide gap in the history of medicine, because there is no published comprehensive history of American pediatrics. And my second reason is that my book may perhaps stimulate interest in the historical development of this branch of medicine.

It may come as a surprise that the best previously published history of pediatrics in the English language, *The History of Paediatrics* by Sir George Frederic Still, published in 1931, does not go beyond the eighteenth century and never mentions America.

In addition to Still's book, there are two histories of pediatrics written by Americans: Fielding H. Garrison's *History of Pediatrics* (1923) and John Ruhräh's *Pediatrics of the Past: An Anthology* (1925). Neither of these is concerned with American pediatrics. Garrison's history was written as an introductory chapter for Isaac Abt's multivolume *Pediatrics* (1923). It is an excellent review of pediatric history from prehistoric times to the beginning of the present century; however, American pediatrics is discussed only tangentially.

Ruhräh's text contains biographical sketches of the lives of some of the more important pediatricians of the past with a comprehensive selection of some of their published works. Ruhräh has thrown much light on the important contributions of long-forgotten writers (almost all non-American) by tracing the progress of pediatrics from ancient times to the nineteenth century.

My principal aim has been to write a history of American pediatrics encompassing the major contributions of American men and women in improving the care and management of sick children. I have not written the book primarily for the specialist in medical history, to whom most of the facts I have mentioned will already be well known. Rather, I had in mind the medical practitioner, the medical student, and all others who may have an interest in the evolution of contemporary medical care of children.

A story so broad as the history of American pediatrics covering almost four centuries must of necessity be incomplete. To those of my contemporaries whose names I may not have mentioned, my apologies. The omissions were not willful, but solely due to the constraints imposed in keeping this book within limits.

My obligations to many authors are indicated by the bibliographies at the end of each chapter. I have leaned especially on Faber and McIntosh's *History of the American Pediatric Society, 1887–1965*, Parish's

A History of Immunization, Paul's *A History of Poliomyelitis*, Dowling's *Fighting Infections*, Garrison and Morton's *A Medical Bibliography*, Viets's *A Brief History of Medicine in Massachusetts*, Clarke's *A Century of American Medicine, 1776–1876*, and Packard's *History of Medicine in the United States*.

I am deeply indebted to Dr. Samuel X. Radbill for his continued and generous guidance over many years and for his willingness to read every page of my manuscript. However, if there are factual errors in the book, the fault is entirely mine. I wish to thank Mr. Richard J. Wolfe, Rare Books Librarian in the Francis A. Countway Library of Medicine, and his entire staff for helping me to locate many hard-to-find references.

My sincerest thanks to Miss Annette Cardillo for her unstinting willingness to type and then to retype the entire manuscript not once but several times.

For permission to use some of the material on infant feeding that originally appeared in *200 Years of Feeding Infants in America*, published in 1976, I wish to thank Ross Laboratories.

The publication of this book was made possible by a grant from the Johnson and Johnson Institute for Pediatric Service, New Brunswick, New Jersey. I take this opportunity to express my sincerest appreciation to Steven Sawchuk, M.D., Chairman, and to the other members of the Institute's Board of Trustees for their financial support. I hope this book will be considered worthy of their faith in me.

T. E. C., Jr.
Boston

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History of American Pediatrics

The Colonial Period

Pediatrics is a modern specialty, and the practitioner or investigator devoting his whole time and energy to children is inclined to think our knowledge of the subject a thing belonging to the end of the nineteenth century and to the twentieth. . . . It is interesting, therefore, to look backward over the centuries and try to see what medical men of other times thought or knew about morbid manifestations in the young.

John Ruhräh (1919)

As the seventeenth century began there was no permanent English settlement or even a trading post in America. The thought of venturing out into the vast Atlantic Ocean was viewed with terror by the ordinary people of England, and yet within a few decades thousands of them would leave their homes, some alone and some as families with young children, to cross the mysterious emptiness of the Atlantic to settle in a strange and far-distant New World. They were spurred on by a new spirit of adventure engendered by the long reign of Elizabeth I, from 1558 to 1603, during which England had embarked on a course of expansion, spiritual and material, such as few nations had ever experienced. In the opening years of the century this spirit was to see a swarming of Englishmen and women being drawn to the New World to create a new life in the wilderness.

When the rest of medicine started to advance in the middle of the seventeenth century, pediatrics lagged far behind. A glance through the English pediatric texts of the period is disappointing. Some have the unmistakable flavor of charlatanry, which suggests, according to a modern medical historian, that "they were written with an eye to being sold to midwives rather than to physicians."³³ This was so because, as a rule, British physicians in the seventeenth century treated only children of the nobility and upper classes, and then only on occasion. If a physician did condescend to see a child, or to write about pediatrics, it was with the fascination of illness that he was principally concerned, not with the unexciting routine of infant management. It is small wonder that in the care of young children "the med-