



# Mary Ellen Wohl



Dr. Mary Ellen Wohl, known internationally for her research in pediatric pulmonary diseases, passed away at age 77 in October, 2010 at Rogerson House in Jamaica Plain. Professor of Pediatrics at Harvard Medical School, she had served as Chief of the Division of Respiratory Diseases at Children's Hospital Boston for 22 years and Director of its Cystic Fibrosis Center for 19 years, saving and touching countless lives along the way. She was a pioneer in the development of the discipline known today as "Pediatric Pulmonary Medicine". A Harvard trained physiologist who began her career at Children's Hospital Boston in the early 60's, she experimented with lung volume measuring

devices that followed her "hunch" that pulmonary medicine as it was then defined for adults, might well be something that could be applied to children.

Mary Ellen Beck was born into a medical family in Cleveland. Her father, Claude Beck, on the faculty at Case Western Reserve, was the first Professor of Cardiac Surgery in the nation. (I think he invented CPR) and her mother Ellen (Manning) was a surgical nurse. They had met in Boston when Dr. Beck was a neurosurgical trainee of Dr. Harvey Cushing at the Brigham and Women's Hospital and her mother a trained nurse there. Growing up in Cleveland, her father saw to it that his three daughters had role models in the world of medicine. From an early age Mary Ellen encountered many of his female classmates at dinner in their home. Instead of immediately following in her family's footsteps, she took a slightly different approach in college and, in 1954, she graduated from Radcliffe College with a Bachelor of Arts degree in history. Yet during her time at Radcliffe, she'd taken a number of premedical classes. She enrolled at the Columbia University College of Physicians and Surgeons, where she ultimately met her future husband, Dr. Martin Wohl. She received her medical degree from Columbia in 1958 and followed this with an internship at Bellevue Hospital in New York and a residency in Pediatrics at Babies' Hospital. Although she originally intended to be a pediatric psychiatrist, after three months as an intern on the chest service at Bellevue, inspired by Gustave Laurenzi she became interested in the "new respiratory physiology" which she described in an autobiographical piece as "the molecular biology of the 50's". She writes *"We looked at Goff sections; we fought about the definition of emphysema; we discussed airway obstruction, centrilobular vs. pan-acinar; we fluoroscoped; we managed patients on tank ventilators; we measured arterial blood gas tensions – an advanced technology of that era... I must have been pretty hard to take. Armed with my 3 months of training in chest medicine and with the stridency of the young, I set out to reform the care patients with lung disease received at Babies Hospital. I borrowed a spirometer*

*In tribute to their dedicated efforts to science and medicine, deceased members of the Harvard Faculty of Medicine (those at the rank of full or emeritus professor) receive a review of their life and contributions with a complete reflection, a **Memorial Minute**.*

*from Dr. Alfred Fishman's laboratory – in fact, he taught me how to use it. I acquired an outpatient clinic filled with little wheezers ...and I daringly thought that pediatricians might call upon adult respiratory physicians for assistance”*

After their marriage in 1961, the Wohls moved to Boston where Martin could do his senior residency at Mass General Hospital. Mary Ellen became a research fellow at the Harvard School of Public Health in the Physiology group led by Professor Jere Mead, who almost single handedly developed the field of Respiratory Mechanics. A ground breaker even here, she and Dr. Mary Ellen Avery were the only two women in the group. Parallel to her training at the School of Public Health, in 1962 she started at Children's Hospital beginning her nearly four decade relationship with Children's hospital by learning respiratory medicine from Denise Strieder. Thus it was the marriage of Dr. Wohl's physiology training on Jere Mead's team and her clinical pediatric pulmonary medicine experiences that led her to become a pioneer in the evaluation of infant lung function. Unlike older children and adults who can be coached in lung function maneuvers, infant lung function was an underserved area of medicine.

Looking back today, we have to remember that this was a truly remarkable moment in the history of respiratory biology. Dr Mary Ellen Avery was working with Professors Clement Smith and Jere Mead on the concept of surface tension of the lung being dependent upon surfactant. A little know field at that time, neonatal death with hyaline membrane disease was poorly understood, and thus it was that this group were the ground breakers who linked surfactant with premature lung disease. In this rich environment, Mary Ellen Beck Wohl was poised to become one of the leaders of the nascent field of Pediatric Pulmonology. In fact, at this time in the seventies pediatric lung disease research was dominated by three women, Dr. Mary Ellen Avery as Chair of Pediatrics at Childrens, Professor Lynne Reid as Chair of Pathology , and Dr Wohl as Chief of Respiratory Diseases.

During the Eighties, Mary Ellen Wohl rose to national prominence as one of the founders of the subspecialty of pediatric pulmonology. Internationally, over eighty of her trainees have risen to prominence in this subspecialty.

Her most important clinical impacts were in the care of children with Cystic Fibrosis. This disease was first described in 1938 by another female medical pioneer, Dr. Dorothy Andersen at Babies Hospital, Columbia Presbyterian Medical Center. Dr Wohl inherited the Boston Childrens Hospital Cystic Fibrosis Center founded by Dr. Harry Schwachman, one of the largest CF centers in the world at that time. In the early days of Cystic Fibrosis clinical research, children died in infancy from gastrointestinal complications. With the use of pancreatic enzyme supplementation in the 1950's, children lived long enough to begin to show that the lung was a major target in this autosomal recessive disease. The CF lung develops tenacious mucus, which serves as a platform for chronic infection with bacteria such as Pseudomonas Aeruginosa. During Dr Wohl's tenure as Chief (1980-2002), life expectancy for children born with Cystic fibrosis increased to over thirty years of age. She was an early advocate of aggressive care in both nutrition and respiratory therapy in children with cystic fibrosis, as well as constant surveillance for colonizing bacteria in the lung. These are now standard of care in the field.

With thick mucus being a hallmark feature of Cystic Fibrosis lung disease, Dr. Wohl was the senior author of a landmark 1994 New England Journal of Medicine paper describing the efficacy of recombinant DNase I as a therapeutic in CF lung disease. Much of the mucus secretion was in fact found to be DNA released from white blood cells fighting the bacteria in the lung. Thus digesting DNA with an inhaled enzyme appeared a viable treatment option. This was the first therapy in decades which offered

new hope for extending the lifespan and quality of life for CF patients. As a CF clinician, Dr. Wohl was known for her devotion to her patients, who adored her.

In person, one colleague described Dr. Wohl as a “Force of Nature”. She was tall and large boned and full of energy. In her non-clinical moments, she was a gourmet and excellent chef. Dinner parties at the Wohl home in Brookline were always memorable. She joked about their rustic beach home in Nova Scotia, which was the only summer property around with outdoor plumbing and a Cuisineart. She inspired tremendous loyalty from patients and staff alike, because, when in need, there was no stone left unturned for anyone she tried to help.

She received the Henry Chadwick Medal in 1995, joining many of her mentors in this award which recognizes outstanding lifetime accomplishments in lung research. In 2001, Dr. Wohl’s contributions to medicine were acknowledged with the American Thoracic Society Lifetime Achievement Award. In 2002, she received the Edwin L. Kendig Award, a joint award from the American Academy of Pediatrics and the American Academy of Chest Physicians for outstanding achievements in pediatric pulmonology. In addition to the awards and accolades Dr. Wohl received, her colleagues, students and patients remember her for her determined spirit, incredible generosity of spirit and heart of gold.

Dr. Wohl leaves her husband Martin, a son, Alexander of St. Paul; a daughter, Laura Hornbrook of Quincy, and four grandchildren. Children’s Hospital Boston recently endowed the Mary Ellen Beck Wohl Professorship in Pediatric Respiratory Diseases.

Respectfully submitted,

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