Paul Meier, statistician who helped change clinical research, 1924-2011

By Steve Koppes
AUGUST 11, 2011

University of Chicago professor emeritus Paul Meier, who exerted a major influence on the application of statistics to medical research, died Sunday, Aug. 7 at his home in New York City. He was 87.

"Paul was a friend and colleague, as well as one of the most influential statisticians of an important era," said Stephen Stigler, the Ernest DeWitt Burton Distinguished Service Professor in Statistics. "He left an indelible mark on us, and through his research on the world's clinical analytical practice. He will be missed and cannot be replaced."

Meier was well known among his colleagues for co-developing a statistical method called the Kaplan-Meier estimator, which provided a novel method for estimating survival rates in clinical trial data. It incorporates data from patients who have been followed until death, as well as others who survived. The journal article that introduced the method in 1958, co-authored by Meier and Edward L. Kaplan, remains one of the most cited research papers in statistics or any other field, with about 34,000 citations to date.

RELATED CONTENT

Science Life: 'The Curve That Changed the World'

JSTOR: 'Nonparametric Estimation from Incomplete Observations'

Meier also wrote extensively about the polio vaccine trial of 1954. The trial comprised the largest medical experiment in history, involving more than a million children.

Meier's passing has evoked an outpouring of gracious personal and professional testimonials from his friends, colleagues and former students, including Joseph Sonnabend, a leading AIDS researcher now retired in London. "He was a kind of lifeline to me, reassuring me that integrity does exist in a world where principle is so often trampled by ambition," Sonnabend said of Meier. "He was truly a great man, a unique combination of kindness, honesty and adherence to principle."

Meier also had a profound impact on Theodore Karrison, MS'75, PhD'85, research associate and director of the biostatistics laboratory at UChicago.

"Throughout his long career Dr. Meier made outstanding contributions to the application of statistical methods to medical research — contributions that have led to the proper and efficient evaluation of new medical therapies, to the betterment of many patients' lives," said Karrison, a longtime collaborator who studied under Meier as a UChicago graduate student.

"Paul was the type of person who cared deeply about others and would go out of his way to help people whenever he could — whether it was a student struggling with difficult statistical concepts, an individual coping with an illness, a colleague making a hard career choice or simply someone who needed help with a thorny administrative problem," Karrisan said. "I've always looked up to Paul as an example of how one should strive to be, both professionally and as a human being. I will miss him dearly."

Rima McLeod, professor of ophthalmology & visual science and pediatrics at UChicago, worked closely with Meier for the last two decades on the National Collaborative Chicago-Based Congenital Toxoplasmosis Study. Meier was instrumental in the design, establishment and implementation of the only randomized, clinical trial treatment of congenital toxoplasmosis, a parasitic disease that can result in a wide variety of medical problems.

"This study has established that treatment in the first year of life markedly improves outcomes for many of those with this disease, leading to normal, productive lives rather than significant medical problems," McLeod said. "It changed the face of the disease and improved the lives of many persons with this disease and their families."

Meier was born July 24, 1924 in New York City. He received his bachelor's degree in physics and mathematics from Oberlin College in 1945. He then attended graduate school at Princeton University, where he earned his master's degree in mathematical logic in 1947 and his doctorate in statistics in 1951.

He began his academic career as an assistant professor of mathematics at Lehigh University in 1948-49. He went to Johns Hopkins University in 1952, starting as a research associate in biostatistics before rising to the rank of associate professor. Meier joined the UChicago statistics faculty in 1957, where he remained until 1992. During this period he led the Department of Statistics as chairman or acting chairman for more than 10 years.

Meier held joint appointments at UChicago, starting in 1975 as professor of pharmacological and physiological sciences, then in 1985 as professor of medicine. He also held several temporary appointments as a National Institutes of Health Special Fellow at the University of London and Imperial College, as a visiting professor at Harvard University and Jerusalem's Hebrew University, and as a fellow of Stanford University's Center for Advanced Study in the Behavioral Sciences.

He retired from UChicago in 1992 as the Ralph and Mary Otis Isham Distinguished Service Professor Emeritus in Statistics. He then joined the faculty at Columbia University, initially as head of the Division of Biostatistics.

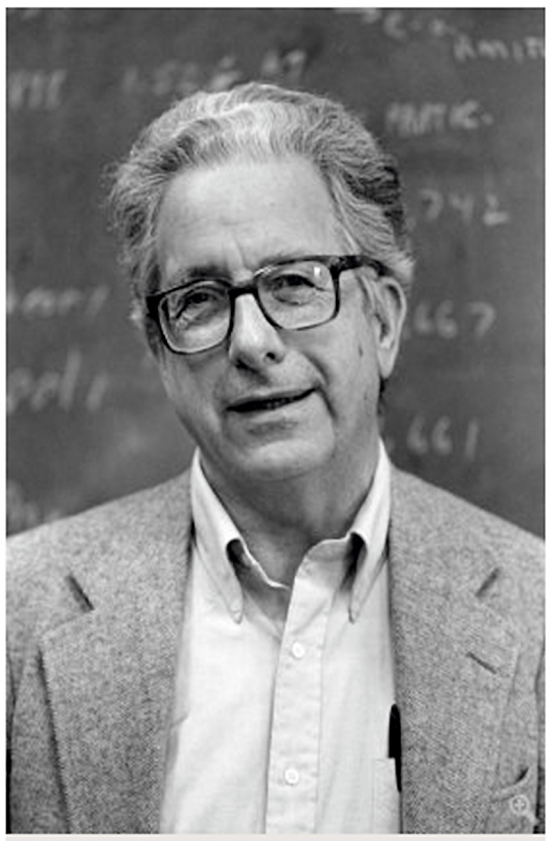
A fellow of the American Academy of Arts and Sciences, the Royal Statistical Society, and the John Guggenheim Memorial Foundation, Meier received many awards during his career. These honors included election to senior membership in the Institute of Medicine of the National Academy of Sciences.

Meier also was named 1986 Statistician of the Year from the Chicago Chapter of the American Statistical Association. More recently, he received the association's 2004 Samuel Wilks Award "for significant and pioneering contributions to the development of important statistical methods and biostatistical methods."

Additionally, he was a founding member of the Society for Clinical Trials, served on the society's board of directors, and as its president from 1986-87. He also served on numerous committees of importance to the nation's health, including the NIH Diet-Heart Feasibility Study Review Committee, a National Academy of Sciences panel on atmospheric pollution, the Advisory Committee of the State of Illinois Institute of Environmental Quality, and multiple Food and Drug Administration advisory committees and clinical trial Data Monitoring Boards.

Meier is survived by his wife of 63 years, Louise Goldstone Meier; three children, Diane, Karen and Joan; and five grandchildren. Contributions may be sent to the UChicago Paul Meier Fellowship for new doctoral students in statistics, in care of Kathryn Kraynik, Administrator, Department of Statistics, University of Chicago, 5734 University Ave., Chicago, IL, 60637.

PHOTOS



Paul Meier

Download

MEDIA CONTACT

Steve Koppes
News Officer for Physical Sciences
The University of Chicago News Office
skoppes@uchicago.edu
(773) 702-8366

Reserved for members of the media.

TAGS

Kaplan-Meier estimator, Medical research, Obituary, Paul Meier, Statistics

5801 South Ellis Avenue
Chicago, Illinois 60637
(773) 702-1234