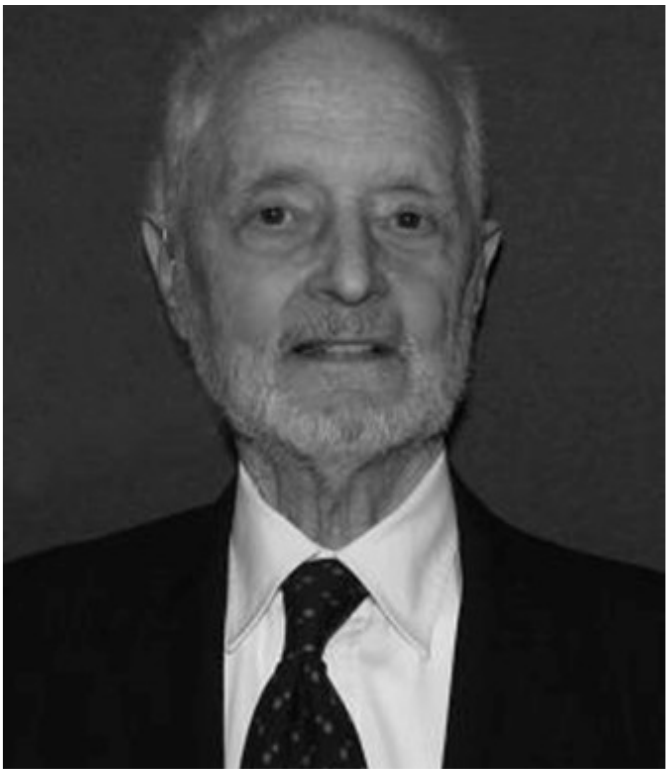
THE FACULTY OF MEDICINE
Harvard University

Emanuel A. Friedman



Photograph courtesy of the American Journal of Obstetrics and Gynecology

Dr. Emanuel A. Friedman, Professor Emeritus of Obstetrics, Gynecology, and Reproductive Biology at Harvard Medical School, a world-renowned Clinician and Scientist. Dr. Friedman's legacy is permanently linked to the practice of obstetrics through what became universally known as the "Friedman Curve"—a graphical representation of the normal progression of labor that has guided the care of countless mothers for decades.

Dr. Emanuel A. Friedman, a towering figure in obstetrics and gynecology whose groundbreaking research transformed fundamentally the way clinicians manage labor and delivery worldwide, passed away on February 13, 2025 at the age of 98.

Dr Friedman was born and raised in Brooklyn, New York. His education was interrupted by World War II, when he was drafted into the U.S. Navy. He earned his bachelor's degree from Brooklyn College in 1947, followed by his Doctor of Medicine degree from the Columbia University College of Physicians and Surgeons in 1951. Later, he would be awarded a Doctor of Medical Science degree from Columbia in 1959 and an honorary Master of Arts degree from Harvard University in 1969.

Dr. Friedman's formal medical training included an internship at Bellevue Hospital from 1951 to 1952 and a residency in obstetrics and gynecology at Columbia-Presbyterian Medical Center, where he served as chief resident before joining the full-time faculty. During this period, his research into uterine physiology, human labor, and biostatistics laid the foundation for his landmark work on labor progression.

Dr. Friedman's academic career spanned seven decades and traversed some of the most prestigious medical institutions in America. He held faculty positions at Columbia, Chicago Medical School, and the University of Rochester before joining Harvard Medical School in 1969. At Harvard, he served as Professor of Obstetrics, Gynecology, and Reproductive Biology and as Chairman of the Department from 1971 to 1976. He was also Obstetrician-Gynecologist-in-Chief at Beth Israel Hospital in Boston from 1969 to 1990. During his tenure at Harvard, he expanded residency training programs and prioritized the

recruitment of women and physicians underrepresented in medicine. In 1979 his three chief residents were women—a progressive stance indeed!

The Labor Curve, which he pioneered, was the basis of the graphical record of labor (partograms) used in labor and delivery units worldwide. This simple but elegant tool, which charts cervical dilation and fetal descent over time, was conceived on a singular night in 1952 when Dr. Friedman himself became a father for the first time. On June 11, 1952, when his wife Judy went into labor, he was a resident on call at Columbia-Presbyterian Medical Center. Denied permission to leave his post to be at his wife's side at another hospital, Dr. Friedman channeled his anxiety and anticipation into scientific observation. Armed with pencil and paper, he began recording serial examinations meticulously of his patients in graphic form—tracking the frequency of contractions, cervical dilation and effacement, and fetal descent. From this remarkable convergence of personal and professional life emerged a clinical tool that would revolutionize obstetric care worldwide.

The Friedman Curve, formally introduced in his 1954 publication "The Graphic Analysis of Labor" in the American Journal of Obstetrics and Gynecology, provided obstetricians and midwives with an invaluable clinical and research tool to identify normal versus abnormal labor patterns and make informed decisions about when to intervene.

This foundational study was then followed by a systematic series of examinations of the factors related to the progression of labor, the development of a nomenclature for labor disorders, studies of the impact of these disorders on the fetus, and a proposed management program to optimize outcomes. The terms *prolonged latent phase, arrest of dilation, arrest of descent, protracted dilation,* and *protracted descent*, which are all used today to describe abnormal labor, were derived from the pioneering work of Dr Friedman. Beyond the labor curve, Dr. Friedman made substantial contributions to understanding pregnancy complications, particularly toxemia of pregnancy (now known as preeclampsia).

He was deeply involved with the National Collaborative Perinatal Project, which was funded by the National Institutes of Health. While serving as obstetric coordinator of this landmark study, he collected information about pregnancies, labor, and their outcomes in approximately 60,000 women. During his analysis of the data, Dr Friedman realized that neurologic disabilities were increased in babies who were delivered by mid-pelvic forceps. This analysis led him to embark on a crusade to inform the obstetric community that mid-pelvic deliveries, regardless of the surgeon's skill, were unreasonably risky for babies. While this view was unpopular at the time, currently, mid-pelvic operative deliveries are no longer performed in the United States.

Dr. Friedman's scholarly output was prodigious: more than 500 peer-reviewed publications and 50 books over the course of his career. He continued publishing into his late eighties, demonstrating an unquenchable intellectual curiosity. At the age of almost 98, in March of 2024, he published his final paper in American Journal of Obstetrics & Gynecology.

He also served as a consultant to the National Institutes of Health and the Food and Drug Administration, where his work on the safety of intrauterine contraceptive devices had a lasting impact on women's health policy.

Manny was a meticulous and elegant surgeon who preferred a clampless technique for hysterectomies, relying on sutures alone for hemostasis. He also clearly valued his role as a teacher both in the operating

room and elsewhere.

In 2020, the Perinatal Research Branch of the National Institutes of Health and the American Journal of Obstetrics and Gynecology recognized Dr. Friedman formally as a "Giant in Obstetrics and Gynecology"—a fitting tribute to a man whose lifetime of contributions elevated obstetrics from an art into a science.

Dr. Emanuel Friedman's life embodied the highest ideals of medicine: scientific rigor, clinical excellence, dedication to teaching, and an unwavering commitment to improving the lives of mothers and babies, which included a willingness to take unpopular stands when he thought they were justified. The Friedman Curve remains not merely a clinical tool but a testament to one man's ability to transform personal experience into universal benefit—a fitting legacy for a true giant of medicine.

Respectfully submitted,

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