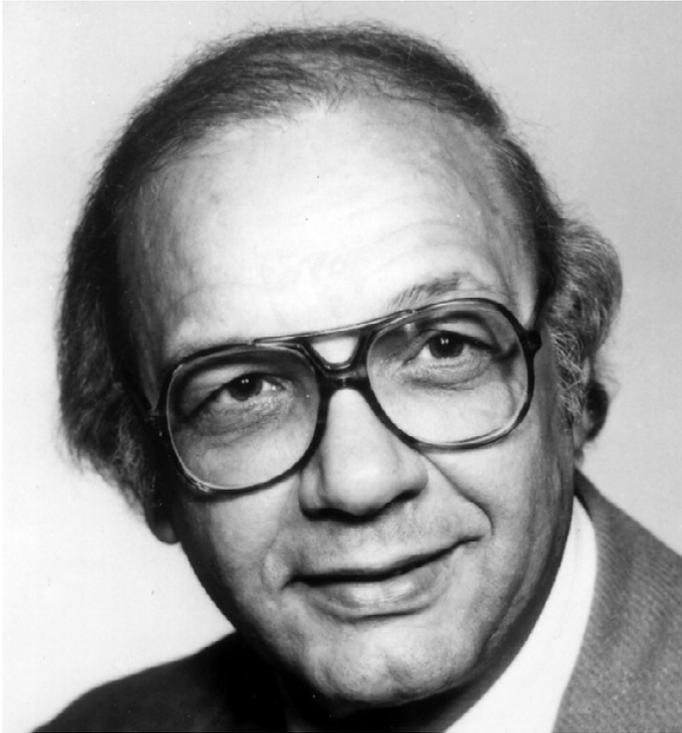




# Benjamin Gene Covino



Both the practice and science of regional anesthesia have expanded in acceptance and popularity over the past several decades, and in no small part owing to the efforts of the late Benjamin Covino, Ph.D., M.D. In his influential scientific and drug development work at the Astra Pharmaceutical Company, as one of the founders of the American Society of Regional Anesthesia (ASRA), and, at the time of his untimely death, as Chairman of the Department of Anesthesia at the Brigham and Women's Hospital, he had promoted the safe, multifaceted use of local anesthetics. During his tenure as Chairman at Brigham and Women's that department became a world center for teaching, practice and research on local anesthetics, a reputation that survives to this day.

In commemorating Ben Covino's career there are several aspects wherein he made everlasting impressions. Firstly, he was a devoted family man, a deeply religious man, and a lay member of the Catholic church. Secondly, he was chronologically first a scientist and then a physician, moving from basic research in cardiovascular physiology to a role in the development of new novel local anesthetics ultimately to a place as practicing anesthesiologist. He served in a third major part as an organizer and administrator, guiding the merger of three separate and disparate anesthesia departments into the eventual single entity at the Brigham and Women's Hospital. Fourth, he was an inspiring teacher, in the lofty position as Editor-in-Chief of the journal *Regional Anesthesia*, as an international lecturer in demand on all aspects of anesthesia and as an intimate teacher of residents in his specialty.

Religious belief was forever an essential fabric of Ben Covino's existence. He was taught by the Jesuits, both at Holy Cross and Boston College, who reinforced these values, and his one-time classmate, then devoted spouse, Lorraine, was convinced that early on he contemplated seriously a purely religious life. Instead, Ben became a lector and later a Eucharistic Minister, thus permitted to distribute Communion to

the congregation.

First and foremost, Ben's main concern was his family. He was a wonderful father; calm, patient, interested, loving and indulgent, a characteristic he might have modestly denied. The family was blessed in that they could travel about so often with him, and he occasionally took sons, Paul and Brian, individually, allowing each the opportunity to see what he did when he was away from them. It is noteworthy that Paul is a liturgical consultant and Brian a physician, such was the influential model of their father.

His personal concern extended well beyond his immediate family. Throughout his adult life, his peers, friends and family members gravitated to him when they were in need of help - professional, personal, or healthwise - and he was never too busy to take the time to listen.

Ben Covino took multiple pathways en route to his eventual professional position. Having earned an A.B. degree at Holy Cross College and completed work for the M.S. degree at Boston College, he entered a doctoral program in the Department of Physiology at Boston University. Fortunately for his later inclinations, the required studies included many of those assigned to first and second-year medical students.

While a predoctoral candidate, Ben held several fellowships and assistantships, one of the latter provided by the U. S. Air Force under contract to support studies on the pathophysiology of deep hypothermia. Ben focused on the perplexing phenomenon of terminal ventricular fibrillation during hypothermia, attempting to elucidate the underlying mechanisms and to discover preventive measures. In his three predoctoral years, Ben impressed his colleagues with his theoretical and practical talents and his mature ambition and self-confidence. During this period, he published the results of his work in no less than seven peer-reviewed articles, an extraordinary feat for those times.

After the doctorate in Physiology he was commissioned second lieutenant in the U. S. Air Force assigned to the Arctic Aeromedical Laboratory in Fairbanks, Alaska, where a prime area of research was hypothermia. Dr. Covino was provided with substantial support for experimentation and assigned the responsibility of monitoring all research contracts awarded by that laboratory to academic physiologists/biochemists/ pharmacologists in the U. S. Still in Alaska, Ben published a final paper resulting from his predoctoral work and authored 12 additional articles on hypothermia.

In the summer of 1957, Lieutenant Covino was decommissioned and he and Lorraine returned to the Boston area where Ben enrolled as a first-year student at Boston University School of Medicine. Simultaneously he was appointed Assistant Professor of Pharmacology at Tufts University School of Medicine, the first of a series of dual positions wherein he was both teacher and student.

In 1959, Ben transferred to the University of Buffalo, as a third-year medical student as well as Assistant

Professor of Physiology. As a student, the third and fourth academic years were programmed over three years with the awarded M.D. degree in June 1962. As Assistant Professor, he participated fully in teaching and he continued his program of experimentation on the cardiovascular effects of hypothermia.

In October 1962, Ben Covino joined a small pharmaceutical firm, Astra Pharmaceutical Products, Inc., in Worcester, Massachusetts, the firm a subsidiary of AB Astra, with headquarters in Sweden. In 1962, the Worcester firm had essentially one-product, lidocaine (Xylocaine®), a versatile local anesthetic which, at the time, was the most widely used local anesthetic in both medicine and dentistry. Ben Covino's first title at Astra was Director of Clinical Research, his first charge was to establish a Clinical Research Department. By 1977, his title had become Research Director and Executive Vice President, responsible for 105 positions in disciplines in the basic and clinical sciences.

In the year 1962, facing now Congressional amendments to the Food and Drug Act, Astra was fortunate since Dr. Covino had extensive experience with controlled experimentation and was current in his understanding of the rapidly changing clinical environment. From 1962 to 1979, during Ben Covino's stay, most of Astra's new drug applications were approved by the FDA, including the use of intravenous lidocaine as an antiarrhythmic agent, use of terbutaline as a bronchodilator and etidocaine as a long acting local anesthetic.

In the mid-sixties, Ben established a small clinical laboratory at Worcester's St. Vincent Hospital where he was able to carry out clinical studies on new compounds developed at Astra, such as the local anesthetic, etidocaine. In light of these new directions, Ben's interest moved away from cardiovascular physiology towards local anesthesia and pain. His professional focus also changed, from the role of research scientist to that of physician. Towards that end he took leave of his position at Astra and began an anesthesia residency at the Massachusetts General Hospital.

He completed the residency in the fall of 1977, following which he was appointed Professor of Anesthesia and Vice Chairman of the Department of Anesthesia at the University of Massachusetts Medical Center in Worcester, Massachusetts. On no other occasion in its long and illustrious history has the Department of Anaesthesia at the MGH had a resident graduate whose first academic appointment was that of Professor and Vice Chairman! In July of 1979, less than two years after completion of his residency, he returned to Harvard as Professor of Anaesthesia and Anesthetist-in-Chief at the soon to be Brigham and Women's Medical Center.

The task at the Brigham was a splendid opportunity and simultaneously a challenge. Not only must he succeed one of the true giants of anesthesia, Dr. Leroy D. Vandam, but he must preside over the unification of three separate and independent anesthesia services (Peter Bent Brigham, Robert Breck Brigham, and the Boston Hospital for Women) into a single, harmonious clinical and fiscal entity. Within the academic anesthesia community at Harvard, Ben Covino had the special capability of characterizing the contentious issues in a way that most often lead to harmonious solutions. Despite

his strong leadership there was minimal discord and much satisfaction in the conduct and growth of his department.

Ben Covino's role in developing and popularizing the widespread use of local anesthetics, activities for which he was recognized internationally, must be appreciated in historical context. In the early 1960s when Covino joined Astra, local anaesthesia in clinical practice was at a low ebb, anesthesiologists having gone down the path of polypharmacy made possible by the introduction of muscle relaxants. This trend had deleterious effects on the practice of regional anaesthesia since it required little in the way of practical skills of dexterity apart from those required to set up an IV line and intubate the trachea. The same technique could be used for virtually all operations, major and minor. In many departments the use of regional techniques, particularly spinal anaesthesia, was considered too dangerous. Those responsible for teaching trainee anesthesiologists often did not have the experience or motivation to include regional blocks. Indeed, in many countries the attitude to teaching regional anaesthesia was positively hostile. It is true to say that it had survived at all only because of the enthusiasm and dedication of a small number of individual practitioners who were able to teach by example and clearly show the advantages.

With the inauguration of the American Society of Regional Anesthesia, of which he was a founding member, Dr. Covino quickly appreciated the contribution the Society could make to the teaching and development of regional anaesthesia. His enthusiastic promotion of this subspecialty was effectively focused through this Society, of which he was an outstanding president in 1988-89 and a leader throughout his life. By the time he assumed the Chair at Brigham and Women's Hospital, anesthesiology in the USA was changing quite dramatically and the specialty started to enjoy a very considerable increase in the number of young doctors seeking training in it. Many seasoned attendings as well as neophytes made pilgrimages to Covino's department to be immersed in the practice and research of regional anesthesia.

At the outset of the Brigham and Women's years, Dr. Covino presided over a merger attended by enormous changes with a new building, many operating rooms, intensive care wards and a busy department of obstetrics and gynecology. A pain service, both acute and chronic soon grew in use.

Covino foresaw the importance of pain management as an emerging subspecialty in anesthesia. He encouraged the growth and academic development of the Pain Treatment Center and initiated the use of Patient Controlled Analgesia for postoperative pain relief. Considering the huge workload he carried, he never became the unapproachable "big man". Much to the contrary, his door always remained open to all his staff and his wise council was much sought after. He never talked down to anyone and, only if it was unavoidable, would he ever give a direct order without full discussion of the problems. He retained his appetite for science and new and interesting findings always brought him forward to the edge of his seat, eyes sharp for details of the data and brain engaged in mechanistic analysis. Despite the years as research administrator and clinical chairman, his passion as an investigator remained at the core.

If a person's importance in the world can be gauged by the consequences of his departure, then Ben Covino's import was profound and long lasting. His death left an emotional void in the lives of people throughout the world. Those of us who continue the work we had done with him, however, are counseled by the wisdom that he provided and are nurtured by the spirit of his life.

Respectfully submitted,

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