EMS EDUCATION IN THE EARLY 1970s WAS like a ship without a captain. Programs throughout the country developed their own paramedic training curriculum and used nursing and medical books and articles. In 1979, the paramedic education process found direction with a novel textbook, *Emergency Care in the Streets*. Authored by Nancy L. Caroline, MD, this landmark EMS text finally gave paramedic instructors and students a book they could call their own. It covered EMS and was written by a physician who understood the topic.

For longer than a decade, *Emergency Care in the Streets* was the only textbook available for paramedic training. Originally published by Little, Brown and Co., Boston, the textbook went through five editions. Today, the fifth edition remains available from Lippincott, Williams and Wilkins, Philadelphia.

Caroline now lives in Israel, practices palliative medicine and is medical director for the Hospice of the Upper Galilee. She recently took time from her practice for a brief interview.

**How did you become involved in EMS?** Peter Safar, who was then department chair in anesthesiology at Pitt [University of Pittsburgh] and, thus, my boss in the Critical Care Medicine program, talked me into taking over medical direction of the Freedom House Ambulance Service in 1974 and bringing it up to ALS level. It was an EMT-A-only service at the time. Freedom House had been the vehicle through which USDOT standards for EMT-A training and ambulance design were established.

**Who inspired you?** That one question would take a book to answer, but, specifically in EMS, Peter Safar and Eugene Nagel—my mentors and, to this day, dear friends. Also, the EMTs from the Freedom House Ambulance Service in Pittsburgh who were all very special human beings doing an impressive job in the streets against enormous odds.

**How were you able to keep revising the textbook once you emigrated to Israel?** The short answer is that I took my typewriter with me to Israel. Remember typewriters? A somewhat longer answer is that when I came to Israel, I became medical director of Magen David Adom (MDA), the Israeli equivalent of the Red Cross.

**What is the role of MDA in Israeli EMS?** MDA operates all the ambulances in the entire country, as well as conducting civilian first aid training at every level (from layperson to paramedic). So I was very much involved in day-to-day EMS—including, unfortunately, more mass-casualty incidents than I would have seen in a lifetime of EMS in the States—as well as EMT-A and paramedic training.

I also maintained my ties with the University of Pittsburgh (I’m still on the visiting faculty there) and made it my business to ride rescue in Pittsburgh and Boston (my hometown) whenever I was visiting the States. So I kept in touch with what was happening in the streets of the USA.

In addition, we arranged a whole variety of exchange programs whereby our paramedics would go to various EMS systems in the States and see how things were done there. We would host American paramedics here and, of course, medical friends and colleagues in the USA, like my classmate Mickey Eisenberg in Seattle. I made sure I kept abreast of EMS development in America.

**Where do you see EMS going?** EMS seems to be suffering from a lot of the same ills besetting the whole medical system—privatization, mergers, creation of huge, anonymous entities that are top-heavy with administrators. What will save EMS is the quality of the people who are doing the actual work in the streets—the EMTs and paramedics who are out there on the front lines day after day. Sept. 11 was a big consciousness-raiser for the general public with regard to EMS and other emergency services. Suddenly, everybody was saying, “These people are heroes.” But the EMS people were just doing the job they have been doing all along. They have been heroes all along; it’s just that no one seemed to notice it before.

---

**GUEST COMMENTARY**

A Tribute to Nancy Caroline, MD, & Emergency Care in the Streets

By Bryan E. Bledsoe, DO, FACEP, EMT-P, & Mick J. Sanders, EMT-P, MSA

---
Nancy Caroline is a Boston native who received her undergraduate degree from Harvard University, Cambridge, Mass. She attended medical school at Case Western Reserve University, Cleveland, and completed an internal medicine residency at University Hospitals of Cleveland. Following her residency, she moved to the University of Pittsburgh where she undertook a critical care medicine fellowship.

Peter Safar, MD, a noted expert and visionary in EMS and resuscitation, served as the founding chairman of the department of anesthesiology and critical care medicine (CCM) at Pitt, and Caroline’s immediate supervisor. The physician fellowship in CCM at Pitt was then, and remains, the largest in the world.

In 1974, Safar talked Caroline into taking over medical directorship of the Freedom House Ambulance Service, Pittsburgh. Freedom House Ambulance Service was developed by Safar in 1967 to care for Pittsburgh’s minority citizens and to test the new national guidelines for ambulance design and equipment and attendant training developed by the NIH/NRC under Safar’s leadership.

In 1966, Freedom House Enterprises took 44 unemployed men, ages 18 to 66 years, gave them 3,000 hours of emergency medical training and put them to work on ambulances. The program proved a big success. Through her association with Freedom House Ambulance in the early 1970s, Caroline learned the streets in an urban ambulance service. Through that work, she developed a deep love and respect for EMS and its workers.

In 1975, the U.S. Department of Transportation (DOT), under a federal grant, asked Safar to write a paramedic curriculum. Safar asked Caroline to take on this challenge. She had to evaluate virtually all curricula in use in the country for paramedic education at the time. She later stated, “They delivered every available paramedic curriculum to my office in a semi-trailer.” She set up the new curriculum in a modular format and presented the final document to the late Bob Motley, then in charge of the DOT curriculum development program.

In addition to the curriculum, Caroline delivered an enormous instructor’s manual and textbook. There were endless political delays in getting the textbook published. Finally, Motley told Caroline to go ahead and take the textbook to a commercial publishing house. Little, Brown and Co. was amenable to publishing the material, but wanted it rewritten and expanded for copyright protection. Caroline revised the manuscript, and Emergency Care in the Streets was born. Later, the government did publish the earlier draft of the book.

Caroline remained at the University of Pittsburgh for several years and then moved to Israel. Initially, she served as medical director for MDA, remaining involved in EMS. She later wrote a textbook for EMTs entitled Emergency Medical Treatment, also published by Little, Brown and Co.

Approximately 10 years ago, Caroline switched to the practice of palliative medicine and became the medical director for the Hospice of the Upper Galilee, where she remains today. The hospice cares for patients in the Galilee panhandle and northern Golan Heights of Israel. She also found time to write a textbook on palliative medicine, now in its second edition, Handbook of Palliative Care in Cancer, published by Butterworth-Heinemann.

Throughout her career, Caroline’s work in Pittsburgh, Israel, East Africa and the Galilee had one thing in common: She advocated putting patient management in the hands of highly trained, physician-guided non-physicians. As a tribute to her work, The Safar Center for Resuscitation Research and the Department of Anesthesiology at the University of Pittsburgh is establishing the Nancy Caroline Research Fellowship in Emergency and Critical Care Medicine. (For more information, contact the Safar Center at www.safar.pitt.edu).

Bryan Bledsoe, DO, FACEP, EMT-P, Remembers Emergency Care in the Streets

In 1979, when Emergency Care in the Streets came out, I was the EMT and paramedic program coordinator at Texas College of Osteopathic Medicine, Fort Worth, Texas, now the University of North Texas Health Sciences Center. We had Nancy Caroline’s 15-module paramedic curriculum for about a year and could occasionally get copies of parts of Caroline’s DOT manuscript.

It was exciting when the book finally came out. Although somewhat simple by today’s publishing standards, the book was like a bible to us. It was the first book exclusively for paramedics. And, as instructors, we knew that every bit of the text was fair game for exam question writers at the Texas Department of Health and the National Registry of Emergency Medical Technicians. After all, this was the DOT, and we taught it like a Bible college would teach the Bible. Before the course was over, my students could almost recite that book.

Without Caroline’s work & support, EMS would not have evolved into the profession it has become.

Like the Bible, we loved parts of it and hated others. After using the book for several years, I became somewhat frustrated by the poor-quality line drawings and lack of color illustrations. I would often give a copy of the book to guest physician instructors who would lecture in my program. I took more than a little teasing about the seemingly simple descriptions of “Adam and God” describing how the autonomic nervous system worked. I also took some grief about the smiling and mustached drug molecules that would interact with the various adrenergic receptors. But, as we say in Texas, “It wasn’t pretty, but it worked.” And it worked for more than a decade.

Even today, as I flip through the many EMS books published by Mosby, Brady, Delmar, and Jones and Bartlett, I invariably see an illustration or two that definitely originated from Emergency Care in the Streets. Today’s EMS books are Caroline’s legacy. Without her work and support, EMS would not have evolved into the profession it has become.
Caroline is one of our icons, and Emergency Care in the Streets is our Old Testament. Thank you Dr. Caroline.

Mick Sanders, EMT-P, MSA, Remembers Emergency Care in the Streets

When I began my paramedic training at St. Louis University Hospitals in 1978, our class had no official paramedic textbook. The first night of class, each of us received a large binder packed full of pages and pages of mimeographed copies of outlines, crude tables, drawings, ECG strips and drug doses. I still have that binder and its contents, and it measures about the same size (and weight) as the most recent paramedic curriculum document published by the DOT. For months, my classmates and I carried our binders to class and to our clinical sites, trying not to accidentally tear or misplace a page. After all, it was our paramedic textbook, and it was all we had.

A short time after I graduated from paramedic school, I saw a paramedic student at my ambulance base carrying the first edition of Emergency Care in the Streets. I remember looking at the red cover and the exciting title and thinking, “It’s about time someone wrote a book for us.” I bought the book soon afterward and used it as a reference for many years.

Like my colleague Bryan Bledsoe and most others, I found some content a little demeaning and unsophisticated. And I guess there was a time in my paramedic career when I was embarrassed by the way Caroline presented some of her material. But I now realize that even though there were no slick pages or color photographs in her book (and God and Adam and the talking alpha and beta heads remain in the most current edition), you could always count on one thing—the core content was excellent! In fact, I still refer to Caroline’s book regularly, and it sits on the same bookshelf that holds all the other reference books I consider important in my EMS library.

Thank you Dr. Caroline for your contributions to EMS. Where were you when I needed you in 1978?

Although competitors in the world of textbook publishing, Bryan Bledsoe and Mick Sanders combined their talents in this tribute to Nancy Caroline and Emergency Care in the Streets.

Bryan E. Bledsoe, DO, FACEP, EMT-P, is an emergency physician from Texas and author of Brady’s paramedic series, Paramedic Care: Principles and Practices and Paramedic Emergency Care. He has also authored several other EMS texts, numerous journal articles and is a popular speaker at EMS conferences. Contact him at bbledsoe@earthlink.net.

Mick J. Sanders is the author of Mosby’s Paramedic Textbook. Since 1978, he has worked in various health-care systems as field paramedic, emergency department paramedic and EMS instructor. For 12 years, he served as a training specialist with the Missouri Department of Health, Bureau of Emergency Medical Services. Contact him at msanders@charter.net.

We would like to thank Peter Safar, MD, and the Safar Center for Resuscitation Research for their assistance with this article and for providing the photographs of Dr. Caroline.