

Elizabeth and Mark Rogers, MD '69, on the Yangtze River during a recent trip to China



Ahead of the Curve

Over five decades, Mark C. Rogers, MD '69, MBA, built a career by anticipating change, from pioneering pediatric intensive care to reshaping healthcare leadership and biotechnology.

BY RENÉE GEARHART LEVY

Every year, thousands of critically ill and injured children's lives are saved by the care they receive in hospital pediatric intensive care units.

Inside those units, teams of highly specialized physicians and nurses manage children on ventilators, monitor fragile heart rhythms, respond to catastrophic injuries, and guide families through life-threatening infections, organ failure, and complex surgeries. The specialty is now so fundamental to modern medicine that it feels almost impossible to imagine a time when it barely existed at all.

But in the 1960s into the late 1970s, there were no established pediatric intensive care units. No formal fellowship programs, board certifications, or specialized textbooks. Critically ill children



Frank A. Oski, MD, chair of the Johns Hopkins Department of Pediatrics, the Honorable Harry R. Hughes, Governor of Maryland, and Mark C. Rogers, chair of the Department of Anesthesiology and Critical Care Medicine and director at the dedication of Hopkins' new Pediatric Intensive Care Unit in November 1985. Previously, Dr. Oski was the longtime chair of Pediatrics at Upstate Medical University.

were often treated in spaces adapted from adult intensive care units, using systems designed for adults.

Mark C. Rogers, MD '69, MBA, looked at that absence and saw the future.

"I was certain that there had to be a specialty," he says.

Over the next several decades, Dr. Rogers helped create it.

At Johns Hopkins, he helped establish one of the nation's earliest pediatric intensive care units and became one of the field's foundational architects. He

helped build the academic and organizational framework that transformed pediatric intensive care from an emerging concept into a globally recognized specialty, creating fellowship programs, helping establish board certification standards, organizing an international congress, and authoring the landmark

Rogers' Textbook of Pediatric Intensive Care, now in its sixth edition.

Today, pediatric intensive care units operate in hospitals around the world, saving countless children who, a generation earlier, might not have survived.

For Rogers, that legacy still carries the deepest meaning.

"There are thousands and thousands of children alive today, not because of anything I personally did, but because my role helping start pediatric intensive care," he says. "For me, that provides an enormous amount of satisfaction."

The achievement is all the more remarkable because it represents only one branch of an unusually expansive career.

Over more than five decades, Rogers evolved from

pioneering pediatric intensivist to hospital executive, biotechnology entrepreneur, and corporate leader. Long before physician executives became commonplace, he earned an MBA while serving as a senior leader at Johns Hopkins, later becoming vice chancellor and CEO of the Duke University Hospital system. He eventually moved into biotechnology, helping guide companies focused on everything from leukemia therapies to glioblastoma treatments.

Rogers insists those shifts were never reinventions.

"People think that I changed," he says. "But I didn't change. I was like a tree, branching out to go toward the light, which is whatever the most interesting thing was in the future."

Oddly enough, that philosophy sprouted from medieval history.

Raised in the Bronx by parents with no higher education, Rogers arrived at Columbia University on scholarship intending to pursue a traditional pre-medical education. While fulfilling his liberal arts requirements, he found himself captivated by medieval history and the study of how societies and institutions evolve over long stretches of time.

"It taught me that the world changed over time in periods of decades and centuries and that if you planned your life for only the immediate future, you were going to be surprised and disappointed," says Rogers, who majored in the subject.

That long-view perspective shaped how Rogers approached opportunity throughout his career, often recognizing where medicine was heading before many of his peers.

But his original pull toward medicine was far more personal.

Rogers had been attracted to the field by the example of a physician uncle. "He was the most respected member of the family by far," Rogers says.

At Upstate Medical University, Rogers initially became interested in cardiology and cardiac arrhythmias. A summer research experience led him to apply for a competitive NIH-supported program that allowed him to extend medical school by a year while conducting research focused on the interaction between the nervous system and heart function.

Rather than viewing the additional training time as a burden, Rogers embraced it. "I knew it would make my life more interesting," he says.

Two Upstate mentors proved especially influential.

Julius Richmond, MD—then chair of pediatrics and later U.S. Surgeon General—was conducting research on sudden infant death syndrome and autonomic nervous system disorders, which aligned closely with Rogers' own growing research interests.

"He steered me toward pediatrics, and we developed a decades-long relationship," Rogers says.

Another mentor, David Streeten, MD, left a lasting mark through his insistence on intellectual rigor and

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Left: Dr. Rogers and his family with his portrait at the Johns Hopkins School of Medicine

Below: Dr. Rogers served as a visiting professor at Beijing Children's Hospital earlier this year. He is pictured with the department chair.

academic ambition. *The New England Journal of Medicine* came out on Wednesdays, and medical students who rounded with Streeten on Thursdays quickly learned they needed to have read it.

"He would check us that way," Rogers recalls.

But it was a casual comment Streeten made that stayed with him for decades.

"Wouldn't you like to go to a place where you can read next week's *Journal*?" he asked.

For Rogers, the comment became shorthand for pursuing institutions and opportunities that were shaping the future of medicine rather than simply consuming it.

Rogers completed a pediatric internship at Massachusetts General Hospital followed by a pediatric residency at Boston Children's Hospital. Along the way, he recognized that critically ill children required specialized care environments tailored specifically to them, yet no true specialty existed to provide it.

"It didn't bother me that it didn't exist because I was certain it would develop," he says.

Working toward becoming a pediatric intensivist, he entered a pediatric cardiology fellowship at Duke University Medical Center followed by a two-year anesthesiology residency.

"I needed those critical skills in ventilator management, resuscitation, and intensive patient monitoring," he says.

Combined with his background in pediatrics and cardiology, the additional training positioned him to pioneer pediatric intensive care medicine.

At Johns Hopkins, where he was recruited by a former colleague who had become chair of pediatrics, Rogers helped launch the pediatric intensive care unit and worked to establish the broader infrastructure needed for the field to mature.

He understood instinctively that specialties do not



emerge through clinical work alone. They require research programs, fellowship training, textbooks, professional organizations, and certification standards. Rogers helped build all of them simultaneously.

The field expanded rapidly. Within years, pediatric intensive care became an established specialty throughout the United States. Internationally, hospitals began adopting similar models, and Rogers traveled extensively, lecturing throughout Europe, Asia, and the Middle East as countries developed their own pediatric intensive care systems. He even was requested by UNICEF to teach in Iran.

By age 37, Rogers had become a full professor, chair of anesthesia and critical care medicine and associate dean at Johns Hopkins. Many physicians might have remained comfortably within academic medicine for the entirety of their career. Instead, Rogers was ready for another evolution.

By the late 1980s, he had begun to see another transformation coming—not in the ICU, but in the business of medicine itself.

Recognizing that healthcare was becoming increasingly shaped by economics, organizational systems,

and business strategy, he enrolled in an executive MBA program at the University of Pennsylvania's Wharton School of Business while continuing his leadership roles at Hopkins.

At the time, physician executives with MBAs were rare. But Rogers once again believed medicine was changing in ways others had not fully acknowledged yet.

"At Hopkins, everybody laughed at me," he says. "But I recognized that I didn't understand the language of business as it applied to medicine. If you're going to administer a hospital of a thousand beds, you need to have administrative skills and understand the financial modeling."

The MBA led to Rogers' recruitment to Duke University, where he became vice chancellor and CEO of Duke Hospital and Health Network, overseeing one of the country's leading academic medical systems.

But even then, Rogers continued looking ahead. Another frontier was beginning to emerge: biotechnology.

In the mid-1990s, Rogers was recruited by Perkin-Elmer, which was working with the NIH to sequence the human genome, to help guide the company during a revolutionary era in science and medicine.

"I was brought in to help restructure the company to make it possible to go into the business of using DNA to transform medicine," he says. "I was not an expert on the DNA technology, but I was an agent of change."

Eventually, he moved into entrepreneurial biotechnology ventures, helping launch companies focused on translating scientific discoveries into therapies. Among the most notable was work involving arsenic trioxide as a treatment for leukemia after remarkable remissions were observed in Chinese patients.

The transition required Rogers to master entirely new areas, including patents, manufacturing, and FDA regulation. But by then, adapting to emerging fields had become second nature.

Today, he remains active as chairman of Gibson Oncology, which is conducting Phase II clinical trials involving treatments for glioblastoma.

"I like to joke that I used to have three companies: one that I was starting, one that I was running, and one that I was selling," Rogers says. "And now I'm just down to one company, so I have reduced the workload a lot."

Over the course of his career, Rogers published more than 125 papers and authored or edited 12 books. He has received numerous honors, including election to the National Academy of Medicine. The Mark C. Rogers Chair in Anesthesiology and Critical Care Medicine at Johns Hopkins is named in his honor.

His influence on the field of pediatric critical care endures. Decades later, he continues receiving invitations to lecture internationally because of his role in shaping the specialty, lecturing last year in Azerbaijan

LEADERSHIP IN MEDICINE

Founded in 1870 as the Institute of Medicine, the National Academy of Medicine is one of three academies that make up the National Academies of Science, Engineering, and Medicine in the United States. The National Academies are private, nonprofit institutions that work outside the government to provide objective advice on matters of science, technology, and health. Members are elected annually in recognition of outstanding professional achievement.

Upstate Medical University alumni who have been elected to the National Academy of Medicine include:*

Warren Winkelstein, MD '47**

Frank Young, MD '56**

Samuel Hellman, MD '59

Samuel O. Thier, MD '60**

John G. Bartlett, MD '63**

Elizabeth McAnarney, MD '66

Mark C. Rogers, MD '69

Nancy Tarbell, MD '79

Harry C. Dietz, MD '84

Helen Burstin, MD '87



**If you are a member of the National Academy of Medicine and your name is not listed, please contact the Medical Alumni Office at medalum@upstate.edu*

***deceased*

and earlier this year in Beijing.

Still, Rogers' refusal to remain static reflects the broader philosophy that has defined his life. He says he "craves change," though he credits the stability of his personal life for making continual reinvention possible.

He and his wife, Elizabeth, a gastroenterologist and geriatrician and former associate dean at the University of Maryland, raised two children and now enjoy five grandchildren. Together, they have traveled extensively and sailed throughout the Mediterranean and Caribbean.

Looking ahead, Rogers sees artificial intelligence as medicine's next major transformation, though he believes technology alone will never replace human judgment or collaboration.

"Artificial intelligence will help, but in the end, you need to know how to work with people and to form teams to do the work and get things done," he says.

For younger physicians entering a rapidly changing profession, Rogers offers advice shaped by decades spent repeatedly stepping into unfamiliar territory.

"Be open-minded, be willing to take chances, and be willing to risk failure," he says. "Because unless you do that, you're not going to do anything important." ■