

BLUE SKIES FACULTY FOLIO

INSPIRED





Embracing Change

A lifelong journey in emergency medicine and leadership

As a medical student in Philadelphia in the early 1990s, Richard Zane initially had a “preconceived notion” that he would be a small-town physician. By his own admission, he then “wandered a bit” through various clinical rotations, unable to decide on his future path.

One day a random moment changed that. Zane was innocently walking through the hospital’s emergency department, on his way elsewhere, when an attending physician asked him what he was doing. During a brief conversation, the physician asked Zane a pointed question: What are you gonna be? When Zane expressed his indecision, the attending made a suggestion: Why not emergency medicine?

The blunt question set the stage for Zane’s career. He went on to complete his residency training and a fellowship in emergency medicine at Johns Hopkins University. He was

attracted to a specialty defined by change, he said.

“In emergency medicine, everything felt new,” Zane recalled. “It was the variety and constant intensity that I liked.”

SHAPING EMERGENCY MEDICINE

More than 30 years after the chance encounter in the ED, Zane is still ready for change. On August 1, he becomes the chief medical officer for UHealth, while continuing in his role as the system’s chief innovation officer. The new appointment is the latest stop in a career defined by Zane’s eagerness to take on new challenges, including becoming the inaugural chair of the Department of Emergency Medicine at the University of Colorado School of Medicine, a post he held for 13 years to the day.

He will also remain as a professor of Emergency Medicine with the



school and continue to practice, further reflecting his commitment to the discipline that opened his eyes to the complexities of health care.

“Emergency medicine lies at the fulcrum of inpatient and outpatient care. It allows one to see everything across the entire spectrum of the health care, from clinical care to hospital operations to finance,” he said.

Zane built his expertise in all those areas during a 14-year stint in Boston at Brigham and Women’s Hospital and the non-profit Partners Healthcare (now Mass General Brigham), a multi-hospital integrated system.

He broadened his perspective as an emergency medicine physician, from organizing bustling hospital EDs to developing emergency medical services and emergency preparedness programs to respond to local, national and international disasters. Those efforts included setting up a critical care transport program and patient transfer center while serving as medical director for emergency preparedness and biodefense for Partners Healthcare and vice chair of Brigham and Women’s department of emergency medicine.

Zane’s emergency preparedness work had great reach. For example, with a grant from the federal Agency for Healthcare Research and Quality (AHRQ), he led a team that produced the Hospital Evacuation Decision Guide in 2010. That grant and several others funded by AHRQ and another by the World Health Organization enabled Zane and his colleagues to “build tools used in real time in disasters globally,” he said.

LEADING THROUGH CHALLENGES

In 2012, it was time to “look for the next opportunity,” Zane said. What would it be? Chief medical officer? Position with a private equity firm? Work in research and consulting?

No.

Zane moved west for fresh challenges and stepped in to chair the newly created Department of Emergency Medicine, at that time a tiny new island on the burgeoning University of Colorado Anschutz Medical Campus.

The chance to be the first department chair was only one attraction, Zane said. The University of Colorado Hospital (now part of UHealth) was in the midst of a major physical enlargement of its

emergency department. Its aim was to address severe capacity problems that caused it to divert ambulances much too frequently, board patients who should have been sent to inpatient floors, send patients home without being seen, and leave tasks unfinished.

The “exhausting environment” of the hospital’s ED had discouraged many in 2012, Zane recalled. Asked about the problem shortly after he accepted the position, he was blunt.

“IF WE DON’T REDESIGN THE WAY WE DELIVER EMERGENCY CARE, A LARGER ED WON’T SOLVE ANYTHING. IT WILL JUST BE A BIGGER MESS.”

He didn’t shrink from the challenge, and his approach to addressing it provides a window into his inner drive. “It was a job that was, shall we say, fraught with opportunity,” he said. “There was lots of room for optimism and lots of chances to improve.”

That attitude defines Zane, said Steve Hess, chief information officer for UHealth. The two were to work closely in building UHealth’s nationally recognized Virtual Health Center, which delivers an integrated array of remotely delivered health care services to patients.

“Dr. Zane runs toward the disaster not away from it,” Hess said.

Zane led the charge that transformed the ED, but at the same time his years of innovative work in Boston had taught him that the effort would be fruitless without the support of physicians, nurses and staff who were willing to follow him. He found many who were “hungry for change,” Zane said.

“WE HAD GREAT PEOPLE,
AND WE RECRUITED OTHER
GREAT PEOPLE TO JOIN
US IN TURNING THE SHIP
AROUND.”

Zane hired an industrial engineer and set forth to deconstruct the way the ED delivered patient care. He and his team analyzed every task in terms of what it accomplished and how long it took to do it – not only in isolation but more importantly in the context of the tasks occurring in parallel at the front, main and back ends of the ED. They tested changes with tabletop exercises and live drills followed by critical evaluations to identify opportunities for further improvement.

PEOPLE AT THE CENTER

For every change made in the way the ED functioned, Zane said, the team applied a fundamental question: “What does it look like through the lens of the patient? Patients have to be at the center of everything we do. We don’t do things because they’ve always been done that way. We do what is the right thing to do.”

In addition, Zane recognized that for patients to fully benefit from a redesigned ED, every person providing care had to work at the top of their scope. Zane found that had not been the case before he arrived. Nurses spent less than half their time providing the patient care they had trained for. Instead, they often transported patients, cleaned rooms, and fetched equipment.

“It was not respectful, and it was not efficient,” Zane said. The redesign committed to creating an environment in which every person working there did the jobs that made the best use of their skills.



In the end, Zane and his team met the challenge. Their work produced an ED that “sets the standard for emergency care,” he said. He proudly noted that there has not been a single ambulance diversion since the redesign.

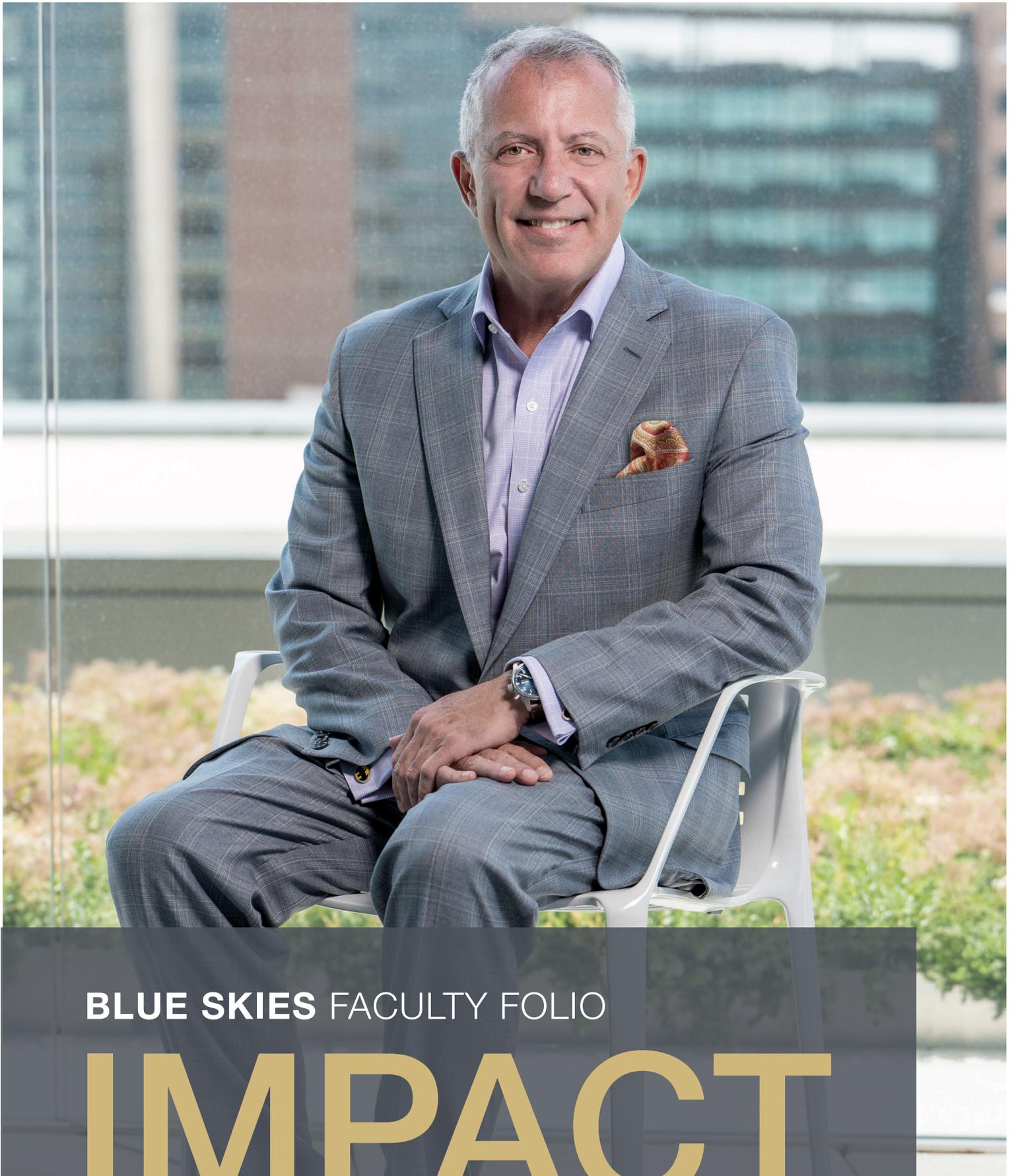
In the decade-plus that followed, Zane played a key role in helping the Department of Emergency Medicine and UHealth successfully meet many more challenges, including building a patient referral and transport system; using telehealth to address capacity problems and improve patient care; developing innovative responses to protect patients during the COVID-19 pandemic; and incorporating artificial intelligence into clinical care decisions.

Every project he has undertaken has involved change – a constant

in his professional life ever since his fortuitous trip through the ED as a medical student.

“A constant across everything I have done is change management,” Zane said. Asking people to think about and do things differently is nearly always uncomfortable, he added, but it can be accomplished through collaboration.

As he shifts from top academic emergency physician leader in the CU School of Medicine and takes over as the leading physician executive at the UHealth system, he will “engage people in change, so that they know they are not helpless, and that we are not doing things to them, but with them,” he said. “That applies to science, education, emergency care, virtual care and innovation.” ■



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IMPACT

Driving Impact

Transforming emergency medicine and virtual care with vision and collaboration

Dr. Richard Zane arrived on the University of Colorado Anschutz Medical Campus from Boston in 2012 eager to drive ambitious change. As a self-described “disruptor,” motivated by his early vow to “change the world,” he fit right in.

Zane became the inaugural chair of the Department of Emergency Medicine at the University of Colorado School of Medicine during a time that was rife with promise and possibility. The University of Colorado Hospital was expanding its capacity-challenged emergency department and constructing a new inpatient tower atop it. The hospital – the region’s only academic medical center – had recently joined with Poudre Valley Health System to form UCHHealth.

BUILDING A TEAM

Zane quickly became a key contributor to the changes, leading a process to transform patient care in the ED and organizing a systemwide patient referral and

transport system. That was only a start. Zane joined with likeminded colleagues to find and launch innovations in stroke care, virtual health, remote patient monitoring, clinical decision support, prescriptive analytics and more.

Each success was a waystation in a continual search for ways to improve patient care, said Zane, who becomes chief medical officer for the UCHHealth system August 1. He stresses that the advances were not one-man achievements but rather the product of amazingly hard work by talented people who shared his drive and vision from the day he arrived on campus and recruited others to join them.

“It became a self-fulfilling prophecy,” Zane said. “The more we set our vision, the more attractive we became, and the more smart, creative and innovative people we had come and stay. Our success was having smart people at the small table making big decisions.”

Zane said he is “exceptionally





proud” of leading a remarkable team who created a world class clinical, educational and research environment that encourages faculty and staff to take risk, think outside the box, thrive and lead.

“If I can take credit for anything, it is that we were able to grow, recruit and retain the right people, as well as support and empower them.”

“I DON’T HIRE SMART PEOPLE AND TELL THEM WHAT TO DO. I HIRE SMART PEOPLE SO THEY CAN TELL ME WHAT TO DO,” HE SAID.

RESEARCH AND RECOGNITION

Under Zane’s leadership, the Department of Emergency Medicine has become a top-10 producer of academic research, thanks to the steady flow of faculty his team recruited, encouraged and supported to build expertise in their chosen areas of interest.

A few examples stand out among many. Two faculty members, Dr. Jay Lemery and Dr. Marian (Emmy) Betz, have been elected to the National Academy of Medicine. Dr. Adit Ginde, in addition to

creating the strategy for building an emergency medicine research powerhouse, played a key national leadership role in the development and launch of Operation Warp Speed, which brought the COVID-19 vaccines to the public, and has been tapped to lead the School of Medicine in clinical research and pioneer adaptive clinical trials.

Dr. Vik Bebarta, who will succeed Zane as Department of Emergency Medicine chair, founded and directs the CU Center for COMBAT Research, whose team collaborates with the military on solving its highest-priority medical challenges. His work has been recognized by the White House, Congress and the highest levels of military leadership.

Lemery, professor of Emergency Medicine and chief of the Section of Wilderness and Environmental Medicine, noted that by “standard metrics, including patient outcomes, research dollars, and the palpable success of students, residents and Fellows,” Zane was a highly successful department chair. But Lemery noted several “unexpected, distinctive superlatives” that define Zane’s success.

These include building a department distinguished by:

- Earning national awards for the most full professors in the United States who are women
- Creating an ED whose novel clinical processes have been witnessed and emulated by numerous peer departments nationally
- Nurturing and facilitating faculty at all levels to develop as national and international leaders.

Don Elliman, who became chancellor of the University of Colorado Anschutz Medical Campus the same year Zane arrived, said Zane’s influence on his specialty and on the entire campus was and remains a powerful force.

“His passion for turning ambitious ideas into tangible results is unmatched, and those who have had the opportunity to work alongside him are better for the experience,” Elliman said.

“We have Rich to thank for his transformational leadership in emergency medicine, which has set a national standard for innovation in emergency care.”

Zane has also been a powerful proponent for change across the spectrum of health care delivery. For example, as the inaugural chief innovation officer and cofounder of the UHealth CARE Innovation Center, he teamed with UHealth Chief Information Officer Steve Hess and Amy Hassell to launch the UHealth Virtual Health Center.

Zane and Hassell, who is now chief nursing officer of the center, were among the co-authors of a 2024 article that summed up the need for virtual care. “In the face of formidable healthcare challenges, such as staffing shortages and rising costs, technology has emerged as a crucial ally in enhancing patient care,” they wrote.

VIRTUAL HEALTH SUCCESS

Today, health system leaders from all over the world visit the center to learn how to do what these leaders and their teams pioneered, but it started slowly, with three UHealth hospitals offering remote routine and urgent care patient visits, along with virtual telemetry and ICU

monitoring, to address increased capacity and staffing demands. In the first month, the center had fewer than 20 remote visits.

Zane said the numbers didn't discourage the team because the concept was sound.

“ANYTHING THAT EXISTS IN BRICKS AND MORTAR NEEDS TO EXIST IN THE VIRTUAL ENVIRONMENT,” HE SAID.

The team proved that true over the next several years. By 2023, the Virtual Health Center served a dozen UCHHealth hospitals and substantially expanded its services to virtual behavioral health visits and remote monitoring of patients with conditions like diabetes. Nurses and physicians with specialized expertise in a variety of conditions remotely monitor patients through an “eye in the sky” that helps bedside providers care for their patients.

The goal: alert those providers when the center's technology detects signs that a patient's condition is deteriorating so that steps can be taken quickly to stabilize it.

The care of patients with sepsis offers one nationally recognized example of the Virtual Health Center's success in helping to save lives. Sepsis occurs when the body launches an extreme inflammatory response to infection. It is vital that providers quickly detect its warning signs, such as rapid changes in breathing, blood pressure and temperature, and promptly begin administering a treatment protocol.

That's very difficult to do in a busy hospital environment, but the Virtual Health Center provides the vital assist through a combination of

artificial and human intelligence that sifts through the fluctuating stream of a patient's vital signs to find the true signals of sepsis.

“Sepsis is hard to detect, because it's subtle until it's not,” Hassell explained in the summer of 2024. “It is high consequence, and it has time consequence – typically, for every hour that you get antibiotics, your mortality improves by 10%. You want to find it as early as you can.”

By one estimate, the Virtual Health Center helped UCHHealth hospitals save 1,000 patient lives from sepsis and deterioration in a year. The combination of a sensitive algorithm and a concentration of people monitoring at-risk patients has created a system that is “highly sensitive, more specific and more timely,” Zane said.

The collaborative work on the Virtual Health Center paid off in another crucial way when the COVID-19 pandemic began its nationwide sweep early in 2020. While many hospitals and systems struggled to meet patient care demands in the new, isolating environment, UCHHealth and CU already had the infrastructure to provide remote patient care.

“During the pandemic, we didn't stand up anything new,” Zane said. “We added more people, chairs and monitors. We had the processes, technology and devices to increase capacity.”

VISION AND DISRUPTION

Bringing his many projects to fruition has required change, and Zane acknowledges that asking people to think and do things differently can lead to discomfort.

He calls himself a “disrupter” with



pride. But he credited his many collaborators for joining him in forging a new future for the health care system.

“Dr. Zane is a visionary,” Hess said. “The journey toward the vision doesn't always go as planned. The difference between Dr. Zane and other visionaries is that he can and will execute his plan.”

As Bebart becomes chair of the Department of Emergency Medicine, Zane urges him to look at the job with fresh eyes, just as Zane did for 13 years, vowing not only “to change the world,” but also to endlessly move “onward” to face new challenges.

“I hope he has sufficient freedom to change everything and take a new look at anything and everything,” he said. “I would love for him to take advantage of what is great while recognizing what needs to be changed, started, grown or made bigger or smaller. My wish is that he feels confident in defying convention and disrupting. Success is rented, not owned, and rent is due every day.” ■