



Dietrich Jehle, MD, has changed the way emergency medicine is practiced

Innovator AND MOTIVATOR

You might say that Dietrich Jehle's career in emergency medicine got off to a flying start.

In the spring of 1979, having just graduated from the University of Virginia (UVA) medical school, Jehle boarded a plane

bound for Germany to visit his parents. As the jet reached cruising altitude, a flight attendant got on the loud-speaker and asked if there was a doctor on board.

Answering the call, the newly minted MD anxiously made his way to the front of the cabin. There, one of the passengers had stopped breathing and was turning blue in the face. Jehle felt for a pulse—none. He opened the drug box—inside was only oxygen, ammonia capsules and aspirin. By the time an internist belatedly joined Jehle, he had already eased his patient out of his seat and to the floor.

"I said [to the internist], 'Go ahead—do mouth to mouth,' and he started that, and I initiated compressions, and we got him back," Jehle recalls. The revived patient was asked to deplane at Iceland for further medical treatment; the members of the flight crew were so grateful to the two doctors that they offered them five cocktails apiece.

Three decades later, the accomplishments of the vice chair of the medical school's Department of Emergency Medicine have spread well beyond the confines of a 747. Jehle (pronounced Yea-la) is widely considered the pioneer in the use of bedside emergency ultrasound in the United States. His endeavors in that field, including coauthoring the first textbook on trauma ultrasound, have turned a once-unheard-of practice into a standard of care in emergency rooms across the country.

Throughout the period that he was advancing this cause, Jehle also emerged as a pivotal figure in the revival of Erie County Medical Center (ECMC), the primary UB site for emergency medicine, as well as the location for the region's only level 1 trauma center. Before being promoted to the position of associate medical director at the medical center, he served 17 years as director of its emergency department.

ECMC's former chief executive officer, Michael Young, assesses Jehle's contribution to the hospital's turnaround this way: "Without his singular support, ECMC would, frankly, not have been able to be in existence, because the emergency department kept the hospital viable."

STORY BY NICOLE PERADOTTO | PHOTOS BY DOUGLAS LEVERE

A FAMILY OF MENTORS

Even with his wide-ranging administrative duties at ECMC and his teaching responsibilities for UB, Jehle continues to make time to research the mysteries that fascinate and perplex him within the realm of emergency medicine. Recently, for example, he found himself wondering why pericardial fat looks different on an ultrasound than the fat around other organs. Seeking an answer led him, among other places, to the grocery store, where he purchased sticks of butter and margarine upon which he conducted ultrasound exams.

“One thing that’s always been important to me is to ask, ‘Why are things like that?’” says Jehle, who is currently finishing a textbook on emergency eye ultrasound. “If you always have an open mind and you always ask questions, you come up with some very interesting observations.”

Asked about the roots of his probing mind, Jehle points to the myriad academic degrees leafing his family tree. His maternal grandmother received her PhD in zoology during the 1800s, one of the first female doctorate recipients in her native Germany. His grandfather was a law professor and his mother, Dieta von Kuenssberg, was awarded a PhD in German literature. However, with the Nazis then in power, she was forbidden to teach in the country because she wasn’t

Aryan, so in 1939 she emigrated to England and then to America.

It is Jehle’s father, though, a prominent physics professor who studied under Albert Einstein, who served as the most influential model for his son’s inquisitiveness. “To be successful in research, you have to have a certain amount of intellectual curiosity. I thank my father for that,” Jehle says. “He was always excited about what I was doing. He would always ask me, ‘What are you working on?’ ‘What are you learning?’ ‘What’s this?’ ‘What’s that?’”

Staunchly anti-Nazi, Herbert Jehle was interned for two years in a concentration camp in occupied France for rejecting positions in Germany’s armament industry and refusing military service before the Gestapo tribunal. “He’s one of my heroes for recognizing what was right and wrong,” Jehle says of his dad, who died in 1983. “He clearly made the right decision, but at a tough time, when it would have been much easier to work in the German armaments industry.”

In September of 1941, his father was able to escape and immigrate to America where he joined a distinguished group of refugee scholars teaching at Harvard University.

When Jehle was born in 1954, his parents, who were teaching at the University of Nebraska, decided to name him

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after a martyr and friend: Dietrich Bonhoeffer, the German theologian who was hanged for his participation in a plot to kill Adolf Hitler.

In 1958, the family moved from Nebraska to Charlottesville, Virginia, where Jehle’s mother taught at the UVA and his father at George Washington University. With the harsh memory of the Nazi regime still fresh in their memory, the couple immersed themselves in the civil rights movement, helping desegregate several local restaurants and, in the process, giving their son a keen understanding of their moral fiber.

“We used to take our car [to protest segregation] because it was kind of ratty. That way, if it got dented or burned or dinged up, it wasn’t a big deal,” recalls Jehle, who counts among his mementos of that era a Martin Luther King Jr. autograph.

While Jehle was pursuing his undergraduate degree at UVA, his parents moved back to Germany, where his father had accepted a professorship in Munich. Even with an ocean separating them, Herb Jehle continued to encourage his son’s academic pursuits, nudging him to major in math and follow his interest in medicine to its logical conclusion.

Jehle’s professors in medical school, on the other hand, “strongly discouraged” him from pursuing what interested him the most: a residency in emergency medicine. “At the time there were only 10 emergency medicine programs,” he explains. “They just weren’t that well developed then.”

Nonetheless, it was too enticing for Jehle to resist.

What was it about that specialty that appealed to him?

“People who go into emergency medicine often like a lot of fields in medicine,” he says. “I’ve always liked surgical procedures, but I also like medicine because it’s a little bit more cerebral. You work your way through problems. Emergency medicine combines a little bit of both, so I found that very attractive.”

Completing his residency in 1982 at the University of Pittsburgh, Jehle went on to help start a training program in emergency medicine at that city’s Allegheny General Hospital. One of his residents was Anthony Billittier, MD, whom he later hired at ECMC and who went on to become Erie County’s Commissioner of Health.

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Anthony Billittier, MD

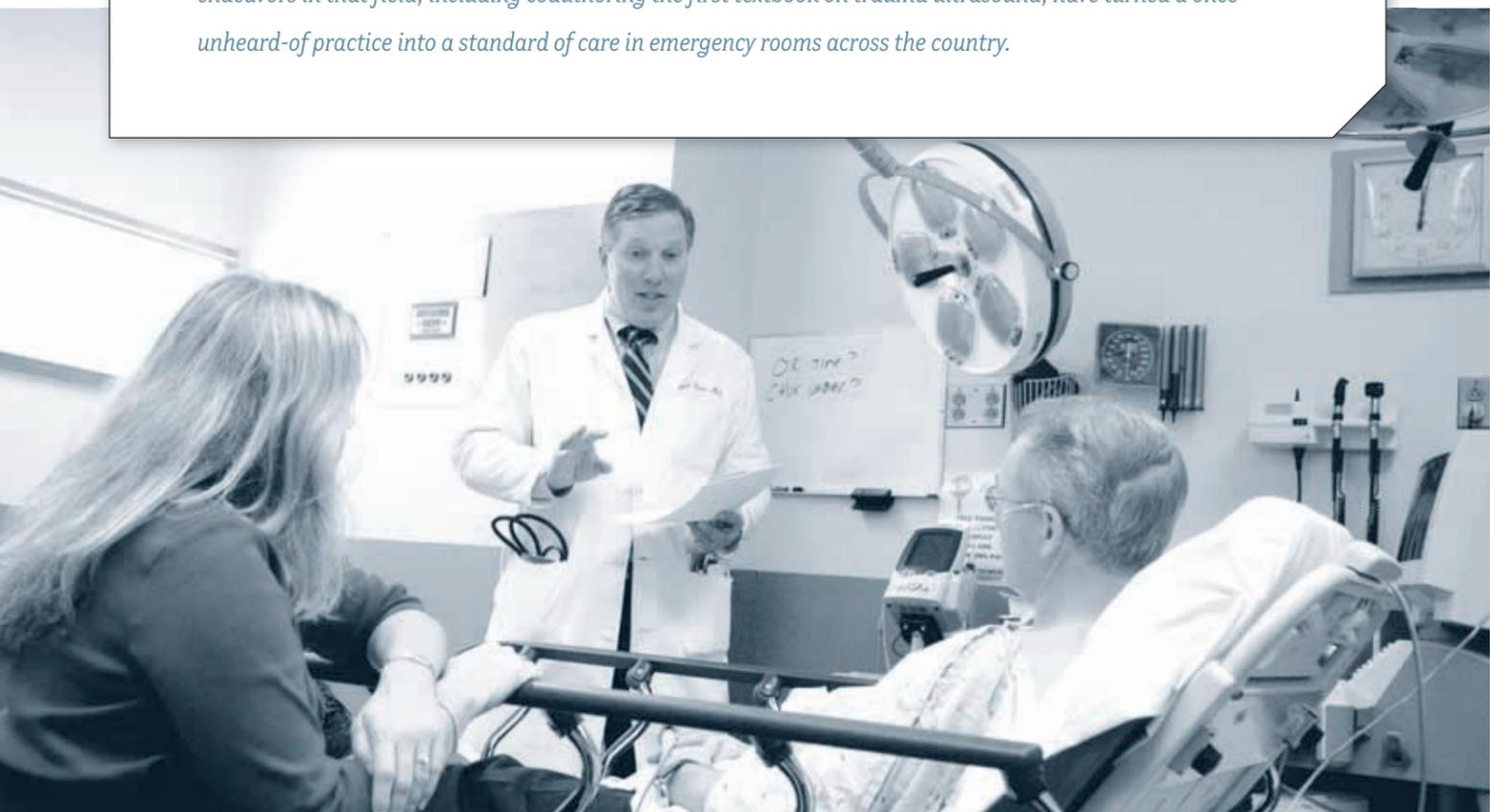
BUILDING, INNOVATING, TRAINING

Today, Billittier recalls that when Jehle arrived at ECMC in 1990 to help start a training program in emergency medicine, he had a tall order to fill; namely, establishing emergency medicine as a viable specialty.

“At the time there were hardly any emergency room physicians in Buffalo,” says Billittier. “The emergency department was split in half, with one half staffed by internists and the other by surgeons. Just the fact that he, as an emergency physician, came to Buffalo was very novel at the time—and that’s too mild a word.”

“He had to lay the groundwork to have emergency medicine accepted here,” he adds. “He had to convince a lot of people that ER physicians are very capable of the initial stabilization of trauma patients. As part of that, he eventually introduced the use of ultrasound in trauma patient evaluation, a bedside test that we now do routinely on patients.”

Jehle’s interest in bedside emergency ultrasound dates back to 1982, when he toured several hospitals in Munich with his father. “It was there that I saw the first ultrasound machines up on the floors, and I found the concept intriguing,” he says. “You didn’t see that at the time on the floors of U.S. hospitals. Although I didn’t do anything immediately



with it, I remember saying, 'They do that in other parts of the world. Let's see if we can do it here.'"

That's just what he did—initially in Pittsburgh and shortly thereafter in Buffalo, where the first trauma ultrasound in America was performed by UB doctors.

In his effort to promote trauma ultrasound as the standard of care, Jehle conducted some of the country's first investigations in the field, including the first study on the use of ultrasonography in blunt abdominal trauma by emergency physicians in the United States, and the first emergency medicine study of the use of bedside ultrasound to evaluate gallbladder, aortic, renal and first-trimester pregnancy pathology.

He has produced seminal literature in the field, including coauthoring the first textbook on ultrasound in emergency medicine as well as "Ultrasound in Trauma: The FAST Exam"—short for Focused Assessment with Sonography for Trauma—the bedside test that Billittier referred to, which has become incorporated into advanced trauma life support as an integral component in the care of the trauma patient.

Under Jehle's guidance, UB offers medical residents at ECMC the only training program in emergency ultrasonography in the country that prepares their residents to sit for the American Registry of Diagnostic Medical Sonographers (ARDMS) certification examination. "We have an ultrasound track so all residents get exposed to ultrasound their first year," Jehle explains. "If they have a particular interest in it, they can do a later elective rotation." Once that's completed, residents can sit for the ARDMS exam.

Over the last 17 years, Jehle has been training academic emergency physicians from around the United States and Canada through a mini-fellowship in bedside

sonography. Consequently, some 20 percent of all emergency ultrasound fellowship directors in both countries received part of their ultrasound training in Buffalo. More recently, he set up a full-time emergency ultrasound fellowship at the medical school.

"Ultrasound in emergency medicine was in its infancy when he started teaching people, and his work has really changed emergency medicine," notes G. Richard Braen, MD, chair of UB's Department of Emergency Medicine, who hired Jehle. "He's pushed it to the extent that everybody wants to train doctors in it in their residency programs."

INQUISITIVE AND STRONG WILLED

Beyond ultrasound, Jehle is interested in a wide swath of study in emergency medicine. He published the first studies in oximetry in pre-hospital care and the initial study of head cooling in cardiac arrest. He has performed a number of studies in resuscitation and helped create a nationally distributed DVD on airway management.

A principal investigator on several federally funded studies on traffic safety, Jehle has published extensively on accident and fatality rates. Through the Center for Transportation Injury Research and the Calspan-University at Buffalo Research Center, he has investigated the role of speed variance, seat belt use, driver weight and other variables in car crashes, sometimes simulating accidents with crash-test dummies in ECMC's parking lot.

In the backseat of his own car Jehle keeps a bulletproof vest, a reminder of the Specialized Medical Assistance Response Team (SMART) that he cofounded with Billittier a decade ago. SMART provides physician support in pre-

hospital care settings, such as at the site of a school bus accident, a chemical spill or an FBI SWAT team raid.

"Dr. Jehle is tremendously respected for his abilities and for everything he's done," Braen notes. "Curiosity is one of his strong points. One day I remember mentioning that when a paramedic tells us that a patient has lost 'a lot of blood,' we have no idea what that means. How much is a lot? So, he designed a study to estimate the loss of blood in the field. He used pop cans filled with old blood, which was easier for the paramedics to understand than a liter or two quarts. He spilled it onto linoleum and grass so the paramedics could see what it looked like and make better estimates."

Billittier, who conducted the study with Jehle, describes his longtime colleague as "extremely strong willed."

"He thinks of novel things like that to study. Then he hits all these hurdles trying to investigate, but he pushes on. It's tough to get him off track. If he gets an idea in his head, he's going to make it happen, one way or another."

This persistence has paid off for Jehle, allowing him to advance the field of emergency medicine in innovative ways.

THE 'WOW' APPROACH

Over the past eight years, ECMC's emergency department has experienced a more than 50 percent increase in patient volume—from 36,000 in 1996 to 52,000 last year. It was recently recognized as having the best trauma outcomes of any of the 50 trauma centers in New York State. The emergency department-to-catheter-lab program performs the largest number of angioplasties for acute ST segment elevation myocardial infarctions in the region. What's more, the program has the best arrival-to-vessel-opening times in the area, significantly better than the American Heart Association guidelines.

Although his colleagues cite Jehle's leadership as instrumental to the hospital's enhanced reputation and return to profitability, he credits the turnaround to many different factors, including a hospital-wide shift in attitude. Within his own department, he promoted a customer-service approach to health care that included creating a new position—that of a greeter—when, several years ago, surveys indicated that ECMC ranked in the bottom five percent of hospitals nationwide in front-desk friendliness.

That's no longer the case. "Excellent quality medical care is the foundation of what we want to do, but it has to be

part of your mission to recognize that we're in a customer-service business," Jehle says. "People make judgments, in large part, on questions like: 'Is this place clean?' 'Were people polite, friendly and professional in their approach?' 'Were they timely?' And we have to answer that."

When articulating his philosophy of health care, Jehle turns to a quote from the legendary physician Francis Peabody: "The secret of the care of the patient is in caring about the patient."

"Generally speaking, if you have a philosophy that you want to take care of people slightly better than what you would want for your own family, you don't make too many mistakes." —DIETRICH JEHLER, MD

"Our former CEO [Michael Young] was a strong believer that quality care is less expensive than non-quality care, and there's a lot to be said for that," Jehle notes. "Generally speaking, if you have a philosophy that you want to take care of people slightly better than what you would want for your own family, you don't make too many mistakes. I like the 'wow' approach—to have people leave and say, 'Wow, they didn't need to do that.' I think it's a good way to approach delivery of care."

In a medical center where a whopping 80 percent of all admissions land in the ER, Jehle makes a point to remind residents and medical students to sit down next to patients rather than stand over them. "Even if you only spend five minutes with the patient, the perception is that you spent more time with them than if you were standing," he says. "You're at their level, so it's not like you're ready to run out the door."

Despite Jehle's rigorous work schedule, he still manages to find time to spend with his family—his wife, Theresa, and their four children. He enjoys tennis, softball, skiing and table tennis.

And when the Buffalo Bills play on their home turf, he doesn't miss a game, although his time at Ralph Wilson Stadium can't be classified as leisurely. For the past 17 years, Jehle has supervised the medical care for the some 72,000 fans that attend each game. Whether he's tackling the most serious medical emergencies (three cardiac arrests last season) or tending to mundane ailments (dislocated fingers from parking lot scrimmages), he's always on his game. **BP**



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—G. RICHARD BRAEN, MD (LEFT),
CHAIR OF UB EMERGENCY MEDICINE