From E.R. to E.D.
The Michigan Medical School Gets Its First New Department in 15 years
A Discipline for the

by Jeffrey Mortimer

William Barsan, professor and chair of the new Department of Emergency Medicine, worked for seven years with his staff to achieve departmental status in the Medical School, but his dedication to emergency medicine goes much farther back in time. (Barsan is pictured here with physician Carol Schultz and (center) clinical nurse Dianne Savage.)
In 1967, when he was a high school senior in Akron, Ohio, the personal became professional for William Barsan, M.D., although he didn’t know it at the time. It’s a recurring theme among emergency physicians — the personal becoming professional — and the chair of the newest department in the University of Michigan Medical School is in this respect cut from the same cloth as many of his colleagues. For him, it happened when his best friend, like him still a teenager, died in the hours following a car crash.

“It happened on the median strip of a highway,” Barsan says. “He was thrown out of this van he was driving, was probably not breathing very well at all, had a brain injury. There were no paramedics back then, so somebody threw him in the back of what was probably a hearse and took him to the nearest hospital, a small hospital which didn’t have the capabilities of flying him out. Very likely, had he crashed today out on US 23, he would probably not be dead for a lot of different reasons.”

The burgeoning field of emergency medicine can take at least some of the credit for those reasons. In fact, Barsan’s friend’s case, which it still pains him to remember, is a dramatic reminder of what has been learned since then. Thanks in large part to the work of emergency medicine researchers and clinicians, not only are vehicles themselves safer and the use of seat belts more widespread, but the health care system’s ability to respond to the consequences when a crash does occur has been vastly enhanced, from the reaching and transporting of victims to their stabilization and treatment.
If you apply those concepts—more effective prevention, faster response and stabilization, and greater understanding of the body’s behavior in such situations—to everything from sore throats to gunshot wounds, season with the urgency of the decision-making, complicate with a patient population that is increasing in both size and acuity, and deduct what one emergency physician called “the need to do a wallet biopsy,” you begin to get a picture of the specialty.

The arc of emergency medicine’s ascent mirrors, in many ways, Barsan’s own career. He graduated from Ohio State University Medical School in 1975, only five years after the start of the first emergency medicine residency in the country and the year before the University of Michigan Medical Center (now called the Health System) first gave anyone official responsibility for operating its emergency room.

“Prior to that time, it had sort of been run by committee,” says Richard Burney, M.D., who took on the responsibility for overseeing the emergency room as part of his duties as a member of the faculty in the Department of Surgery, which became its departmental home. “It was a stepchild of the hospital,” he adds. “It had no clinical base and nobody paid much attention to it. Because it wasn’t part of a department it was mostly invisible.”

It was certainly invisible to Barsan. “At the time I graduated, I didn’t even know you could do anything in emergency medicine,” he says. “I was in a surgery residency for a couple of years at the University of Virginia, and then decided I didn’t like surgery. I had discovered that I liked more the acute medical aspects.”

So he went to the University of Cincinnati, home of the first emergency medicine residency. The year he completed his training, 1979, was also the year emergency medicine was approved as a specialty by the American Board of Medical Specialties. By then, there were more than 40 graduates of the Cincinnati program.

Cincinnati, as it turned out, was the canary in the coal mine of a national trend. “In the early 1970s, patient volumes in the emergency department rose to over 100,000 a year from 20-30,000 ten years earlier,” says Barsan. “Nationwide, you had a real switch in demographics in medical care from people being cared for by their primary physicians to a much more mobile population, and more episodic care. A lot of hospitals were finding themselves totally inundated with emergency patients. At Cincinnati they realized that there weren’t any individuals who could really care for all these patients who were often being piecemealed out very inefficiently, so they thought they should train people to do this.”

Because of the way emergency departments were organized (or not), those patients were often treated in a rather ad hoc fashion. “You would have medicine doctors seeing medicine patients, pediatricians seeing pediatric patients, surgeons seeing surgery patients,” says Barsan. “That was okay as long as the patients coming in knew what they needed, but a lot of time they didn’t know. This led to an inefficient use of resources because there wasn’t really anybody who could take care of assigning patients appropriately. There was also a lot of interest among graduating
medical students in pursuing that. That’s what got people interested in it. It was a societal need and a medical need.”

There was also a need to recognize the unusual demands of many emergency cases that helped make emergency medicine a distinct branch of health care: the need for fast-moving triage and stabilization and airway management, a need to understand toxicology, head and brain injury, hemorrhage. In many locations, including Michigan, once emergency medicine was recognized as a discrete entity, it was put under the aegis of the surgery department. Historically, after all, surgeons had seemed to be the busiest group in the emergency room.

But it could also be, as it was at Cincinnati before gaining departmental status in 1984, a kind of freestanding division that reported to the dean, “analogous to a blood bank,” says Barsan. “People didn’t have a clue as to what to do with emergency medicine, so it was dealt with on a local basis.”

While U-M was not among the first to get a clue, it has arguably been among the shrewdest. “It took a long time for the University to come around to the fact that emergency medicine would be a valuable addition to the academic medical center,” says Brian Zink, M.D., “but once it made its commitment, it did it the right way.”

Zink is an associate professor in the department and the Medical School’s assistant dean for medical student career development. He is also the incoming president of the Society for Academic Emergency Medicine, where presentations by Michigan researchers have dominated the proceedings in recent years.

Michigan succeeded, he says, because “it provided resources, guidance for young faculty, start-up money for research, research laboratories, adequate administrative support, adequate office space—all the ingredients that were needed to make a successful program, and they did a good job of recruiting probably the best person at the time in the country who could come in and make it work for them. This program is looked at nationally as a model of how a program can become successful academically in emergency medicine in a relatively short period of time.”

1974—A U-M task force recommends establishing a Section of Emergency Services in the Department of Surgery to manage the Emergency Department, which consists of five rooms on the fourth floor of the U Hospital Outpatient Building and is staffed by moonlighting faculty from Internal Medicine.

1976—Richard E. Burney, M.D., arrives at U-M as a member of the surgery faculty; half his appointment is as director of emergency services.

1979—Emergency medicine is recognized as the 23rd specialty by the American Medical Association and the American Board of Medical Specialties. James R. Mackenzie, M.D., becomes director of emergency services, with Burney staying on as assistant chief.

1980—There are departments of emergency medicine at five U.S. medical schools.

1981—Faculty staffing on a 24-hour basis in the ER begins; a Section of Emergency Services is formally established in the Department of Surgery.

1983—Survival Flight begins service.

1985—Mackenzie steps down as section head and is succeeded by Burney, who held the position earlier.

1986—The new University Hospital opens with an Emergency Department divided into three areas; the main emergency department is managed by the Department of Surgery, Section of Emergency Services; the medical walk-in area is managed by the Department of Internal Medicine, and the pediatric walk-in area is managed by the Department of Pediatrics and Communicable Diseases.

1987—Survival Flight adds a second helicopter.


1995—The nursing staff for all three areas of the Emergency Department is centralized, and the section head of Emergency Medicine becomes responsible for managing all areas of the Emergency Department. The Section of Emergency Medicine begins staffing the emergency departments at Hurley Medical Center in Flint and Foote Memorial Hospital in Jackson.

1999—Emergency medicine at Michigan attains departmental status; more than 50 medical schools in America teach emergency medicine as a specialty.
The push began in 1992, when Barsan was hired. “My job was to get a training program started,” he says, “and I think they realized they needed someone in emergency medicine to be in charge of that. It was a specialty the U-M didn’t offer, and every year many of their really good medical students were choosing to go into emergency medicine somewhere else.”

Besides, as was happening at other institutions, “people began to realize that the way things were being run in the emergency department wasn’t the best way to run them,” he says. “It was not a real efficient triage system. People got taken care of, but sometimes not as expeditiously as possible.”

As was happening at other institutions, “people began to realize that the way things were being run in the emergency department wasn’t the best way to run them.”

The first priority was a training program. “The expectation was that if we were good at recruiting residents nationally, and if we were able to run in the black as a business, and able to get our research productivity up to a level that was considered acceptable, they would consider making us a department,” Barsan says. “The Health System obviously feels we did that.”

It was the defining moment at Michigan in a field that has gone from stepchild to poster child in less than a generation, a progression in no way hindered by the glamour associated with emergency medicine thanks to a number of television shows. Going all the way back to M*A*S*H, they have helped make the often dramatic work of emergency medicine seem seductively appealing, intense, consuming, and full of professional victory. Many emergency physicians say they like the variety and excitement portrayed in these shows as much as the viewers do; they readily admit it’s part of the specialty’s attraction.

“Emergency Medicine Research: The Goal is Always Fewer Emergencies”

“I want to find out how we can treat people better who are injured,” says Ronald Maio, D.O., an associate professor of emergency medicine as well as an assistant research scientist at the University’s Transportation Research Institute and director of the U-M Injury Research Center in the Department of Emergency Medicine. “But I’m even more interested in what we can do to prevent people from being injured in the first place.”

Broadly speaking, Maio is with that simple statement outlining the two arenas of emergency medicine research. The first is medicine’s version of fire-fighting, the other is more aligned with Smokey the Bear, and both seek to improve the health of society, either by treating patients better or by more effectively keeping them from becoming patients in the first place.

The University of Michigan Medical Schools’ new Department of Emergency Medicine is singularly rich in top-notch researchers interested in reducing the number of people who get into the desperate situations that land them in emergency rooms. William Barsan, M.D., the department chair, is a past president of the Society for Academic Emergency Medicine, as is Steven C. Dronen, M.D., an associate professor of emergency medicine. Brian J. Zink, M.D., also an associate professor of emergency medicine and the Medical School’s assistant dean for medical student career development, is the incoming president of the Society; his interest is the effects of alcohol in the early period after a brain injury.

Maio is currently involved in two federally funded projects studying the practicality and efficacy of what might be called “pre-emergency” behavioral change. As with Zink, alcohol is center stage in his work.

“We think that when a person comes into the emergency department following an injury that represents a teachable moment,”
saying Maio. “If we can identify certain behaviors that are putting them at risk for future injury, it might be a particularly effective time to make an intervention.”

It’s almost symptomatic of emergency physicians that they would try to figure out how to pile this on top of all the other tasks demanding their attention. On the other hand, if it works (and “working” includes minimally disrupting those other tasks), the number of their tasks might actually shrink.

Toward that end, Maio is a principal investigator in two studies, one with adults, (Frederic C. Blow, Ph.D., of the Department of Psychiatry is principal investigator) and one with adolescents (with Blow and research scientist Jean Shope, Ph.D. of the Transportation Research Institute as co-principal investigators). Both studies employ computer technology, the first a hand-held device, and the second a laptop, to provide a brief, tailored intervention to change drinking behaviors or, in the case of teens, to prevent alcohol use.

For Maio, the beauty of the high-tech approach is its efficiency. “It precludes the need for a lot of personnel-intensive intervention,” he says. “You don’t have to have a lot of counselors and doctors talking to people, which in the emergency department can be difficult to accomplish.”

Also difficult, says Zink, is erasing the notion that being drunk can actually protect people from injury because they’re “more relaxed.” “We’ve observed that alcohol worsens injury and increases mortality, after motor vehicle crashes in particular,” he says, “so we’re trying to use a laboratory model to figure the mechanisms that account for alcohol’s potentiation of injury. We looked at breathing, blood pressure, hemorrhagic shock, circulation, and what alcohol’s effects were, and we found that it depressed the respiratory response and reduced blood pressure and blood flow to the brain. Now we’re starting to look at the biomolecular reasons for those physiological changes.”

Which is all quite fascinating, but what does it have to do with saving someone’s life? “We are responsible for providing airway control and resuscitation of trauma victims,” says Zink, “and if these changes that we see in laboratory animals are happening in injured humans, then we need to be extra aware that alcohol-intoxicated people may require a different level of airway control or resuscitation.

“We also need to be aware that physiological changes we might attribute to the injuries could actually be caused by the alcohol, and it also becomes important in anesthesia,” he adds. “Then there is the public health perspective. If this information is correct, relying on a designated driver may not be enough to save your life. If you’re sitting in the passenger seat intoxicated and you’re involved in a motor vehicle crash, your chances of dying or being seriously injured may be greater if you’re drunk than if you’re not.”

So it appears that alcohol is a double whammy, increasing both the likelihood of a traumatic event and the severity of its effects. It’s the sort of insight that transcends academic boundaries. It’s also the sort of insight that emergency medicine’s broad scope facilitates—as does the oft-lauded and very real interdisciplinary inclination of many of Michigan’s researchers.

“I don’t think I could have done this research at any other institution,” says Maio. “It’s truly interdisciplinary, involving people from the Department of Psychiatry, the School of Public Health and the University’s Transportation Research Institute, as well as many graduate students from the School of Public Health and the School of Social Work who are working as research assistants. That’s what makes this such a great place to work.”

And that’s what leads to breakthroughs. While squarely in the mainstream of emergency medicine’s historic concern with public health, broadly defined, the studies Maio’s leading also represent a rather dramatic departure.

“In the past, emergency physicians concerned with prevention have been involved in education and trying to influence policy, activities outside of the emergency department clinical setting,” he says. “What we’re trying to do, at least with our studies, is incorporate prevention activities into the normal clinical practice of a busy emergency department. That’s the challenge, and I can’t tell you that it’s going to work. It really is an experiment.”

The technology developed at the U-M obviously helps. “That’s why we’re ahead of the pack,” says Maio. “It’s also fortunate that we staff the emergency departments at Hurley Medical Center in Flint and Foote Community Hospital in Jackson. From a research standpoint, that gives us a look at three different populations and makes it easier to generalize.”

The relative absence of walls between disciplines at U-M was a factor in luring Zink to Michigan. “One of the reasons I came was the opportunity to work with these people who were doing some very interesting alcohol research,” he says, meaning Patricia Waller, who recently retired as director of the Transportation Institute, as well as Maio.

“Dr. Waller did a landmark study in North Carolina, before she came to Michigan in the late 1980s that was the first to show, using sound methods, that alcohol seemed to worsen injury and increase the risk of death following motor vehicle crashes,” says Zink. “Then Dr. Maio got here in 1989 and started working with Dr. Waller. What they were doing was giving me ideas for what to test in a laboratory setting, and my laboratory results were giving them ideas that might explain what they were seeing, so there was a lot of potential for brainstorming and collaboration between us.”

As with many of their colleagues, the keen sense of mission felt by both Maio and Zink was fueled in part by personal experience. “A real good friend of mine in college got killed by a drunk driver,” says Maio, “and I had several acquaintances from my college years that were killed in motor vehicle crashes. Then my best friend in medical school was killed in a small plane crash, so the idea of injury and how it can destroy young people’s lives has always kind of directed me.”

When Zink was an undergraduate at Allegheny College in Meadville, Pennsylvania, he signed up for a work-study program at the town’s tiny hospital. “I worked as an orderly or technician in the emergency department and got to do a fair amount of hands-on work with patients and observe the physicians,” he says. “None of them were emergency physicians but I liked what they were seeing. A lot of people say this and it’s a little bit trite, but you really feel you have your finger on the pulse of society when you’re in the emergency department. Everything is kind of unmasked.”

No one was more surprised than Maio himself when his enthusiasm for research surfaced. “When I went to medical school and even afterwards, I just wanted to practice clinically,” he says. “Then I did some small-scale health services research when I was in the military and realized how, as a clinician, you can have an impact on that one person you’re dealing with, but if you do good research, you can have an impact on the lives of thousands of people you’ve never met. When I first got into emergency medicine, the sicker the patient and the bigger the challenge, the more I liked it. The more procedures I could do, the better. Now I’m more excited about trying to prevent injuries.”

“All the issues that we deal with in emergency medicine on a daily basis are societal issues,” says Zink, “whether it’s access to care, potential rationing of care, or the problems of drug abuse and domestic violence. We truly are a safety net for people who have no place else to go, who are desperate. We take pride in always being there and always being ready and always trying to help, no matter who you are or what time it is or how ‘undesirable’ you might appear. We will treat you all the same. In many ways, the emergency department is the great equalizer in terms of patient care.”
Few physicians understand the dramatic and episodic appeal of emergency medicine better than Walter Dishell (M.D. 1964). For over 11 years and more than 250 shows, Dishell served as the medical adviser to the popular television series *M*A*S*H*, which, as aficionados of medicine and the military know, stands for Mobile Army Surgical Hospital.

Whether he was showing Alan Alda (Captain Benjamin Franklin “Hawkeye” Pierce) how to hold a scalpel or telling Loretta Swit (Major Margaret “Hot Lips” Houlihan) how to pronounce “carotid” (caROTid, not CARotid), or making sure that an IV was in the proper position, Walt Dishell was on the set to make sure the medicine the TV viewer would eventually see was authentic, to make sure, as he puts it, “that the right doctors were doing the right things.”

A facial plastic surgeon in Beverly Hills, California, for the past 30 years, Dishell first began using his medical background in the entertainment industry when he was asked to be a medical adviser to a CBS production in the 1960s entitled *Medical Center* soon after completing his residency in plastic surgery at UCLA. Like the earliest TV medical shows, including *Ben Casey* and then *Marcus Welby, M.D.*, it focused on physician-patient relationships rather than on the medicine itself. “The disease itself didn’t matter,” Dishell recalls. “They would give me a dramatic story and then I would build the medicine around it.”

All that changed with the highly successful *M*A*S*H*, a CBS production, which first aired in the fall of 1972. “It was the first of the emergency shows,” Dishell says. “Everything was acute; there was always an injury that had to be taken care of right away.”

Because it was set during the Korean War, which took place in the early 1950s, one of the challenges Dishell faced was always making sure that the medicine Alan Alda and his fellow actors and actresses practiced was not too advanced. “I remember they wanted to do a story on cortisone, but I had to tell them that it hadn’t been invented yet,” Dishell says. He consulted medical textbooks from the 1950s and professional publications like the *Journal of War Surgery* to ensure the show’s historical accuracy.

Before the 1990s, television audiences wouldn’t tolerate the high-tech, bloody verisimilitude of today’s emergency room shows, Dishell says. “In the early *M*A*S*H* shows they wouldn’t let us show any blood on the surgical gloves or on the gowns,” he says. “Influences like *MTV*, the Internet, plus changes in medicine itself have made a difference in what people are willing to tolerate. The public is not as squeamish as it used to be. Now you can watch an actual face lift or heart transplant being televised.”

For Dishell himself, who loved the character-centered drama of *Medical Center* and *M*A*S*H*, today’s emergency room shows hold little appeal. “I’m not a big TV fan at this point,” he says. “The emergency shows are too technology-oriented. And the patients never seem to leave the emergency room.” Technology was never much of an issue for Dishell on the *M*A*S*H* episodes he oversaw; on the battlefield in the early 1950s there wasn’t a great deal of it. “There was a lot of surgery on *M*A*S*H*, but it was low-tech because of the time and the place,” he says.

When it comes to the real world, though, Dishell welcomes emergency medicine’s coming of age. “When I was in the Air Force, I was an ENT guy in the emergency room,” he says. “There used to be specialists of every kind in the ER, but they wouldn’t always be familiar with the kind of situations they were asked to deal with. It makes a lot more sense to have physicians in there who are familiar with the acute MIs (myocardial infarctions), the fractures, the things you see there again and again.”

While Alan Alda will always be his favorite surgeon and will always be remembered for a bedside manner worthy of many an acting award, Dishell says he’s happy to know that if he needed the services of a real emergency department himself, the real doctors and nurses there would be especially trained to meet his real-life needs.

“If I go to a dinner party and start telling war stories about my experiences in the Emergency Department, people say I should write a book,” says Barsan. “You see so much bizarre, weird stuff that most people don’t see and half the time don’t believe really happened.”

“I like those high-pressure situations,” he says. “I like having to think on your feet. It’s intellectually challenging, having to know a lot about a lot of things. You realize that your capacity to intervene in a meaningful way is very high.”

He cites his previous night’s shift (and the fact that it is, indeed, shift work, is a purely practical part of its appeal): “I went from seeing someone with an eyelid laceration from playing basketball to a patient with pneumonia to a patient with chest pain to a patient with a miscarriage to a patient with multiple trauma to a patient having a heart attack.”

Then there are the anonymous patients. “There are a lot of John Does, people found unconscious at the side of the road,” he says. “It’s a behind-the-scenes detective game sometimes, trying to find out who people are. And I tell students they really have to have good interpersonal skills. You have to figure these are patients who would much rather be doing something else. That’s a challenge for lots of people in the field—finding ways to create some instant rapport when you meet people, so that they trust you. You never know what’s going to come through the door.”
But whoever it is and whatever is wrong, they’re entitled to the finest care possible. “We see everybody and we take care of them, regardless of their ability to pay, regardless of where they come from, and I really like that,” says Barsan. “I like taking care of all comers. I might see professors at the University or corporate CEOs, and I also see the homeless guys who sleep under the bridge. I had a patient last night who was psychotic. He kept insulting me in the same vulgar, unprintable language, repeated over and over again. He didn’t care if I was the chairman of the department or not. It keeps you humble.”

Such stories illustrate, however cruelly, that the emergency department increasingly functions as a community triage center, a gateway to the health system, and, in this and other academic medical centers, an interface between town and gown.

Says Burney, the head of emergency services at U-M from 1986 to 1992: “The University of Michigan Hospital was not perceived as the community’s hospital, so we tried to change that. In order to do that, you have to change attitudes, increase resources, teach staff to reach out, and you have to make it clear to people that they’re going to be well taken care of. The fact that we now have a very busy ground-level emergency room that accepts large numbers of people locally, and that people feel comfortable coming here, is the result of having worked in that direction from the beginning.”

“Emergency departments are often really the interface between society and medicine,” says Barsan. “You see a lot of people on the fringe. You feel like you have the opportunity to do something: it’s a way of doing a social triage as well as a medical triage. Sometimes the most important things I do have nothing to do with medical care—getting someone in a rehab program, or getting them to a social worker.”

The emergency departments at Hurley Medical Center in Flint and at Foote Community Hospital in Jackson, staffed under contract with U-M and headed, respectively, by Carl R. Chudnofsky, M.D., and John C. Maino II, M.D., also serve to expand the service and teaching missions inherent in emergency medicine at Michigan, as well as to increase clinical research opportunities.

There’s a profound and historic connection between emergency physicians and social concerns, given that the former have to cope so often with the consequences of the latter. It’s the kind of field where there is support for research focused on better ways to connect emergency departments with social services. As Barsan says, a patient’s medical situation just might be affected by “living in a house with no heat, or not having enough food to eat.”

Many of these people will never feel any gratitude to the emergency room staff who save their lives. “Typically, they come in unconscious, confused, in shock. We may save their lives but they have absolutely no memory of us,” Barsan says. “The people they relate to are the ones they saw later in the hospital; they don’t have any clue what happened at the front end.”

For reasons that are subject to debate, the percentage of patients admitted to the hospital from the emergency room has climbed dramatically. “When I first got in, if an emergency department admitted 15% of its patients, that was pretty high. Now it’s between 25% and 30%,” Barsan says, “We see sicker patients than we used to, and I don’t think anybody knows why.” Balancing this development is the fact that “a lot of patients are able to go home now that we didn’t use to send home,” says Barsan, “and we have better outpatient follow-up.

“My theory is that medicine has developed to such a state that we have patients out there who never would have been out there in the past, because they would have been dead,” he says. “It’s a byproduct of becoming so successful at keeping people alive and functioning even though they have pretty bad conditions. My dad had his first heart attack when he was 51, and now he’s 84. It used to be if you had your first heart attack at 50, only very good luck would keep you going to 65.”

That kind of progress has as much to do with prevention as it does with remediation, and the former, broadly defined, is a leading concern of emergency medicine research and thinking. “Prevention is the way to go,” says Marie Lozon, M.D., medical director of the emergency department’s pediatric section. “I would like to be put out of business. If we could get people to use their seat belts or appropriately restrain children, my job would be considerably easier and the amount of morbidity from head injury would be greatly reduced. The horse is out of the barn by the time I get to them.”

Ron Maio, M.D., is director of the U-M Injury Research Center and currently involved in two major injury prevention studies. “Even though I want to find out how we can treat people better who are injured,” he says, “I’m even more interested in what we can do to prevent people from being injured. I’ve become more and more concerned with trying to do something for people other than putting a bandaid on them.”

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Carl Chudnofsky, M.D., head of emergency medicine at Hurley Medical Center in Flint. “It’s the closest thing to the vision I had as a child of what it means to be a doctor—Marcus Welby, M.D., the doctor who could take care of everything.”
When Little Ones Get Hurt

With the specialized pediatric emergency care of the 90s, they’re getting better care than ever before.

“Children are not little adults,” says Marie Lozon, M.D. “My secret,” she adds, grinning, “is that adults are just big children.”

The comment bespeaks the cheerful earthiness of the medical director of the Health System’s Emergency Department’s pediatric area, but her point is nonetheless a serious one. Just as the care of children is recognized as a specialty in its own right, so the emergency care of children is sufficiently different from other aspects of both fields to warrant its subspecialty status.

“We have a whole different set of issues to be concerned about,” says Lozon. “Injuries can affect children differently than they do adults. Children are growing, their bones are not completely fused. Their brains are not like adult brains. If children suffer an injury, their little bodies may react differently from those of adults. If you don’t have a sensitivity for the different ways children react to illness or injury, you can miss the boat, miss a serious injury or illness, and then it’s too late to do well for the child.”

This sense of urgency rises a few notches with the knowledge that trauma is the leading cause of death among children older than nine months. “It’s more than all other diseases combined,” says Lozon, “so expert care of injured children is required to reduce morbidity and mortality. Children have different patterns of head injury than adults do, and head injury is what usually kills them, so being able to recognize and manage serious head injury in children is very important.”

And there are procedural differences as well. “One of the most important things to be able to do for an emergency physician is to manage the airway, and the airway of a child is very different from the airway of an adult,” she says. “And the way that a child’s vascular system reacts to shock is different from the way an adult’s does. Children can compensate for hemorrhagic shock in such a way as to appear generally stable or well until they’re very seriously in danger.”

Physical separation of adult and pediatric patients is also better for all concerned. “It’s often not reasonable to house ill children next to ill adults, for both their sakes,” says Dr. Lozon. “If you’re having a heart attack, do you want to hear a nine-month-old baby screaming? If you bring in a child with croup in the middle of the night, do you want to hear a drunk cursing in the next room? That’s why we feel having a special area to care for children, where there are toys, distracting pictures, and a certain kind of nursing staff is really very important.

Children tend to do better in that environment.”

Pediatric emergency physicians also must learn to recognize, and act on, the symptoms of physical and sexual abuse. “It can be a very tricky and subtle business,” says Dr. Lozon. “The child may come into the emergency department with an injury or a complaint that, on the face of it, seems very innocent, but if the child is examined or the story does not seem to match up with the pattern of injuries or pattern of illness, this can be recognized and appropriate steps taken.”

She has her share of war stories, but prefers to focus on the ones that represent successful teaching experiences. “A resident saw a little girl who complained that it hurt when she went to the bathroom,” she says. “He got a urine specimen, which was the appropriate thing, and it indicated she might have a urinary tract infection, and he wrote a prescription. I said, ‘Did you examine the child’s bottom?’ He said, ‘No, she looked okay.’”

“We went back to examine her genital area and it was clear she had been sexually abused. When the family was questioned more deeply about the child’s caregivers and any potential for abuse, it was clear that the potential was high. The make-up of the household revealed many suspects. The child was admitted to the hospital and later found to indeed have been abused. Possibly in another department, that child would have been dismissed as simply having a UTI, which she indeed had, but I’ve looked at so many little kids’ bottoms that I can tell you what looks normal and what doesn’t.”

Perhaps equally important, she knows “what sounds like a reasonable story and what doesn’t.” This is invaluable from a pedagogical perspective. “The young training physicians seeing patients in the emergency department do not have the experience that the attending physicians have,” says Lozon. “One of the important ways we can help them is to give them the ‘Heads up’ that says, ‘This doesn’t look kosher, let’s contact the child protection authorities.’

Reporting abuse to the proper authorities, though, can be the least of it. “Sometimes you have to be willing to incur the wrath of a parent when you say you have to take custody of their child because you believe they’ve abused or neglected them,” she says. “You have to do what’s best for the child and not have fear, and that’s a scary thing.”

At such moments both the emergency physician’s self-confidence and can-do attitude, and the pediatrician’s experience in dealing with parents are both needed.

“In pediatrics, there is more than one patient in the room,” Lozon says. “You’re also taking care of the parents. The people making the decisions for children are the adults. A huge part of pediatric practice is reassurance, of parents and children.”

In addition to knowing how to provide reassurance, the pediatrician in the emergency room has to know how to quickly change her style or way of interacting with the child according to the child’s developmental age, which may not always match chronological age. “Learning to deal with a recalcitrant toddler to obtain a proper physical exam is one thing,” Lozon says. “You have to change your style in dealing with an adolescent, who is basically still a child but feels an element of autonomy. You have to go from room to room and instantaneously change the way you relate to people.”

But people skills and being light on one’s feet are among the hallmarks of emergency medicine. “Most people attracted to emergency care enjoy the requirement to make decisions based on a very limited set of data,” she says. “You have one opportunity to address the patient’s illness, you have a brief window, and you need to have a very good ability to integrate information.”

“There’s an element of self-confidence that’s required. You have to be the leader of a team of people who could be called upon at any moment to work on a patient with what may be a limb- or life-threatening problem, and you have to be able to do that instantly and keep in mind all the other patients in the emergency department. And these patients are very stressed; they can be quite annoyed with you, they may have had long waits, they’re anxious, and when their most unappealing characteristics come forward,
you have to be a counselor, a spiritual advisor, a friend, a fellow parent.”

And you also—as a bonus—get to practice procedural skills. “Many people don’t want to do procedures all day, so they don’t become surgeons,” says Lozon, “but they would like the opportunity to do life-saving procedures when necessary. I enjoy doing complex intravenous line placements, managing airways. And I’m interested in pain relief in injured children. That is a major mission of mine that has been only recently addressed in the medical community. Children historically have been vastly under-treated for their pain, and this is an area where the pediatric emergency specialty has made great strides.”

She cites, as an example, the evolution of treating a child with a broken leg, “If you asked an orthopedic surgeon who had been here for many years, ‘What kind of support did you receive to care for a child with a broken leg in the emergency department 20 years ago vs. now?,’ he would tell you he now receives expert pain control and sedation for children when they have their fractures reduced,” she says. “That means the child is better served, and the surgeon doesn’t have to tie up an operating room or an anesthesiologist to put the child to sleep to set the bones. The best thing is that the child doesn’t have to endure undue pain and suffering, and the orthopedist can do the job humanely and more effectively because the child is asleep, and at much less cost than calling in an anesthesiologist and an OR team. That is now the standard practice—to put the child to sleep in the emergency department and do their care there.”

Lozon and her team can enjoy such moments of triumph only briefly, however, before they’re on to the next emergency. “I think a lot of us have a short attention span,” she chuckles, “and this is where I can put mine to good use.”

I n June, work began on what might be called the externalization of emergency medicine’s new status, an expanded and reconfigured space at University Hospital. “When this hospital was built, there were no emergency physicians here,” says Barsan. “The departments of pediatrics, medicine and surgery each ran their own sides, so when they built the emergency department, they built it as three separate areas. Now all of it is run under emergency medicine, but we still have three separate geographic areas, which has been very problematic for us. It’s not a very good system, the way we have it right now.”

Soon, it will be better—more efficiently designed, better integrated and, yes, bigger. The cowboys of health care (James MacKenzie, M.D., a Canadian surgeon who worked closely with Burney in the formative days at U-M and was Emergency Services chief from 1979-1986, actually was a rodeo rider before turning to medicine) will have more room and improved tools. “The ambulance entrance leads right into the resuscitation areas,” says Barsan, ticking off improvements, “which can be used for any sick patient: pediatric, adult, medical or surgical. They all go into the same area, which is more economical than having separate resuscitation areas.”

No longer will patients taken from ambulances or helicopters be wheeled through public areas in the department, a chronic source of distress for all concerned. “We’re building a new landing pad, with a tunnel right to a one-floor elevator for the exclusive use of the helipad,” says Barsan. “CAT scan and regular radiology are right there; they can all get done right within the department. Emergency laboratories will be right next to the vestibule, and an on-site lab will make a huge difference. Psychiatry—and this is the only 24-hour emergency psychiatry facility in Washtenaw and Livingston counties—has 2,200 square feet instead of 700.”

Another part of the expansion will be a “clinical decision area” for observing patients, such as those with chest pain, who may require more time for diagnosis. “If you had come to the emergency department with chest pain five years ago, and we did an electrocardiogram and you weren’t actually having a heart attack, the only way to know if you were really coming to a heart attack would be to admit you to the hospital, observe you for two or three days, do a stress test, and probably schedule at least one or two return visits.”

Now the whole process can be expedited. “After we evaluated you in the emergency department to make sure you were not having a heart attack right now, you would go into the clinical decision area,” Barsan says. “You would be seen by a cardiologist, have a stress test, and we would get you out in 12 to 16 hours. We’re taking what used to be a two- to three-day work-up and compressing it into less than a day. You get a quicker answer, you’re not spending days in the hospital when you don’t need to, and you’re having the same outcome you would have had if you had been admitted to the hospital.”

Asthma attacks are another example. “Someone having a bad attack that doesn’t clear up in several would typically get admitted and be in the hospital several days,” he says. “With this new area, if they’re not better in six hours but better in 16, we’re able to get them out much quicker.”

“Emergency medicine has matured into an independent discipline here at Michigan as it has at our peer institutions around the country.” —Dean Allen Lichter