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EMS destinations: Source of liability for ED personnel?

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Editor's Note: *From transporting patients to hospitals in hearses and any other available vehicles to the complex EMS systems of today— we've come a long way. Most communities have public emergency response systems that serve their communities as well as specialized medical centers designated as trauma centers that provide specialized regional trauma care. Yet, problems within the systems still exist. Rural areas find that their ambulances may be out of service for new emergencies when available vehicles are on long distant runs. In large population centers, the available ambulances are insufficient to meet capacity needs. Level II as well as Level I trauma centers can be inundated with injuries and medical problems that stretch their capacities beyond their limits. Such overcapacity scenarios are inevitable, but being prepared for such contingencies assists us in managing these problems when they occur. This issue discusses some of problems and solutions that occur in the prehospital management of using limited resources to meet the needs of the public. Being aware of problems that have occurred within some prehospital systems may provide us with better insight into planning for such eventualities in our own systems.—**Richard J. Pawl, MD, JD, FACEP***

Introduction

In the early years of emergency medicine, hospital and emergency department (ED) destination decisions were less complicated. Since hospital specialization or clinical niches were not common, religious affiliation or availability of jelly donuts had a greater influence on the destination decision. That has changed. Today, hospitals may hold certification as trauma centers, specialize in the treatment of burns, interventional cardiology, spinal cord injury, microvascular surgery, or cerebrovascular emergencies.

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Emergency medical services (EMS) personnel are expected to know which hospitals provide which services, and to utilize those services appropriately. This applies not only to EMTs and paramedics, but to the physicians and nurses who provide administrative or medical oversight for them. The failure of an EMS system to choose the best destination for its patients can result in significant liability.

But that is only part of the problem. Transport decisions must consider the needs of the public, the resources of the EMS system, the resources of the various hospitals, the distance of the transport, the severity of the illness or injury, and the demands of the patient. At times, the interests of the hospital, the patient, and the EMS system conflict. Those who provide EMS oversight must consider these factors when developing policies and point-of-entry plans, and when giving on-line medical direction.

This article will explore the liability that can arise from difficult destination choices and some of the controversies that have arisen as a result of the trend toward hospital and ED specialization. A brief analysis of hospital "diversion," which has haunted EMS systems in recent years, will also be discussed.

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Hospital Destination in Perspective

For the most part, EMS systems allow patients to choose their own hospital destinations. This practice comports with the principle of autonomy that lies at the heart of medical care. Patients usually ask to be brought to facilities that have treated them previously, or where their primary care physicians hold admitting privileges. Transporting a patient to a hospital where he/she has previously had care benefits both the patient and the receiving facility because it helps to ensure continuity of care and makes record-keeping easier.

EMS systems cannot always accede to the wishes of the patient, however. Under a common law principle known as "public duty doctrine," governments and their agents have an obligation to serve the public at large, as opposed to any one individual.[1] Thus, an EMS system cannot honor the destination choice of a particular patient when the ambulance is needed more urgently elsewhere.

This problem occurs most commonly in rural areas far from hospitals. When an ambulance commits to a prolonged transport, it is removed from public use for an extended period of time. To minimize the effect of such transports, most EMS systems have adopted a practice known as "mutual aid," under which ambulance services of neighboring jurisdictions provide backup coverage for one another.

Patients often claim that they have a right to be transported by ambulance to any hospital they choose. Such a statement is almost never true. To properly serve the public, all noncommercial EMS systems impose some sort of geographical limitations on the service they provide. In each of the following cases, the demand of a patient tested the boundaries of an EMS system, resulting in litigation.

Case #1. *Soffin v. City of Livonia Fire and Rescue Department.*[2]

Arriving home after angioplasty, a Michigan woman, Irene Soffin, felt a "pop" in her groin as she exited her daughter's automobile. Within minutes, a grapefruit-size hematoma had formed. Her daughter, Lori Northey, called 911 and requested an ambulance.

The City of Livonia dispatched an ambulance staffed by firefighter/EMTs. Under Livonia Fire and Rescue Department policy, EMS personnel were authorized to transport patients to one of three facilities: Botsford Hospital, St. Mary's Hospital, or Gar-

den City Hospital. The department had adopted this policy in order to keep its personnel close to their service area in case of a fire emergency.

When the ambulance arrived, the patient described her recent procedure to the EMTs. She complained of pain in her groin with a feeling of general weakness. The EMTs found her blood pressure to be 182/90 mmHg with a heart rate of 120 bpm and hot, flushed, diaphoretic skin. They did not believe Ms. Soffin to be in shock.

Then, a disagreement arose over the hospital destination. Ms. Soffin insisted on going to Providence Hospital, because the angioplasty had been performed there and that was where her physician practiced. The EMTs told her they were not allowed to transport patients to that facility. Ms. Soffin said that she would not go anyplace else, and Ms. Northey threatened to drive her mother to Providence Hospital herself. Ms. Northey later claimed that she eventually told the EMTs to bring Ms. Soffin "to whatever hospital she needed to go to," but the EMTs would deny this.

One of the EMTs contacted the Livonia dispatcher, who arranged for a commercial ambulance company, Huron Valley Ambulance, to bring Ms. Soffin to Providence Hospital. The EMTs later testified that Ms. Soffin's condition and vital signs did not change while they waited for the second ambulance to arrive. They said that if anything had changed for the worse, they would have cancelled the Huron Valley ambulance and brought Ms. Soffin to a hospital, whether Ms. Soffin and her daughter consented to the hospital destination.

Thirteen minutes after being dispatched, the Huron Valley ambulance arrived. The paramedics who staffed that ambulance found Ms. Soffin to be pale and diaphoretic, oriented but groggy. She complained of feeling cold and dizzy. Her heart rate had increased to 140 bpm, and the paramedics could not hear a blood pressure. The hematoma, as measured by the paramedics, had grown to eight inches in diameter and two inches in height.

Ms. Northey pressed the paramedics to take her mother to Providence Hospital. Again she said that she would bring her mother by automobile if necessary. The paramedics later described Ms. Northey as "very anxious, very upset, very determined to get her way." Reluctantly, they agreed to transport Ms. Soffin to Providence Hospital. They placed her in the Trendelenburg position and attempted three times to start an IV, but did not succeed. In all, they spent 18 minutes on scene. By the time Ms. Soffin reached Providence Hospital, a hemorrhage in her groin had caused permanent damage.

Ms. Soffin and her daughter brought suit against Livonia Fire and Rescue, Huron Valley Ambulance, the EMTs, and the paramedics. They accused the Livonia defendants of failing to treat Ms. Soffin's condition, failing to transport her to Providence Hospital as requested, failing to transport her to any hospital, and failing to inform the paramedics of the patient's life-threatening condition. The Huron Valley defendants were accused of spending too much time on the scene. The defendants denied liability generally. The Livonia defendants also contended that under public duty doctrine, they could not be held liable because they had no duty to transport any particular individual, Ms. Soffin included.

In Michigan, as in some jurisdictions, EMS personnel enjoy immunity from claims of ordinary negligence. To proceed to trial, the plaintiffs would have to prove the existence of gross negligence or willful misconduct. In the eyes of the trial court, the plaintiffs did not meet this burden. Summary judgment was granted to all defendants.

The Michigan Court of Appeals affirmed the trial court's decision with respect to the Huron Valley defendants. Because of divergent testimony, the court found it possible that the Livonia defendants had committed gross negligence by demonstrating a "lack of concern for Soffin's well-being." In remanding the case for trial, the court invited the Livonia defendants to again raise the public duty defense, an issue that had not been addressed by the trial court.

Case #2. *Russell v. City of Seymour*.[3]

A county ambulance transported Mr. Bill Russell, who had had a heart attack, to Seymour Hospital, a local facility that stabilized his condition but lacked the ability to administer a thrombolytic agent. The emergency physician who treated Mr. Russell at Seymour, Dr. Daniel Jackson, described his condition by telephone to a cardiologist at Bethania Hospital in Wichita Falls, some 50 miles away. The cardiologist agreed to accept him as a patient.

What happened next was later disputed. According to Mr. Russell's wife, Dr. Jackson told the Seymour County EMTs to "get the ambulance equipment ready" for a trip to Wichita Falls. A friend of

the Russell family reported hearing a similar instruction, as did a nurse in the ED. Dr. Jackson subsequently denied that he had specifically requested the services of the county ambulance service. Rather, he testified that he was under the impression that: 1) Seymour County EMTs were not qualified to handle such an assignment, 2) that the county's ambulance lacked the equipment necessary to undertake high-risk cardiac transports, and 3) that Seymour EMS vehicles and their crews were not supposed to leave the county. The EMTs later corroborated these statements, testifying that Dr. Jackson had never mentioned the proposed transfer to them.

On Dr. Jackson's orders, a nurse contacted a commercial ambulance company, Lifeline Ambulance Service of Wichita Falls, to make the transfer. A delay of approximately 30 minutes was anticipated, but the Lifeline ambulance did not arrive until more than three hours after it was due. By the time Mr. Russell arrived at Bethania, the opportunity to treat his condition with streptokinase had passed. He died five days later.

Mrs. Russell brought a negligence action against the City of Seymour, the Seymour/Baylor County Emergency Medical Service, and the Seymour Hospital Authority, claiming that the government's refusal to transfer her husband had caused his death. She contended that Seymour EMS had refused to perform the transfer because of a hospital authority policy that prohibited Seymour ambulances from leaving the city without backup. On the day of the transfer, no backup was available.

The trial court accepted the version of events offered by Dr. Jackson and the EMTs. Because the physician had never asked Seymour EMS to transfer Mr. Russell, and the patient could not be transferred without a physician's order, the court found that it was impossible for Seymour EMS to have negligently refused to make the transfer. The Appeals Court of Texas affirmed.

As in *Soffin*, the defendant EMS system in *Russell* found itself in court because it placed public need ahead of individual rights. This is not unusual in the world of EMS. Transport policies generally do not allow 911 ambulances to stray too far from their service areas, to do so would jeopardize the safety of the public at large. It is the utilitarian principle at work—using finite resources to do the most good for the greatest number of people.

Sometimes, long transports cannot be avoided. Not every town has a trauma center, or a hyperbaric chamber, or a hospital capable of performing cardiac surgery. When a patient requires specialized care, and the nearest facility offering that care is 100 miles away, rushing the patient to that hospital in the town's ambulance may represent the only lifesaving option. Increasingly, helicopters are being used for such transports, and at least one ground ambulance service has been sued for declining to use such this method of transport.[4] Medical helicopters are not available at all times in every geographic region, however, and factors such as bad weather frequently ground them.

From a liability standpoint, long-distance transports place EMS systems and their directors and policymakers in a no-win situation. If a municipal or county ambulance is allowed to transport a patient outside of the ambulance's regular service area, some other patient might sue, claiming that the ambulance should have remained available for public use. However, if long-distance transports are prohibited, a patient might claim that the EMS authority violated the standard of care by standing in the way of necessary, available treatment. Creating a blanket policy applicable to all EMS systems and all situations is not possible. When drafting a transport policy or directing field personnel, ED staff must consider the risks and benefits to the patient of the extended transport, the needs of the community, and the availability of backup services.

To further complicate matters, some EMS authorities have been sued for transporting patients farther than may have been deemed appropriate. In *Baptist Hospital v. Rawson*, the plaintiff surfaced from a scuba dive in the Gulf of Mexico with symptoms of decompression sickness. An ambulance was waiting for him on shore, and a U.S. Navy decompression chamber was located less than two miles away. The on-line EMS medical director insisted on evaluating the patient before sending him to the chamber, however, and he ordered the EMTs to wait on scene for the arrival of a medical helicopter. The patient was flown to the hospital that provided EMS medical direction. By the time he was medically cleared and transferred to a hospital with decompression capabilities, the four-hour window for treatment had passed, leaving the patient a paraplegic. The patient sued the hospital and won.[5]

Patients have contended that they have a constitutional right to be transported to the hospital of their

choice. These arguments have failed universally. In *Hartman v. Pointer*, a cardiac patient sued the City of San Francisco after paramedics refused to transport him to a Veterans Affairs (VA) hospital that had no ED. Undeterred by the advice of a VA doctor, who instructed the man by phone to accept transport to one of four designated emergency hospitals, he instead took a bus to the VA facility. A federal court held that the paramedics had complied with local EMS regulations, and that the patient had neither a statutory nor constitutional right to demand ambulance transport to a particular facility.[6] Similarly, in *Wideman v. Shallowford Community Hospital*, a woman in premature labor brought suit against a county ambulance service after EMTs transported her to a facility closer than the one at which she had received prenatal care. The plaintiff went on to win a $250,000 judgment in state court for wrongful imprisonment and intentional infliction of emotional distress,[7] but a federal court held that no constitutional right had been violated.[8]

Trauma Centers

As recently as the 1960s, differentiation was the exception and EDs were more or less alike. Ambulances, staffed by a pair of attendants with limited medical training, transported patients to the closest hospital with an emergency room. It made no difference which hospital received the patient, because EDs provided essentially the same or similar services. Then, the goal was to transport the patient to a facility where a doctor was present.

This began to change in 1969, with the opening of the Maryland Shock Trauma Center. For the first time, trauma patients were transported to a central facility by helicopter, where qualified personnel and specialized equipment were available around the clock. This program was immensely successful, as evidenced by an immediate decline in mortality.[9] Similar programs were developed in other states. Today, 35 states designate trauma centers within their jurisdictions, using standards set forth by the American College of Surgeons' Committee on Trauma (ASCOT).[10]

ASCOT classifies trauma centers into four levels. *Level I* centers serve as regional resources, providing not only comprehensive trauma care, but also education, research, and system planning. Most of these facilities are university-based teaching hospitals. *Level II* centers serve as lead trauma facilities in rural areas, and as supplements to Level I facilities in cities. *Level III* facilities provide assessment and emergency surgery, while *Level IV* centers provide advanced trauma life support in remote areas where more sophisticated trauma care is not available. One additional category, the *Level V* trauma center, is not formally recognized by ASCOT, but is used by some states to designate hospitals that provide life support prior to transfer.[11]

To qualify as a trauma center, hospitals must be designated by the local, regional, or state health authority under which they operate. ASCOT has implemented a verification and consultation program to facilitate this process.[12] In all jurisdictions, the requirements for trauma center designation mirror the standards established by ASCOT. (*See Table 1.*)

For years, EMS personnel have relied upon ACSCOT guidelines to identify patients who need the specialized services of a trauma center. These guidelines advise EMS personnel to bypass standard EDs in favor of trauma centers whenever specified anatomical or physiological criteria exist. (*See Table 2.*) Until recently, mechanism of injury figured prominently in the prehospital triage process. Patients who fell from a significant height or who were involved in a serious collision were brought directly to a trauma center, whether they appeared to be injured or not. Mechanism of injury is now thought to be an unreliable predictor of outcome,[14,15] however, and with trauma centers throughout the country facing severe overcrowding, ACSCOT no longer recommends the routine utilization of such facilities in the absence of clinical indications.[16]

The effectiveness of trauma centers is well established. Seriously injured patients fare significantly better when transported to a trauma center than to a standard ED[18] in terms of both survival and functional outcome at discharge.[19] Pediatric patients, too, benefit from specialized trauma care.[20] Improvements in diagnostic imaging have spawned a wave of conservative treatment,[21] but a substantial proportion of injured children still require emergency surgery, and pediatric trauma centers, like their adult counterparts, have been shown to reduce mortality.[22-24] The greatest difference in outcome has been observed among children with brain injury.[25,26] Field triage to a pediatric trauma center, therefore, should be considered for any child with significant head injury.

Certainly, the failure of an EMS system to make

TABLE 1: Key Trauma Center Requirements[13]

LEVEL I

- Immediate operating room (OR) capability, including in-house OR staff at all times
- Immediate availability of trauma surgeons, anesthesiologists, physician specialists, nurses, and resuscitation equipment
- Extensive equipment requirements
- At least 1,200 trauma admissions per year, or 240 major trauma admissions per year, or an average of 35 major trauma admissions per surgeon
- Must take a lead role in research, education, and community injury-prevention activities

LEVEL II

- Same requirements as Level I trauma centers, except that volume requirements do not apply
- Should participate in research and educational activities

LEVEL III

- General surgeons and anesthesiologists must be available at all times
- Must have transfer agreements with Level I or Level II trauma centers
- Must adopt and follow standardized treatment protocols

LEVEL IV

- Must be capable of resuscitating, stabilizing, and transferring trauma patients to the closest, most appropriate Level I or II trauma center

TABLE 2: ACS Trauma Center Utilization Guidelines[17]

PHYSIOLOGIC CRITERIA. TRAUMA CENTER INDICATED FOR:

- Glasgow Coma Scale score less than 15
- Systolic blood pressure less than 90 mmHg
- Respiratory rate less than 10 bpm or more than 29 bpm
- Revised Trauma Score less than 11

ANATOMIC CRITERIA. TRAUMA CENTER INDICATED FOR:

- Penetrating injuries to head, neck, torso, and proximal extremities
- Flail chest
- Trauma combined with burns
- Two or more proximal long-bone fractures
- Pelvic fracture
- Open and depressed skull fracture
- Paralysis
- Amputation proximal to wrist or ankle
- Major burns

MECHANISM OF INJURY CRITERIA. CONTACT MEDICAL DIRECTION AND CONSIDER TRAUMA CENTER FOR:

- Ejection from vehicle
- Death of a same-vehicle occupant
- Extrication time greater than 20 minutes
- Falls greater than 20 feet
- Vehicle rollover
- Vehicle crash greater than 40 mph, or with vehicle deformity of more than 20 inches, or passenger compartment intrusion of more than 12 inches
- Pedestrian thrown or run over
- Greater than 5 mph impact between vehicle and pedestrian or bicyclist
- Motorcycle crash greater than 20 mph, or separation of rider from motorcycle

PATIENT-SPECIFIC CRITERIA. CONTACT MEDICAL DIRECTION AND CONSIDER TRAUMA CENTER FOR:

- Age less than 5 years or greater than 55 years
- History of cardiac or respiratory disease, diabetes, cirrhosis, obesity, pregnancy, immunosuppression, bleeding disorders, or anticoagulant use

use of a trauma center in appropriate circumstances can land the EMS system and its personnel in court. The following case did not result in EMS liability, yet it stands as a reminder that trauma patients must be triaged to proper destinations, and that EMS medical directors, both administrative and on-line, have an obligation to make this happen.

Case #3. *Shoemaker v. City of Shreveport*[27]

Jeffrey Shoemaker was celebrating in "Shooter's Saloon" in Shreveport, Louisiana when a brawl erupted, and Mr. Shoemaker was struck over the head with a pool cue. Paramedics arrived to find him lying on the floor, confused but awake, with a large hematoma around his left eye and a lacerated lip. His pulse and respirations were found to be normal, but his blood pressure was slightly elevated—a finding considered by the paramedics to be consistent with injury in the wake of a brawl. Mr. Shoemaker had long been blind in his left eye, but the pupil of his right eye was briskly reactive. Sensory and motor reflexes were normal in all extremities. The paramedics found no evidence of skull fracture or depression, and Mr. Shoemaker scored 14 of a maximum 15 on the Glasgow coma scale. Based upon these findings, the paramedics did not believe that he met the criteria for transport to the Level I trauma center at Louisiana State University Medical Center. Instead, they complied with the request of Mr. Shoemaker and his companion and transported him to the ED at nearby Schumpert Medical Center.

Mr. Shoemaker underwent a CT scan, which

revealed a skull fracture. He later claimed that he suffered brain injury as a result of delayed treatment. He brought a negligence action against Shreveport's EMS authority, alleging that the paramedics should have transported him to a trauma center.

Dr. Ronald Lambert, Medical Director of the Shreveport Fire Department's EMS Department, submitted an affidavit on behalf of the paramedics. He had developed the fire department's Advanced Life Support Protocols and Standard Operating Procedures, including the Emergency Transport Policy in effect at the time of Mr. Shoemaker's injury. Dr. Lambert stated that Mr. Shoemaker did not qualify for trauma center triage under any of the six enumerated criteria. Furthermore, he opined that Mr. Shoemaker's skull fracture would not have been obvious in the field. In Dr. Lambert's opinion, the paramedics had acted appropriately in transporting Mr. Shoemaker to a non-trauma center. The plaintiff submitted no evidence to refute these statements, and the trial court granted summary judgment.

Trauma centers have existed in the United States for nearly four decades. Still, most people cannot distinguish a trauma center from a traditional ED. This can cause patients to make poor choices. As the following case illustrates, the failure of an injured person to fully appreciate the benefits of trauma center care can cause problems not only for the patient, but for EMS personnel and ED staff as well.

Case #4. *Smith v. Medical Center East*.[28]

When 17-year-old Victor Smith and his girlfriend were injured in an automobile collision, EMTs decided to transport them to different hospitals. Mr. Smith, suffering from blunt trauma to his chest and abdomen, would be taken to Carraway Methodist Medical Center, a Level I trauma facility. His girlfriend, less seriously injured, would go to Medical Center East, a Level II facility.

Upon learning of this plan, Mr. Smith asked to be transported to the same hospital as his girlfriend. The EMTs explained that his injuries appeared to be serious, and that it would be better for him to receive treatment at Carraway. Mr. Smith insisted on being transported to Medical Center East. This request was communicated by the EMTs to Dr. R.W. Berry, the emergency physician on call at Carraway, who granted permission to transport Mr. Smith to Medical Center East.

Mr. Smith had a grayish appearance and abnormal vital signs when he arrived at the hospital. X-rays revealed a widened superior mediastinum. The ED physician, after consulting with a general surgeon, diagnosed an aortic tear—a condition that required prompt surgical correction not immediately available at Medical Center East.

The emergency physician telephoned a thoracic surgeon under contract to the hospital, who recommended that an arch aortogram be performed. An on-call radiologist was summoned, but before he could get to the hospital, Mr. Smith went into asystole. The ED staff attempted resuscitation, to no avail. Mr. Smith was soon pronounced dead.

Mr. Smith's father brought wrongful death actions against the ambulance service, both hospitals, and the physicians who had treated his son in the ED. In his claim against Carraway, the plaintiff argued that Dr. Berry, as the hospital's agent, should have mandated transport to the Level I trauma center. At trial, Dr. Berry testified that local EMS regulations require a patient to be transported to the hospital of his choice if he is able to speak and make decisions. Mr. Smith, Dr. Berry said, had met these criteria. Dr. Berry's testimony was corroborated by the EMTs, and was not disputed by the plaintiff. Because Dr. Berry had complied with the regional EMS protocol, the trial court found that Carraway had no obligation—and, in fact, no right—to countermand the patient's expressed wishes. On this basis, Carraway was granted judgment as a matter of law.

The plaintiff contended that the remaining defendants had been negligent in failing to transfer Mr. Smith to a level I trauma center, and that they had taken too long to contact a thoracic surgeon. Mr. Smith had died from a ruptured descending aorta, and according to the plaintiff, this condition could have been corrected with a timely thoracotomy. The plaintiff's argument failed when one of his expert witnesses admitted on cross-examination that Mr. Smith probably would have died even if surgery had been performed immediately. The trial court, finding that the plaintiff had not produced even a "scintilla of evidence" that the defendants actually caused Mr. Smith's death, held for the defendants on all counts. The Supreme Court of Alabama affirmed.

The common law has long recognized the necessity of dispensing with informed consent in a true emergency.[29] This doctrine holds true to an even

greater extent in the prehospital setting than in a health care facility because EMTs and paramedics cannot provide their patients with a precise diagnosis and prognosis. Confronted with a severely traumatized patient, under circumstances that do not permit a prolonged discussion about the risks and benefits of various alternatives, the only practical course of action is to provide all necessary care and transport the patient to the most medically appropriate facility, regardless of the patient's desires. When a patient has the time and ability to make an informed decision, though—as was the case in *Smith*—EMS personnel generally must accede to that choice, whether the EMTs, paramedics, and ED staff agree with it or not.

The insistence of a patient to be transported to a particular facility can place on-line and administrative medical directors in a difficult position. Advising prehospital personnel to follow the medically-inappropriate transport demands of a patient can lead to a malpractice lawsuit like the one in *Smith*. On the other hand, civil rights claims are being filed against EMS medical directors with increasing frequency,[30] and transporting a patient to a facility not of his choosing certainly could lay the foundation for such a claim. Liability exposure can be minimized by implementing policies that clearly describe the method EMTs and paramedics should use to determine a patient's capacity.

Far less common, but equally problematic, is the failure of an ED to live up to the reasonable expectations of patients or prehospital care providers. In the following case, an ED presenting itself as a quasi-trauma center was exposed to liability when it was unable to provide the surgical services it had promised.

Case #5. *Millard v. Corrado*.[31]

Dr. Joseph Corrado, a general surgeon on the staff of Audrain Medical Center in Mexico, Missouri, left the hospital to attend an American College of Surgeons conference some 20 miles away. He had scheduled himself to be on call that day because the hospital's other two surgeons were on vacation. He had asked Dr. Ben Jolly to cover for him during his four-hour absence—an odd decision, given that Dr. Jolly was an orthopedist who did not enjoy staff privileges at Audrain.

While Dr. Corrado was at the conference, 63-year-old Marjorie Millard was involved in an automobile collision on a highway in a neighboring county. EMTs found Ms. Millard to be pale, cool, and moist, with faint pulses and a low blood pressure that soon could not be detected at all. The EMTs considered transporting her to University of Missouri Medical Center (UMMC), but they did not believe that her condition was stable enough to make the 25-mile trip. Instead, they transported her to Audrain, 14 miles closer. While Audrain was not a Level I trauma center, it did promote itself as a "twenty-four-hour emergency room" with an emergency physician "in house," a general surgeon "on call," and surgical equipment to handle trauma on an emergency basis.

The EMTs radioed to Audrain that they were coming in with a "Class 1 patient," meaning that the patient had a "critical or life-threatening condition." This message went unanswered. A chest X-ray performed shortly after arrival revealed diminished lung volume. The ED physician, Dr. Steve Taylor, diagnosed intra-abdominal bleeding and ordered the administration of intravenous fluids. Dr. Corrado was paged twice, but he did not respond.

Efforts were made to transport Ms. Millard by air to UMMC, but the EMS helicopter was grounded for an indeterminate period due to inclement weather. Dr. Jolly, the orthopedist covering for Dr. Corrado, and another physician examined Ms. Millard; they agreed that she needed surgery to stop internal bleeding. Unfortunately, neither physician was qualified to perform such a procedure, and neither physician held operating privileges at Audrain.

More than an hour after Ms. Millard arrived in the ED, Dr. Corrado answered his pages. He spoke to the physicians caring for Ms. Millard, and a decision was made to transfer her to UMMC by ground ambulance. In the operating room of UMMC, Ms. Millard was found to have broken ribs, a ruptured diaphragm, and significant injuries to her renal artery, renal vein, and adrenal artery. The surgery, which began four hours after the collision, included the removal of her left kidney, gallbladder, colon, and part of her small intestine.

Ms. Millard brought two actions—one for medical malpractice, the other for general negligence—against Dr. Corrado. The trial court held that the plaintiff could not prevail on a general negligence claim because the complaint involved "a matter of medical science or art requiring special skills not ordinarily possessed by lay persons." Finding no

patient-physician relationship between Dr. Corrado and Ms. Millard, the trial court dismissed the medical malpractice claim as well.

The Missouri Court of Appeals disagreed with both of these conclusions. A professional can incur a general duty, the appellate court said, when public policy favors the recognition of such a duty, or when harm is particularly foreseeable. Here, both elements were present. Shortly after Ms. Millard's injury, the Missouri General Assembly adopted a regulation that requires on-call physicians to arrive at the hospital within 30 minutes of being summoned. In the opinion of the appeals court, such a rule would not have been adopted unless the public expected physicians to attend to their patients within a reasonable time. Dr. Corrado, therefore, had a duty to make himself available on the day of the accident, and his failure to do so created a foreseeable risk of harm to any patient who might have presented to his ED during his absence.

On the issue of malpractice, the appellate court held that a professional relationship may indeed have existed between Dr. Corrado and Ms. Millard. "Hands on" treatment is not necessary to create such a relationship, and the appellate court held Dr. Corrado's transfer recommendation over the telephone may have been sufficient to constitute treatment. Having determined that the claims had been dismissed prematurely, the appeals court remanded the case for trial on the issues.

In *Millard*, only the ED physician was sued. Usually the hospital is named as a defendant well, under vicarious liability theory. The lesson to be learned from this case is that hospitals in general—and trauma centers, specifically—must meet their obligations to the public. EMTs and paramedics make transport decisions on the basis of known hospital capability. For a coordinated trauma system to be effective, hospitals must deliver services as promised.

Burn Centers

Trauma is not the only condition that responds well to treatment in a specialty center. The success of the regional trauma center model has led to the creation of burn centers that are verified through a collaborative effort of the American College of Surgeons and the American Burn Association. As with trauma centers, criteria have been developed for the utilization of these facilities. (*See Table 3*.)

Cardiac and Stroke Centers

Unlike trauma and burns, the emergency management of myocardial infarctions (MIs) can be effectively accomplished in most departments. The catch, of course, is that the ED can provide optimal care only when it is located in a hospital capable of performing timely percutaneous coronary intervention (PCI).[34,35] A number of studies have found PCI preferable to fibrinolytic therapy in the treatment of MI,[36-38] particularly in the setting of ST-elevation MI (STEMI). At the same time, studies have left no doubt that paramedics can detect STEMI with almost total accuracy.[39,40] Thus, to ensure the immediate availability of this procedure to patients who need it, some EMS systems have begun to triage patients suffering from STEMI directly to regional PCI-capable facilities.[41-44] The American College of Cardiology believes that "it is reasonable that paramedics review a reperfusion checklist and relay the ECG and checklist findings to a predetermined medical control facility and/or receiving hospital. The checklist should be designed to determine the presence or absence of comorbid conditions and underlying conditions in which fibrinolytic therapy may be hazardous. The checklist should also facilitate detection of patients with suspected STEMI who are at especially high risk, including those with severe heart failure or cardiogenic shock, for whom primary PCI is generally the preferred reperfusion strategy."[45]

It is important to note, however, that the effect of bypassing one or more EDs for the purpose of obtaining PCI has yet to be adequately studied. Accordingly, this practice has not yet evolved into a standard of care. For now, the American Heart Association recommends leaving decisions about field triage of MI patients to local EMS authorities and their medical directors, who, when designing transport protocols, should consider transport time, system resources, and the capabilities of area hospitals.[46]

Similarly, the wisdom of triaging patients with abnormal neurological findings directly to designated stroke centers remains a subject of much debate.[47] The effects of such an arrangement have not been extensively studied, but early reports suggest that treatment by a well-trained multidisciplinary team improves subsequent outcome dramatically.[48,49] The American Heart Association, therefore, suggests triaging stroke victims to the ED of a hospital where such care is available, as long as the

TABLE 3: American Burn Association and American College of Surgeons Burn Center Utililization Criteria[32,33]

BODY SURFACE AREA:
- 5% or more (full thickness)
- 10% or more (partial thickness, patient younger than 10 years or older than 50 years)
- 20% or more (partial thickness, patient age 10-50 years)

BURNS OF ANY THICKNESS TO VULNERABLE BODY PARTS:
- Hands
- Feet
- Face
- Eyes
- Perineum
- Major joints

NONTHERMAL BURNS:
- Electrical burns, including lightning injuries
- Significant caustic chemical burns

INHALATION BURNS:
- Burns of the upper or lower airway

COMPLICATING FACTORS:
- Multiple trauma (if trauma poses the greater risk, stabilize at a trauma center first, then transfer to burn center)
- Significant medical problems that could complicate management, affect mortality, or prolong recovery

transport interval is reasonable.[50]

Plans for direct triage to facilities offering other forms of specialized care are even less well developed. As a result, little is known about the potential benefits of such practices. The feasibility of direct triage depends largely upon the resources available in any given community. Medical directors of EMS systems may wish to consider adopting a point-of-entry plan that utilizes a particular facility for spinal cord injuries, if one exists, or for limb reattachment, or for ocular injuries. Because so few facilities specialize in the treatment of such conditions on an emergent basis, however, EMS authorities in most areas direct these patients to ordinary trauma centers.

Diversion

The closure of EDs to incoming ambulance traffic has become a major problem in recent years. At times, so many EDs go on diversionary status that EMS personnel are left with no place to bring their patients. EMS personnel can ignore a hospital's diversionary warnings, of course, but to do so poses a liability risk, because the EMTs or paramedics will likely be blamed for any harmful delays in treatment that result.

Conversely, hospitals must not instruct EMS systems to divert from their EDs without a valid reason. To do so may implicate the Emergency Treatment and Active Labor Act (EMTALA).[51] In *Johnson v. University of Chicago Hospitals*, the mother of an infant sued a health care facility for its role as a provider of on-line EMS medical direction. The plaintiff's infant had gone into cardiac arrest, and even though a pediatric ED was located just five blocks away, the nurse at that hospital who was providing on-line medical direction instructed the paramedics to transport the infant to a more distant facility. The reason for this diversion had nothing to do with the ED's ability to handle the patient; rather, the decision was prompted by a shortage of inpatient beds. In the long and complex series of trials and appeals that followed, the hospital ultimately was found not liable, but the Seventh Circuit Court of Appeals warned that the outcome might have been different if the plaintiffs had offered persuasive evidence that the diversion constituted a "scheme to dump patients."[52] The most important lesson learned from this case, then, is that diversion should be based on ED capability, not on inpatient census.

EMTALA does not prohibit ambulance diversion. A hospital incurs no liability if it turns an ambulance away because of ED overcrowding before that ambulance arrives. If EMS personnel disregard a hospital's diversion instructions, however, and arrive with a patient anyway, the hospital incurs an obligation under EMTALA to provide a screening examination and stabilizing treatment as soon as the patient reaches hospital property.[53]

In general, when a patient enters a hospital-owned ambulance, the EMTALA requirement of "comes to the hospital seeking emergency care" is satisfied.[54] Thus, at times, a hospital may incur a duty to provide medical screening and stabilizing treatment even before the patient has reached its property. No such obligation exists, however, where the ambulance operates under "communitywide EMS protocols."[55] In other words, ED staff may lawfully direct a hospital-owned ambulance to another facility without implicating EMTALA as long as the chosen destination is an appropriate one under a regional point-of-entry plan.

Bypassing a local ED in favor of a regional specialty center is recommended only when the patient will derive significant benefit from treatment not available at the local facility. The decision to order ED bypass should not be made lightly. A number of factors must be considered, including the extent to which transport will be prolonged, the condition of the patient, the anticipated benefit, and the effect on the EMS system's ability to service the public. Bypassing the ED of a community hospital in favor of a trauma center or other regional specialty center is appropriate in many instances, but it must always be ordered in accordance with accepted medical practice. Failure to adhere to these principles exposes the EMS system, its administrative and online medical directors, EMTs, and paramedics to significant liability exposure, as evidenced by a substantial body of case law.

Conclusion

All EDs are not alike. Increasingly, hospitals offer specialized emergency care on a regional basis.

To properly direct the activities of an EMS system, nurses and physicians must familiarize themselves with area hospitals and the specialized services they provide. Every EMS system should have a point-of-entry plan that identifies the EDs to which patients may be transported, as well as the criteria that should be employed by EMTs and paramedics when making transport-related decisions. Patient preference should be honored to the extent possible, given the nature of the condition and availability of resources. In appropriate circumstances, EMS should be instructed to bypass a local hospital in favor of a regional specialty center. This practice, known throughout the medical literature as *ED bypass*, should not be confused with *ED diversion*, which occurs when—usually because of overcrowding—a hospital cannot provide a particular patient with necessary care in a timely manner.

CE/CME Instructions

Physicians and nurses participate in this continuing medical education/continuing education program by reading the article, using the provided references for further research, and studying the questions at the end of the article. Participants should select what they believe to be the correct answers, then refer to the list of correct answers to test their knowledge. To clarify confusion surrounding any questions answered incorrectly, please consult the source material.

The semester ends with this issue. You must complete the evaluation form that is inserted in this issue and return it in the reply envelope that is provided to receive a certificate of completion. When your evaluation is received, a certificate will be mailed to you.

Endnotes

1. *Hines v. Dist. of Columbia*, 580 A.2d 133 (D.C. 1990).
2. No. 219880 (Mich. Ct. App. 2001).
3. 836 S.W.2d 283 (Tex. App. Ct. 1992).
4. *Lytle v. Stearns*, 830 P.2d 1197 (Kan. 1992).
5. *Baptist Hosp. v. Rawson,* No. 95-2237 (Fla. Dist. Ct. App. 1996). The case was remanded for retrial because of inappropriate comments made by the plaintiff's attorney before the jury.
6. No. 92-15929 (11th Cir. 1993).
7. *Wideman v. DeKalb County*, 409 S.E.2d 537 (Ga. Ct. App. 1991). The judgment was reversed on appeal. *Wideman v. DeKalb County*, 416 S.E.2d 498 (Ga. 1992).
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CE/CME Objectives

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Participants who complete this activity will be able to:

- identify high-risk patients and practices within the ED;
- discuss a standard of care in the ED for treatment of conditions that may be considered as high-risk;
- explain conditions and practices in which informed consent is required in the ED;
- cite methods of minimizing risk in the ED setting.

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51. 42 U.S.C. § 1395dd.
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53. 42 C.F.R. 489.24(b)(4).
54. 42 C.F.R. 489.24 (b)(3).
55. 42 C.F.R. 489.24 (b)(3)(i).

CE/CME Questions

27. Which of the following factors are *not* considered when verifying a Level I trauma center?
    A. The location of the facility
    B. The number of trauma cases treated each year
    C. Availability of anesthesiologists
    D. Availability of an operating room

28. When ordering an ambulance to bypass a local hospital in favor of a hospital offering specialized services, which of the following factors should *not* be considered?
    A. The benefit to the patient of receiving specialized care
    B. The availability of backup ambulance service
    C. The patient's condition
    D. The reputation of the specialty hospital

29. According to the American Heart Association, direct triage to a PCI facility should be considered when which of the following conditions exists?
    A. STEMI
    B. Chest pain
    C. Trauma
    D. Hypertension

30. Direct triage to a facility offering specialized treatment has become the standard of care for which of the following patient classes?
    A. Pediatric patients
    B. Stroke patients
    C. Cardiac patients
    D. Trauma patients

Answers: 27. A; 28. D; 29. A; 30. D