THE RECESSION: TEN MISTAKES THAT ARE MAKING IT WORSE

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HOW TO PROTECT YOUR CREDIT RATING

THE SHAME OF EMERGENCY MEDICINE

KIDS AT RISK

IS YOUR HOSPITAL GOOD ENOUGH?

WHAT PARENTS NEED TO KNOW

Seven-year-old Elaina Barrett suffered respiratory distress following emergency brain surgery. Improper monitoring by doctors and nurses left her with severe brain damage. An only child, she lived at home for seven years before she died.

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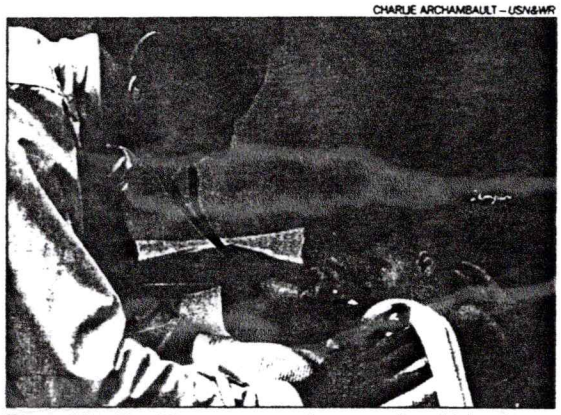
COVER STORY

The shame of emergency care for kids

Most hospitals and rescue squads aren't really prepared to deal with children's medical crises

With his undergraduate degree from Yale and diploma from Harvard Medical School, Richard Flyer could have had his pick of prestigious medical specialties. He chose to go back home to Verona, N.J., to be a children's doctor. "The beauty of kids is that they haven't had years to abuse their bodies," Flyer says. "If you treat them correctly, you can get good outcomes."

CHARLIE ARCHAMBAULT – USN&WR



The critic. *Dr. Flyer says much more should be done.*

But for much of the 10 years since he opened his pediatric practice in that prosperous New Jersey town, Flyer has been frustrated, sometimes angry: He is convinced that too often America's critically ill and injured children are *not* treated correctly. Each year, according to the National Safety Council, between 20,000 and 25,000 children die from accident-related injuries, more than from any other cause. Four times that number are permanently disabled, and 2.5 million are incapacitated for two weeks or longer. Injuries to children over age 1 account for six times as many deaths as cancer, the next highest cause. And thousands more children die every year from treatable illnesses like asthma, meningitis, pneumonia and bacterial infections.

Each year, an estimated 600,000 children are hospitalized because of injuries, and almost 16 million more are treated in emergency departments. The startling fact is that unless the most imperiled of those children are taken to a sophisticated children's hospital or one especially geared for pediatric emergencies, the treatment they will receive is a crap shoot. Every day, some of America's children die, or almost die, because they are taken to the wrong hospital, treated with improper equipment, given wrong dosages of medications or not diagnosed properly.

Even in the best systems, "kids are dying and being maimed unnecessarily," says J. Alex Haller, children's surgeon-in-charge at Johns Hopkins Hospital in Baltimore. "Imagine when there is no system, which is the case in most of the country."

Critical differences. In a recent report on emergency medical services for children, or EMSC, the National Center for Education in Maternal and Child Health declared: "The majority of infants, children and young adults who might benefit from pediatric critical care services do not receive them." The report, written by many of the nation's leading pediatricians, emergency care doctors and nurses, also found that "in communities without access to specialized pediatric services and EMSC system components, there is a higher mortality rate for critically ill and injured children." Dr. Joseph Zanga, pediatrics professor at the Medical College of Virginia and a member of the executive board of the American Academy of Pediatrics, basically agrees: "We are making significant progress, but we still have a long way to go. The powers that be, in government and in the medical community, have been slow to realize that kids really are different."

It is impossible to determine exactly

CASSIE CAGGIANO

What happens when a fatal disease looks and feels like a common illness

On Oct. 1, 1990, 3-year-old Cassie Caggiano of Upper Montclair, N.J., was diagnosed with pneumonia by her pediatrician. Her condition worsened, and she was rushed to a local hospital on October 13. Much of that day she was treated for pneumonia, supposedly confirmed by a chest X-ray. But she became gravely ill, and a second X-ray revealed she had viral myocarditis, a rare inflammation that ballooned her heart to three times its normal size. It took several hours to find a properly equipped ambulance to take her to a more appropriate hospital seven miles away in Newark. Only a heart transplant could have saved her. She died three days later.

COURTESY OF CAGGIANO FAMILY

NIKKI SAN AGUSTIN
Her father: 'I had no idea there is no good system'

Twelve-year-old Nikki San Agustin was knocked unconscious in a ski slope accident in New Jersey in 1988. A volunteer rescue squad took her across the border to St. Anthony Community Hospital in Warwick, N.Y., an 80-bed facility with no neurosurgeon or pediatric specialist on duty and no sophisticated neurological diagnostic equipment. Several hours after the accident, Nikki was transferred by ground ambulance to St. Joseph's Hospital and Medical Center in Paterson, N.J., which had the appropriate personnel on duty and advanced equipment to treat her. But it was too late. Nikki died in St. Joseph's two days later. In a pending lawsuit against St. Anthony, the San Agustins say the hospital should not have accepted such a seriously injured patient. The hospital responds that it acted properly in evaluating the child and transferring her to a higher level of care. Officials also say they had no control over where the ambulance crew took her. The alleged shortcomings of this system dismayed Nikki's father. "I'm a trauma surgeon and I had no idea there is no good system for treating kids," says Dr. Norman San Agustin. Nikki was the San Agustins' only child.

how many children suffer as a result of these systemic problems. Most medical personnel, especially doctors, refuse to talk openly about the specific cases that go awry. This code of silence is partly fueled by a fear that speaking up could lead to malpractice suits and loss of patient referrals—or even their jobs. It also stems from a fear of alienating colleagues and other key medical players whose cooperation they need to make changes in their communities. Reformers who have tried to change the system face another obstacle: Most Americans, including many pediatricians, do not know the extent of the problem. Rightly proud of the dazzling progress of medical technology, many find it impossible to believe that a system that can nurture a 1-pound premature baby to robust health does not have a consistent capacity to treat children who become gravely ill.

When there has been cooperation between the key players and institutions in different locales, there have been significant improvements. For example, it was once common for rescue squads simply to pick up a critically ill or injured child and race to the nearest hospital, a process known as "scoop and run." Today paramedics and emergency medical technicians are much more likely to deliver children to hospitals with intravenous lines and ventilators already in place. But there are only a few strong communitywide systems—two pioneering examples are in Maryland and Los Angeles—for treating desperately ill children (story, Page 40).

Partly in response to concerns about the inadequacy of the system, the American Board of Medical Specialties last April approved a new subspecialty in pediatric emergency medicine, which may lessen the rivalries between pediatricians and emergency care physicians and make the field more attractive to the next generation of doctors. The goal is to have

COURTESY OF SAN AGUSTIN FAMILY

1,000 board-certified pediatric emergency doctors in the United States by the year 2000. That is not a big group, considering the need, but supporters of the subspecialty hope these new doctors will have a ripple effect, inspiring many communities to deal with this problem.

Still, a large segment of the over 38,000-member general surgical community opposed the new specialty. The reason: They fear pediatricians and emergency physicians would exclude them from the early management of cases. Other experts in both pediatrics and emergency medicine argue that more reforms are still needed – including greater access to equipment designed for children; 24-hour staffing by pediatricians and other doctors and nurses with pediatric training in hospital and wards that treat children; more training of emergency rescue personnel, and better coordination between them and hospitals to get sick children to the right place quickly.

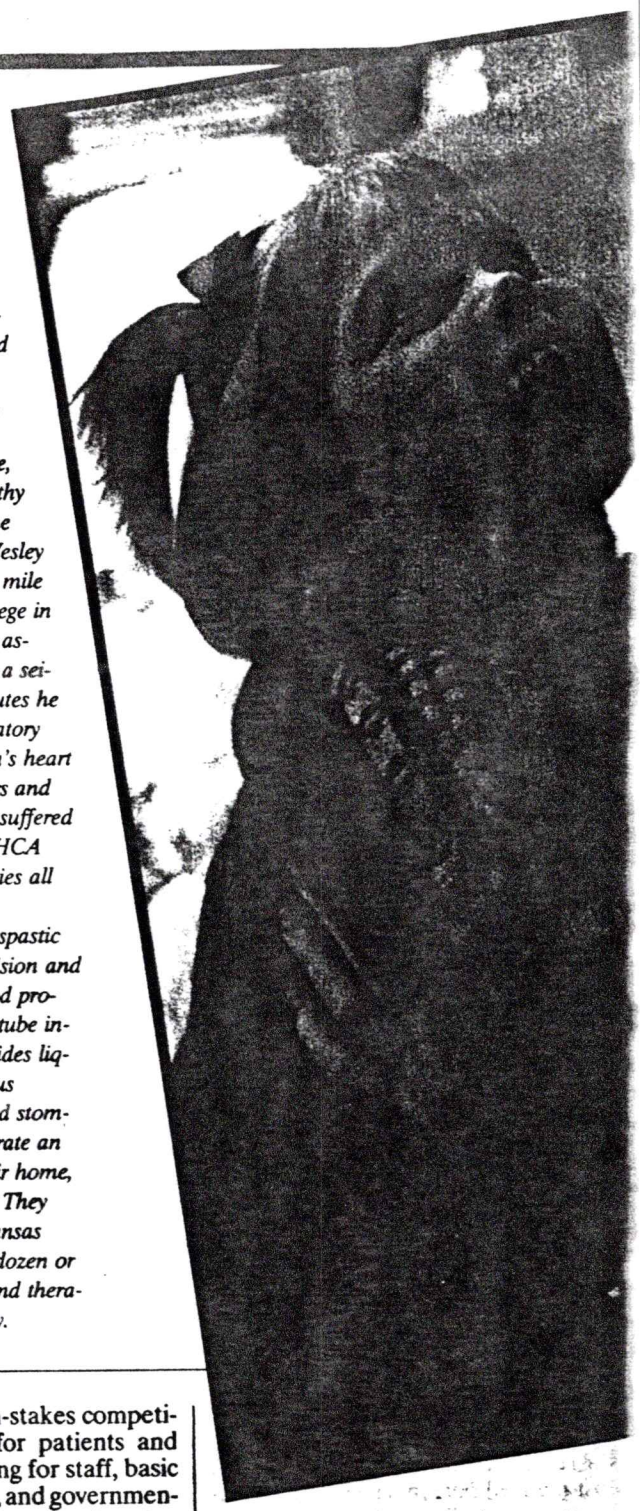
A middle-class dilemma. Surprisingly, kids in many of the nation's nicest communities are the ones most at risk. Sick children whose middle-class parents instinctively take them to modern community hospitals in safe, tree-lined neighborhoods may be less likely to receive optimal care than inner-city kids who live closer to teaching hospitals with advanced pediatric services. "Just because there's a sign on the building that says HOSPITAL or EMERGENCY ROOM doesn't mean the people inside are ready to treat kids," Flyer charges. "There is an illusion that it's being done, but it isn't."

It wasn't being done in suburban Atlanta last October when a 3-month-old boy suffering from a runny nose, persistent coughing and no appetite was taken by his mother to their pediatrician. The doctor treated the child for a cold and sent him home. Three days later, the sick child was taken to a local hospital's emergency room, where he received fluids intravenously because the attending physician suspected shock. In fact, the child was suffering from congestive heart failure and the fluids greatly worsened his condition. A simple chest X-ray would have shown an enlarged heart and a routine physical examination would likely have revealed an enlarged liver. Neither was done. The child died en route to a tertiary care facility in Atlanta, before a common life-saving surgical procedure could be performed.

Critics are especially frustrated because the technology and skills needed to improve care already exist. Too often, however, their use is thwarted by professional rivalries, the high-stakes competition among hospitals for patients and prestige, a lack of funding for staff, basic equipment and training, and governmental indifference. "If this same situation were happening to old people, there would be a march on Washington," charges Dr. Frank Castello, director of pediatric intensive care at Children's Hospital of New Jersey in Newark.

Children are not adults. Perhaps the biggest medical problem is that many doctors, nurses, paramedics and emergency medical technicians continue to treat children as miniature adults. In fact, children are at greater risk than adults of having serious breathing problems, are less tolerant of blood loss and more vulnerable to head injury. With critically ill and injured children, time is of the essence. For adults who have suffered trauma, getting treatment within the "golden hour" is the rule. For children, the most crucial time is the "platinum half-hour." The younger the child, the smaller the margin for error.

Recognizing and treating a child in shock illustrates another crucial difference. Blood pressure drops quickly in adults in shock and that is an early indication that major organs are being de-



JOURDAN RUSH
The awful things that occur when a heart stops

In June 1989, the Rush family was finishing dinner at a restaurant in Wichita, Kan., when 23-month-old Jourdan turned pale and lethargic. A few minutes later, when her breathing became strained and lips turned blue, her parents, Russell and Kathy Rush, drove frantically to the emergency room of HCA Wesley Medical Center, less than a mile away. There, the Rushes allege in a pending lawsuit, a doctor assumed Jourdan was having a seizure and for 11 crucial minutes he failed to monitor her respiratory and cardiac status. Jourdan's heart stopped. By the time doctors and nurses restarted it, she had suffered irreparable brain damage. HCA Wesley Medical Center denies all allegations of negligence.

Jourdan is now a severe spastic quadriplegic with limited vision and speech. She is fed solid food processed in a blender, and a tube inserted in her stomach provides liquids. She has had numerous operations on her brain and stomach. The Rushes, who operate an insurance agency from their home, have a son, Joshua, age 6. They moved from Wichita to Kansas City, Kan., to be near the dozen or more medical specialists and therapists Jourdan sees regularly.

BERN KETCHUM FOR USN&WR

COURTESY OF BARRETT FAMILY

ELAINA BARRETT

Even big hospitals sometimes don't do the right thing

A week before she turned 8 in 1983, Elaina fell off her horse in Tahlequah, Okla. After treatment at a community hospital, she was airlifted to St. Francis Hospital in Tulsa, a big facility that includes a pediatric intensive care unit. About 36 hours after her accident, Elaina was rushed into surgery, where a blood clot between her skull and brain was removed. But she began having trouble breathing. Almost an hour passed before a secure breathing tube was placed in her airway. The lack of oxygen caused permanent brain damage. In 1988, a jury found the hospital negligent for not following its own procedures. Rolland and Linda Barrett cared for their only child at home until she died in 1990.

prived of oxygen. But children's vascular systems allow them to constrict the blood vessels tightly and maintain a more normal blood pressure even when they are in shock. A child can have normal blood pressure until he is just about to die.

One relatively simple procedure that helps identify a child in shock is called capillary refill, in which a child's fingernail is squeezed for a few seconds and then released. If it takes more than two seconds for the blood to return to the fingertip, it probably indicates shock. But Dr. Stephen Ludwig, division chief of general pediatrics at Children's Hospital of Philadelphia and chairman of the American Academy of Pediatrics committee on pediatric emergency medicine, estimates that as many as half of the more than 45,000 pediatricians in the United States and a large number of nurses and emergency medical personnel are unfamiliar with capillary refill.

The same is true for another basic procedure, intraosseous infusion, in which life-saving fluids are injected into the bone marrow through a needle inserted directly into the tibia, or shin bone. When small children suffer respiratory arrest, their veins often collapse, making it very difficult to administer fluids intravenously. It is relatively easy to teach a doctor or nurse the intraosseous method, but based on his experience, Ludwig estimates that only about 1 in 5 practicing pediatricians knows how to perform the procedure.

The training gap. During their training after medical school, most pediatricians get little instruction in emergency care, and most emergency care doctors have had limited training specific to treating kids. Most pediatric residency programs, for example, devote three months to emergency care during three years of instruction; critics within the field say that is insufficient. Many of the nurses who evaluate emergency cases also are not adequately prepared to handle pediatric emergencies, according to Dr. Zanga of the AAP executive board. Indeed, it is an open secret in many hospitals that regularly place children in their adult intensive care units that nurses are very wary of having to care for such children.

Efforts to provide more training in pediatric emergency care often face familiar roadblocks – not enough time or money. Some of those who can more easily afford refresher courses, like doctors, can't find the time, while some of those who are able to take the time, like rural EMTs, can't afford to travel to a city for instruction.

Beyond the barriers of time and money, however, is the problem of getting the various medical specialties to agree on standards and curriculum. For example, it took nearly 10 years to develop the Advanced Pediatric Life Support course, a joint venture of the American Academy of Pediatrics and the American College of Emergency Physicians. And the newly certified subspecialty in pediatric emergency medicine took almost a decade to get approved.

But even with proper training, medical personnel need the right equipment to treat kids. Only 43 percent of the pediatricians surveyed by Johns Hopkins Medical School last year said their offices contained all the equipment and drugs on a list of commonly used emergency equipment. Children need smaller oxygen masks, for example, and using

adult-size blood pressure cuffs on a child, which many hospitals still do, often results in inaccurate readings. Because children have smaller lungs and airways, they require plastic airway tubes less than half the width of those made for adults. But several studies have noted that many hospitals in the United States do not even have the right intubation gear and often resort to jury rigging adult tubes in frantic attempts to force air into a child's lungs.

In other cases, the proper equipment or medications are on hand but not organized or easily accessible. The "Report to the Nation" on emergency medical services for children found that "many prehospital providers do not carry the basic equipment and supplies necessary for the assessment and resuscitation of infants and children." The tragic irony, critics charge, is that the cost of the basic pediatric emergency equipment is only a few thousand dollars.

Speed saves; delays kill. Some 7,500 of the 25,000 children who die from accidents each year die within three hours of injury. Often the death is attributed to severe head trauma, but according to Dr. Michael Matlak, a pediatric surgeon at Primary Children's Medical Center in Salt Lake City, the real cause is often shock or prolonged hypoxia – lack of oxygen – both of which are treatable. Dr. Matlak contends that between 8,000 and 10,000 children could be saved from accidental death every year with a combination of more injury prevention by parents and better treatment by medical personnel. Studies have shown that only 1 in 4 children injured in automobile accidents was wearing a seat belt.

Paramedics have told Matlak that in

CREATING A SYSTEM

The godmother of the drive to improve kids' emergency care

Before Dr. Martha Bushore arrived at Good Samaritan Hospital in 1988, there were only four pediatric intensive care beds to serve the 200,000 children of Palm Beach County, Fla. Pediatricians from the county's 15 hospitals regularly had to send critically ill children 80 miles south to Miami. The county's emergency vehicles had no child restraint devices and some had only adult-size respiratory bags. It was routine for critically ill or injured children to be taken to a hospital where no pediatrician was even on duty.

Dr. Bushore changed all that. As chief of pediatric emergency/critical care services at Good Samaritan, she recruited three additional specialists and persuaded the West Palm Beach hospital to invest in expensive new technology, including four respirators at a cost of $27,000 each. She taught nurses, doctors and emergency medical technicians advanced pediatric life support. She stocked Good Sam's pediatric emergency department with special intraosseous needles and a guide, called the Broselow tape, for delivering medications based on a child's height. She developed a wall chart, detailing procedures for pediatric emergency care, that is now on display in every emergency room and rescue vehicle in the county. Palm Beach County now has 19 pediatric intensive care beds.

The creator. Bushore's influence stretches far beyond Florida. In 1988, the American Academy of Pediatrics gave her its Distinguished Service Award for essentially creating the field of emergency medical services for children. She spends about a third of her time on the road, teaching and pleading for change.

KEVIN HORAN FOR USN&WR

Saving grace. *Dr. Bushore with one of her wards*

Identifying with children in pain comes naturally to Bushore. She bit into an electrical cord when she was 10 months old, suffering severe burns that required five operations by the time she was 12. Her travails inspired her maverick streak. At the University of Tennessee Medical School she was the only woman in the 100-member class of 1970. She spent 15 years on the staff of East Tennessee Children's Hospital in Knoxville, helping to develop the nation's first pediatric emergency department. And she was a key force in persuading Tennessee to pass the nation's first car child-restraint law in 1978.

Battles. Bushore is a self-described crusader, whose impatience with the pace of change has led to numerous battles with colleagues. At one point, a group of pediatric surgeons tried to have Bushore removed from the chairmanship of an American Academy of Pediatrics committee working to develop a new subspecialty in pediatric emergency care. "They claimed I was trying to have pediatricians and emergency doctors do the job of surgeons," Bushore says. "I was just trying to make sure kids can be kept alive to make it to surgery."

Last June, after four years in West Palm Beach, Bushore, a divorced mother of three college-age children, moved to Atlanta. She is now the director of pediatric emergency medicine at Emory University's Egleston Children's Hospital and at Emory's medical school. Her parting with Good Samaritan was not entirely amicable. She accused the hospital of reneging on its commitment to broader pediatric care. The hospital said her dream of a separate children's hospital was unrealistic.

When she left Knoxville for Florida, a family friend lamented the changes in the hard-driven pediatrician. "You used to laugh so much, but you don't laugh anymore," the friend said. Bushore didn't apologize. "With so many children hurting," she says, "it's hard for me to feel I can genuinely laugh."

the past when at accident scenes where both adults and children were seriously injured, they tended first to the adults because they were "terrified" of treating children, especially small ones. The main difference is training. The 110-hour course required to become an emergency medical technician devotes only two hours to the prehospital emergency care of infants and children. More advanced courses for critical care technicians and paramedics are not much better, devoting no more than 10 of the 200 to 1,000 hours of training to pediatrics. In New Jersey, for example, the state department of health concedes that only 1 in 20 paramedics is certified in advanced pediatric life support. For emergency medical technicians, especially, a critical missing link is training in the emotional strain of caring for a critically ill child while also dealing with his overwrought family.

Your fate depends on where you go. The most critical choice facing rescue workers is where to take a stricken child. All too often, critics charge, gravely ill and injured children are taken to the nearest hospital even though a pediatrician may not be on duty, the nursing staff has no special training in pediatrics, equipment designed for children is not available, and critical specialists such as neurosurgeons are not present. In a large percentage of these cases, the child requires a transfer to another hospital. The delay, which can last several hours, often proves fatal or close to it.

Dr. Castello at Children's Hospital in Newark sees this happen regularly. In one case, a child who had been born prematurely and was initially treated at Children's went into respiratory distress at her family's suburban New Jersey home. But the ambulance crew refused

JOE SKIPPER FOR USN&WR

WALDON CAINE
A well-run Florida emergency system saved his life at age 3.

In April 1989, Waldon's guardian Marjorie Brown rushed him to University Medical Center in Jacksonville because he had run a high fever for two days and had trouble swallowing. He had epiglottitis, a swelling of throat tissue that is often mistakenly treated as a simple sore throat but in fact is life threatening: The swelling can completely block the airway. Dr. Robert Luten, director of the hospital's pediatric emergency services, recognized the problem and rushed Waldon to an operating room. The swelling was so great that an anesthesiologist couldn't insert a breathing tube. But surgeon Joseph Tepas immediately performed a tracheotomy, cutting into Waldon's air pipe and inserting the lifesaving tube. Waldon is now a healthy 6-year-old.

A SYSTEM THAT WORKS

How Los Angeles does it right

If the rest of the nation is seeking a model emergency medical system for children, it should take a look at Los Angeles County. Since 1984, the county has developed a sophisticated triage system to treat children in the field and transport them to the hospitals best suited to handle their problems. The system is the largest in the world, covering 4,083 square miles and employing nearly 2,000 paramedics and 15,000 emergency medical technicians.

Its creation has been a triumph of common sense over bureaucracy. Basic life-support teams of EMTs, usually firefighters, are first on the scene. They are often joined by paramedics in mobile intensive care units who are directed via radio by more than 700 mobile intensive care nurses located in the county's 34 "base hospitals." Patients are transported by paramedics or private ambulance to facilities that are affiliated with a two-tiered network. The first tier consists of 74 hospitals with emergency departments approved for pediatrics. The second is made up of nine of those facilities that have pediatric critical care centers—including separate pediatric wards, intensive care units and specially trained personnel.

Making progress. No firm data are yet available to measure whether the system has met its highest goal—lowering mortality rates. But it is clear that the county has a significantly lower rate of transfers of patients from hospitals that were unable to treat gravely ill or injured children.

The system has its shortcomings. Because it serves a large indigent population, for example, paying for the trauma component is a major problem. Also, the county has not found a way to thwart "doctors who insist on taking care of kids they're not capable of treating well," according to Dr. James Seidel, chief of emergency and ambulatory pediatrics at Harbor-UCLA Medical Center and the driving force behind the system.

That frustrates Seidel, but he is reluctant to openly criticize others in the system. "When you start pointing fingers, you end any sort of dialogue with the people you need to make it work," he says. In any case, the progress in Los Angeles has spawned similar, although less extensive, efforts in other parts of the state.

her mother's request that she be taken to Children's and instead took her to a hospital only two minutes nearer home. Two hours later, Castello's team was called by the first hospital because a medical team was unable to insert a breathing tube into the girl's throat. Children's Hospital dispatched a pediatric team and found the girl close to death. They intubated her and she recovered.

Such missteps can also occur in large-scale disasters. In January 1990, an Avianca Airlines jet crashed approaching New York's Kennedy International Airport, killing 70 adults and three children. A study by pediatricians at New York University's School of Medicine found that the 21 surviving children were transported to hospitals around the region by rescue squads without regard for the severity of their injuries or the capabilities of the receiving hospitals. The result was that 4 of the 5 children with the most severe injuries initially were taken to the least equipped hospitals – though none died – while 10 low-risk patients were cared for at hospitals with the most sophisticated trauma services. The study concluded that many of the volunteer rescue squads who participated in the effort simply took patients to the facilities with which they were most familiar.

Reformers argue that there should be a triage system for children. Under it, emergency medical personnel, in radio or telephone contact with pediatric-trained doctors and nurses, would have the option of bypassing the nearest hospital in favor of the closest hospital specifically designated to handle pediatric cases. Maryland has had such a system for trauma cases for nearly two decades, and Pennsylvania recently became the only other state with such a coordinated approach. Maryland's highly acclaimed program is financed by general tax revenues; that may be the only logical source of funds for states that need such systems.

A triage scheme would short-circuit such widespread problems as unqualified hospitals' hanging on to insured patients in order to perform "wallet biopsies." Those are batteries of expensive tests that are often improperly administered and have to be repeated at the hospital where the child is ultimately treated. In many cases, critics say, the tests waste valuable time even when done properly because the hospital is incapable of acting on the results. "What good is it to spend 90 minutes on a CAT scan to find internal skull bleeding when you don't even have a neurosurgeon on call?" asks Dr. James Seidel, chief of emergency and ambulatory pediatrics at Harbor-UCLA Medical Center in Los Angeles. Critics say the increase in for-profit hospitals has increased the competition for patients and made it more likely that gravely ill and injured children may be taken to hospitals that cannot provide optimal care.

A triage system would also help override the knee-jerk reaction of doctors and parents that community hospitals can give the best emergency care. A study of 100 consecutive pediatric trauma deaths in Mobile, Ala., found that with optimum care, 53 percent of those patients could potentially have been saved but that failure to send the child to the appropriate hospital and delay in treatment contributed to their demise. An Oregon study showed that moderately ill and injured children who were kept in community hospitals had a higher than predicted mortality rate, compared with those cared for in pediatric intensive care units.

In 1985, Congress, led by Sen. Daniel Inouye of Hawaii, approved $2 million in grants to four states – Alabama, California, New York and Oregon – to develop pilot EMSC projects. Since then, 20

Teamwork. *Specialists like these at The Children's*

ASSESSING THE SYSTEM

What every parent should know

In pediatric medicine, parents play a critical role as an early warning link to the physician. Most emergency care is provided, at least initially, by the nation's 5,384 community hospitals. But what happens to your child before arrival at a hospital and after being stabilized are equally important. Here are some things to look for in assessing pediatric emergency care.

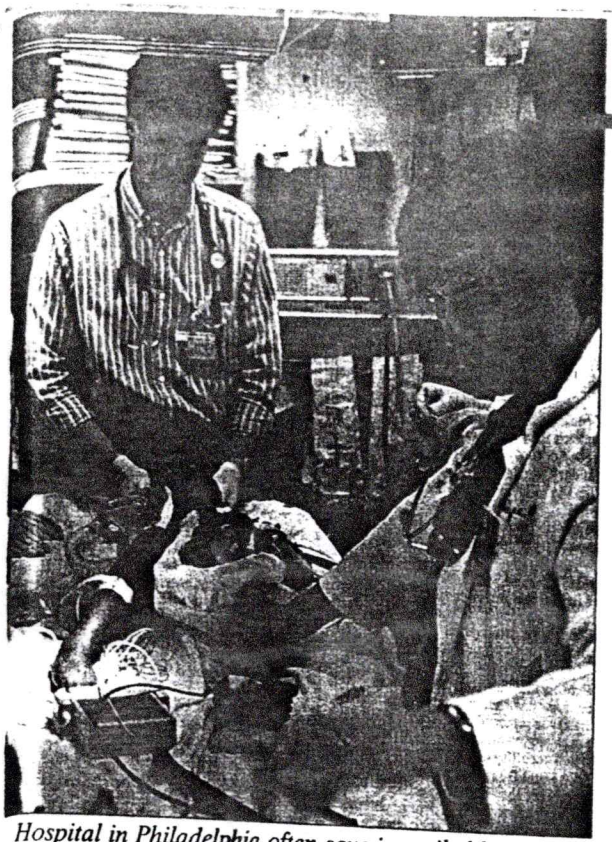
■ **The pediatrician's office.** Your first reaction in an emergency may be to rush to your pediatrician's office. However, if you suspect an illness or injury may be life threatening, it's much better to call your rescue squad.

Don't confuse your doctor's office with a well-equipped emergency room. But it is reasonable to expect your pediatrician to have the basic equipment to perform such common procedures as cardiopulmonary resuscitation and establishment of a secure airway. The doctor should also have on hand common lifesaving medications such as epinephrine, which can be used to stimulate the heart.

■ **Prehospital care.** Know the phone number for reaching your town's emergency care system. In most places, emergency medical technicians are the first to respond, but they usually are not trained in advanced pediatric life support; an ideal system would provide such training. The EMTs should, however, have child-size resuscitation equipment to stabilize your child.

■ **Transport.** Good systems allow EMTs or paramedics to bypass the nearest hospital in favor of the nearest *appropriate* facility. The systems also have communication links permitting rescue crews to talk to hospital-based pediatric specialists before and during transport.

■ **Hospital.** There should be an organized team of doctors, nurses and respiratory specialists with pediatric training on duty 24 hours a day. Since most community hospitals do



Hospital in Philadelphia often save imperiled lives.

more states have received grants, and New Jersey is one of four more state projects to be awarded the limited federal funding for next year.

One man's struggle. The efforts of individual pediatricians to change the system in their communities have sometimes produced dramatic results. In Florida's Palm Beach County from 1988 to 1991, Dr. Martha Bushore led a major overhaul of pediatric emergency care (box, Page 38). Rich Flyer is a disciple of Bushore's, but his experience shows how difficult it can be to buck the medical and political establishments.

During the first year after he opened his practice near the house where he grew up, Flyer says he witnessed what he considered "mass confusion" in several pediatric emergencies. After that, he began complaining at departmental meetings at Mountainside Hospital in nearby Montclair – where he sent most of his patients. He called for better staffing, especially for nights and weekends, and for upgrading the care. "The advances I had been taught weren't reaching people – and this is an affluent community," he says.

No more patients. The resentment of fellow doctors grew when he began transferring patients to other institutions, such as Children's Hospital in Newark. Some refused to refer patients to him. One obstetrician said, "You'll never get another patient from me. Never."

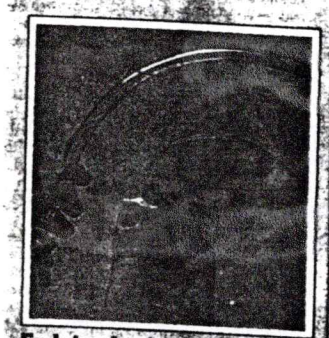
Flyer didn't let up. In 1984, he visited the pediatric trauma center at Johns Hopkins University Hospital in Baltimore, where he saw a system much like the one he envisioned for New Jersey. A few months later he went to the New Jersey Department of Health to plead his case. But he made no inroads because he lacked proof that the system was failing. In 1986, New Jersey Gov. Thomas Kean appointed a commission to study emergency medical services, and its two-year study confirmed that New Jersey lacked an adequate system to care for critically ill and injured children. Still, nothing happened. Staffers of incoming Gov. Jim Florio and Sen. Bill Bradley said their bosses were preoccupied by more pressing issues, and a Bradley aide told Flyer the senator would not take up the issue until the American Academy of Pediatrics made it a top priority.

Finally, Flyer began asking the parents of his 2,000 patients how to promote his cause. He addressed the Junior League of Montclair and in emotional terms described the plight of sick children. The women agreed to help, and now the political action committee of the league's New Jersey chapter is lobbying for legislation drafted by Flyer for a statewide pediatric emergency care system modeled after that of Los Angeles County, which he says would cost $800,000 a year.

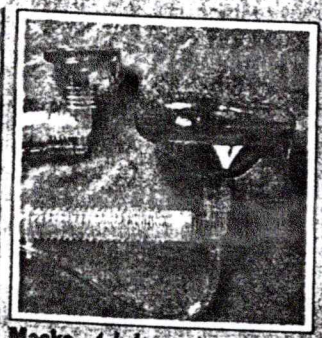
There has been tangible progress in New Jersey. Flyer helped to write state regulations that set higher standards for pediatric care once a child is admitted to a hospital. Last year, Mountainside Hospital directed additional resources to improve child care services. More recently, 12 Kiwanis Clubs in the state each contributed $100 to help train paramedics in advanced pediatric life support.

Flyer's dream of building a complete system may be helped by the increased awareness of the problem that will likely result from the federally funded training and education planned for next year. Still, his fears persist: "The worst thing is after it's all over, the child is dead and the parents come up and thank the doctor. They say, 'We know you did everything you could.' My head is exploding because I know too often it's not true." ■

BY JERRY BUCKLEY



Endotracheal tubes. *Kids often get the wrong size.*



Masks. *Adult version can often fail to revive a child.*

PHOTOS BY KEVIN HORAN FOR USN&WR

Blood pressure. *Grown-up cuffs give bad readings.*

not have in-house pediatricians, it is crucial for the emergency room staff to be able to stabilize your child until a pediatrician arrives. Surgeons should also be available quickly, especially to place an IV line properly.

■ **Secondary transfer.** Once stabilized, your child may need to be transferred to a regional pediatric critical care center. You should be aware of the nearest such facility and whether there is a mobile intensive care unit available for the transport. Such transport systems exist in most places for neonatal patients, but they are not as widely available for older children.

■ **Rehabilitation.** The treatment your child receives after surgery is often as important as the surgery itself. A critical question is whether your child will be placed in an intensive care unit especially designed and staffed for children or in the regular adult ICU. Nurses in adult ICUs, for example, may be unfamiliar with the special needs of children and how to assess their condition.

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