

AUGUST 1989

Texas EMS Messenger



About the cover - EMS can respond only if the public knows when and how to call EMS. Staff photo by Mary Gottwald.

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FROM THIS SIDE

Provider licensing law to improve EMS

by Gene Weatherall, Chief,
Bureau of Emergency Management

The recent session of the legislature has brought about some very interesting and innovative changes for emergency medical service in Texas.

The legislation that provides for the licensing of providers will have the most significant impact on EMS since the original EMS Act was passed in 1983. With this legislation the Texas Department of Health will issue a license to all EMS providers in the state.

Under the original EMS Act the Health Department only issued a permit for emergency vehicles. Under the old system we had situations in which legal action was initiated to revoke a vehicle permit and the provider simply replaced the vehicle before we could complete the legal process.

The primary provisions in the provider legislation call for the issuance of a license after an inspection by the Health Department to satisfy the following components:

1. The EMS provider has adequate staff to meet the required staffing standards.
2. Each EMS vehicle is adequately constructed, equipped, maintained, and operated.
3. The EMS provider offers safe and efficient services for emergency prehospital care and transportation of patients.
4. The EMS provider complies with the rules adopted by the Texas Board of Health.

As you can tell, these general requirements are a major step forward in the regulatory function of this organization. All rules to implement this legislation will be developed through the EMS Division, Texas Emergency Medical Service Advisory Council, and the Texas Board of Health. As these rules are developed they will be printed in the **EMS Messenger** for public comment.

Nancy Polunsky, the new chairperson of the Provider Committee of TEMSAC, has informed me that she intends to seek input from providers from all around the state prior to adoption of these new regulatory rules.

There are several other changes in this and other legislation for emergency medical service. Information regarding those changes will be featured in future issues of the **EMS Messenger**.



This next year certainly will be interesting and exciting as we develop yet a new frontier for EMS in Texas.

Top Ten EMT Classes

January 1989 - May 1989

Coordinator/Location	Average Grade	Number Tested
1. Pickett/Kinwood	88.00	13
2. Goodykoontz/Dallas	87.87	30
3. Hickman/Bandera	86.36	11
4. Kitzmiller/College Station	86.32	19
5. Michalski/Waco	86.22	23
6. Pittman/Arlington	85.86	21
7. Alexander/Big Bend	85.52	21
8. Harmon/Grand Prairie	85.32	19
9. Garoni/San Antonio	84.65	31
10. Jackson/Littlefield	84.53	17

Compiled by Saleem Zidani, EMS Education Program

Local and Regional EMS News

Harlingen EMS dedicates new central station

Harlingen EMS has moved into its new Central EMS station. According to director Bill Aston, the station was dedicated on March 23.

Harlingen's new facility includes a new dispatch area where the enhanced 9-1-1 and communications system is housed. It also has dorm areas, a kitchen, dayroom, classroom, engine room, medical supply storage areas, workshop, washrooms, and full baths. The engine room holds six ambulances.

The Texas Valley system operates a fleet of 8 vehicles from 4 stations covering 9 cities in the Harlingen area. Half of the funding for the central station was awarded by three foundations.

Lee Sweeten honored for EMS nursing home programs

Lee Sweeten, Public Health Region 6 EMS administrator and paramedic, won first place in Public Health Region 6 and second place statewide in the annual Texas Department of Health Commissioner's Employee Volunteer Awards Program.

Uvalde EMS worked with Sweeten to help nursing home residents celebrate several holidays over the past year. For Mother's Day, Sweeten organized the delivery of flowers and certificates to mothers in the Uvalde Nursing Home. For Father's Day, Sweeten and the Uvalde EMS crew sponsored a watermelon feast for all the dads in Uvalde Nursing Home.

At Christmas time, Sweeten collected donations for food and toys for the local battered women's shelter, and also took cake and flowers to nursing home patients. When Valentines Day came around this year, Sweeten and Uvalde EMS were joined by volunteer EMS groups from around the county in delivering 240 valentine balloons and cards to the residents and staff of the nursing home in Uvalde.

Arlington's Sunrise Rotary Club honors paramedic dispatcher

Albert Reese, a paramedic with Life Star in Arlington, received a Phoenix Award in May for giving CPR instructions over the telephone to a father whose apparently lifeless 2-year-old who had been found in the family swimming pool.

Little Tara Giblette was not breathing, had no pulse, and was blue, said her father Todd Giblette. "She looked like she was dead."

Thanks to Reese's calm directions and the father's work, Tara was breathing normally by the time the

ambulance arrived. She was acting like a "typical 2-year-old" in the hospital the next day, said her parents.

Arlington Sunrise Rotary gives the Phoenix Award to individuals whose heroic efforts give people a second chance at life. Reese's award is the seventh time the honor has been given.

Rio Grande COG buys EMS equipment

The Rio Grande Council of Governments recently bought 6 CPR manikins - 2 adult, 2 children, 2 infant - for EMS training in the area. Percy Greene coordinated the purchase with the support of COG Executive Director Justin Ormsby.

The manikins are stored at the Public Health Region 3 office in El Paso and can be borrowed through that office.

"This represents a major improvement in what we can make available for training in the westernmost part of Region 3," said Tom Cantwell, "and we are grateful to the Rio Grande COG staff for this direct support of nearly \$3000." Cantwell is Public Health Region 3's EMS program administrator.

Hamlin EMS reduces response times

Bobby Lee, director of Hamlin's ambulance service, announced recently that the service's average response time had been reduced from 5.3 minutes to 4.4 minutes for calls in the city limits. The ambulance operates out of Hamlin Memorial Hospital with 2 full-time employees and 10 part-time workers.

Hamlin averages about 26 calls a month, and goes as far as 25 miles out of town.

Mount Enterprise paramedic loses barn and trees during tornado

Don Reeves, a volunteer with Mount Enterprise EMS and a Public Health Region 7 EMS program specialist, came home to some major property losses after a tornado passed through Mount Enterprise May 16. Besides destroying his barn, the tornado uprooted 2 pecan trees and 6 oak trees that were big trees 44 years ago when Reeves was born.

The tornado was part of a storm system that passed through Texas the middle of May after weeks of persistent rain. The day after the Mount Enterprise tornado, tornados caused nearly a million dollars damage in Nacogdoches.

(continued page 4)

Darrouzett honors volunteers and supporters

A recently-held Appreciation Supper in the Panhandle's Darrouzett honored volunteer EMTs, instructors, volunteers' employers, and other EMS supporters. Volunteers of the Month have been Elaine Brake, EMT, in February; Roger Gibson, driver, in March; and Jeanne Gunn, EMT-SS, in April.

Dallas requires new firefighters to be paramedics

Beginning in July, Dallas Fire Department will require every firefighter hired to be trained as a paramedic and serve up to 6 years working on the ambulances. The Dallas system is the 7th busiest EMS in the nation and officials expect growing demand for emergency medical services to outstrip their current pool of paramedics.

In an article in the **Dallas Morning News**, acting Deputy Chief John Kay said, "We don't want to hire people anymore that can't do both jobs. EMS is a rapidly growing part of this department and it's a service people expect from us. If the people we hire can't provide that service, we don't want them."

The City of Dallas took over EMS services in 1972 and in 1988 answered 82,439 calls. Officials expect 95,000 calls for emergency medical service in 1989. Only emergencies are transported.

Cypress Creek teaches citizen CPR classes each month

In May Cypress Creek EMS volunteers taught 130 residents in CPR classes. Their total so far for 1989 is 512 students and 31 instructors.

Cypress Creek EMS teaches 4 CPR classes each month.

Public Health Region 2 turns in highest paramedic grades

From September 1988 through April 1989, students in Public Health Region 2 (Canyon/Lubbock) scored higher on the paramedic certification exam than students in other parts of the state. The average grade in PHR 2 was 84.6, and the statewide average was 80.54.

Other regional scores were: PHR 1 (Austin/Temple) - 81.81; PHR 3 (El Paso/Odessa) - 80.15; PHR 4 (Houston) - 80.03; PHR 5 (Arlington/Abilene) - 80.24; PHR 6 (Uvalde/San Antonio) - 80.64; PHR 7 (Tyler/Nacogdoches) - 80.28; and PHR 8 (Harlingen/Corpus Christi) - 81.92.

During the 8-month period 740 students took the exam.



PHR EMS managers discuss certification exam, rules in quarterly meeting

Public Health Region EMS program administrators met in Austin recently. Pictured here (left to right) are Lee Sweeten, Region 6; Region 8's Jay Garner; Jim Arnold, Region 7; and Gail McNeely, Region 1, representing program administrator Rod Dennison.

The managers meet quarterly to discuss the application of state policies and procedures to local EMS providers. The process of developing rules to implement amendments to the EMS Act required major consideration at this meeting.

Searching

Dedicated to those individuals who have searched for something in life but who did not really know what they wanted to do, who got into EMS, and found a permanent niche.

by Pam Price

*Into the darkness of life I walked
Without any direction to call my own
I had nothing that I had sought
Only the things that I had known.*

*Since the day I saved a few
I have so many more to help renew
If unpleasant events come to be
Please my friend don't forget me.*

Caring for daughter leads Maxine Black and family to EMS careers

by Julie Kirby

If you'd like a lesson in how to compress two hours worth of work into one, try watching Maxine Black, who teaches emergency medical technician and emergency care attendant courses at Austin Community College, volunteers with the Manchaca EMS, is chairperson of Region 6 Texas Association of Emergency Medical Technicians, cares for her child who uses a wheelchair, and works in the family business, Darrell Black Custom Wood Flooring.

As she is interviewed in the lobby of her family flooring company, Black greets her child Melissa, a blue-eyed blond 10-year-old, and wheels her in from the school bus.

Black's energy isn't something new. One of her major credits in the past was a successful lobbying effort for state-funded early intervention programs for Melissa and other children with developmental delays across Texas.

It was the birth of her daughter Melissa that activated her interest in the medical field. Melissa was born with cerebral palsy. She had multiple medical problems early in life including status seizures and an accumulation of subdural cerebrospinal fluid.

Maxine explains that "a wonderful doctor told us that no one would ever know as much about Melissa as we would and he helped us to begin to cope with Melissa's medical problems."

"He insisted that we assume primary care for Melissa's problems," she says. "Rather than operate immediately to implant a shunt, he suggested that we could observe whether the accumulated fluid in her brain was decreasing by placing her in a darkened room, illuminating her skull, and recording whether the illuminated area was growing or not." Melissa never needed a shunt.

Realizing how much she didn't know about medical terminology and procedures that would help Melissa, Maxine took an Emergency Care Attendant First Responder Course. "I wanted to be able to communicate with Melissa's doctors," she says.

The courses didn't teach her about Melissa's problems, but she found emergency medicine so interesting she just kept taking more classes.

"I would come home from class and use my family as guinea pigs," she says. "I would practice splinting and other techniques on them, while they watched television or did homework."

Black's enthusiasm for EMS is infectious. Her husband, Darrell; son, Russell; and daughter-in-law picked up her interest and today are also first responders with the Manchaca EMS. Darrell and Russell also

teach at Austin Community College. "I have a whole family of trauma junkies," she says, laughing.

The medical and related needs of a child like Melissa can be overwhelming. Melissa needed therapy before she reached one year of age to help her gain maximum use of her limbs and to develop her capacity for communication .

**"I wanted to be able
to communicate
with Melissa's
doctors."**

- Maxine Black

The Blacks were lucky enough to find one of the first early intervention programs for children and their families in Texas. Through the staff at the Infant Parent Program at Austin-Travis County MHMR, they received support and assistance. "Early childhood intervention is the key to keeping handicapped babies at home and families together," Black says.

Black explains that parents helped out in the classrooms with group activities and the camaraderie was wonderful. "We were good for each other," she says. "We became a support group, sharing the achievements and setbacks of each family."

At that time, in 1979, the Austin-Travis County MHMR infant program had little money and support and there was no state funding for early intervention programs. So, at the same time she was busy learning about emergency medicine, Black and her husband joined the initial lobbying effort for a statewide Early Childhood Intervention Program.

Today, Melissa is a cute young lady with a delightful smile. Cerebral palsy prevents her from using her arms and legs and from doing much talking, but she is very capable of making her wishes known. At school she uses nose-activated switches to turn music on and off. She has definite likes and dislikes, according to her mom. Country-Western and Pop music are her favorites.



Melissa Black is one of over 10,000 Texas children benefitting from the Early Childhood Intervention Program.

Black says that if there were one message she could give to others from her experience with Melissa, it would be not to judge the value of someone by whether they are handicapped or old or by other external standards."

"Melissa has enriched our lives and the lives of others," Black says. "Some people's children just grow up and make money, but Melissa has a way of making people look inside themselves."

Black plans to continue to devote her time and energy to Melissa, EMS, the family business, and to being a grandmother to a third generation of first responders.

Julie Kirby is Information Specialist for the Texas Department of Health Early Childhood Intervention Program.

The Texas Early Childhood Intervention Program today

Today, due to the efforts of parents like the Blacks, the Texas Early Childhood Intervention program provides funding for 71 local community service programs for children with developmental delays from birth to age three.

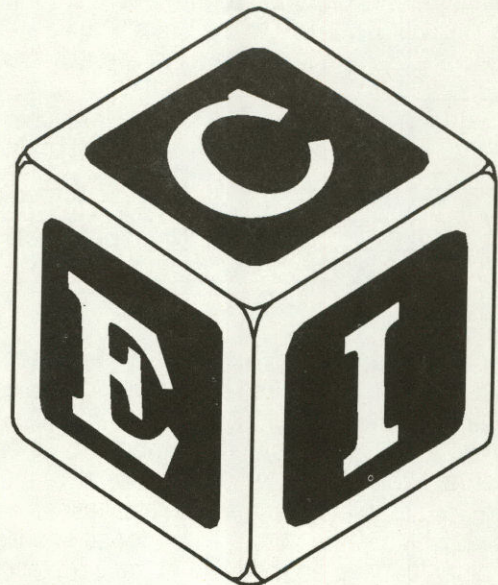
These are children who are behind other children in learning to roll over, sit up, walk, talk or understand what others says. Children who are at risk for developmental delay due to biological conditions are also eligible for services.

Last year, 10,175 Texas children received services from local programs like the infant parent program described in the accompanying article. However this is a small percentage of those in need. It is estimated that there are 270,000 children under age 6 with or at risk for developmental delays in Texas.

Children do not have to have a diagnosed condition for referral to the ECI programs, the individual programs will evaluate children with suspected developmental delay. Families of all income levels are eligible. No one is turned away for inability to pay.

At the local community programs, children receive therapy and other services. Families receive support and training.

For more information about the Texas Early Childhood Information Program and services in your community, call your local ECI program or the state office at 512-458-7673.



Head Care For Kids

by Ellen Reynolds, Brent Dierking, and Max L. Ramenofsky

Trauma presents with a broad spectrum of physical manifestations. Prehospital care providers must be able to quickly assess and efficiently manage the patient's injuries without delay, thus providing optimal care while on the scene and en route to the hospital. While management of adult trauma is fairly routine for most pre-hospital care providers, pediatric trauma poses unique challenges. Because of inadequate training, lack of specialized equipment and infrequency of pediatric calls, pre-hospital care providers are often uncomfortable assessing and managing the pediatric trauma patient. Thus, in order to provide quick and efficient care, it is imperative that the pre-hospital care provider remain current in state-of-the-art treatment modalities involving this age group.

Despite recent advances in trauma systems and care, accidental injury continues to be the leading cause of death in children. More than one-third of pediatric trauma involves head injury, with mortality from such injury at more than 6 percent, contrasted with a mortality of 3 percent from pediatric trauma in general. In addition, approximately one in nine of those children surviving head injury is left with significant disabilities. Thus, head injury is a common and often devastating problem in the injured child (see Graphs 1 and 2 on page 9).

Two types of head injury are most often seen in children. The first is the "concussive-compressive" injury, which occurs as the result of a direct blow (blunt trauma). The second is the "acceleration/deceleration" (or coup-contracoup) injury, which occurs when the head comes to a sudden stop following impact but the intracranial contents continue to move forward and back, causing diffuse injury to the brain. Penetrating injuries are less common in children but are associated with high mortality.

The pathophysiology in any severe brain injury is similar in that it involves disruption of normal brain perfusion/circulation. The brain requires large amounts of the two nutrients - glucose and oxygen - to carry on its complex metabolic processes. When perfusion/circulation is inadequate, the exchange of these nutrients and waste products is compromised and cell damage begins to occur.

Increased intracranial pressure (ICP) is a major mechanism by which impaired perfusion occurs. Intravascular fluid, cerebrospinal fluid and brain tissue make up the three volumes that contribute to intracranial pressure. When the volume of any or all of these is increased, intracranial pressure also increases. Hyperemia, which is the common response in children to brain injury, causes an increase in the intravascular volume; cerebrospinal fluid may increase either as a result of increased production or blocked outflow

channels; and brain tissue increases as a result of edema and intracerebral masses. Thus, management is geared toward optimizing brain-tissue perfusion and minimizing these sequelae.

There are several anatomical and physiological features that affect incidence and pathology of head injury in children. The child's head is proportionately large in relation to the rest of the body; in the neonate, it may make up nearly one-fourth of total body length. This factor, coupled with the weak musculoskeletal support provided by the child's neck, causes the child to be especially prone to acceleration/deceleration injuries. The scalp surface area is also large and highly vascular, enabling even moderate lacerations to be a significant source of bleeding. Fontanelles and sutures provide some accommodation for increased intracranial pressure. Intracranial mass lesions are less common in children than in adults, but due to incomplete myelination in the developing brain, children tend to suffer more from hypoxic insults. In addition, brain hyperemia is much more prevalent in children than in adults. Keeping these features in mind, the pre-hospital care provider's priorities must proceed as in adult care - with the primary survey and management of ABCs.

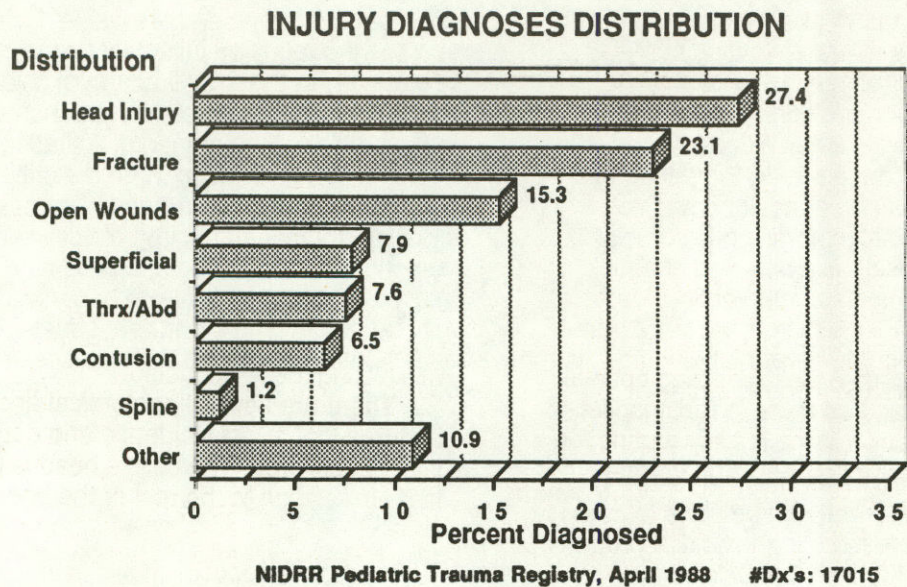
INITIAL ASSESSMENT

As the initial evaluation is taking place, observing the scene and eliciting a history can provide important clues to the significance of head injuries. What was the mechanism of injury? Was there any loss of consciousness? Does the child have a history of seizures? If the child is verbal, has he or she complained of a headache? Has the child experienced vomiting, weakness, or loss of memory?

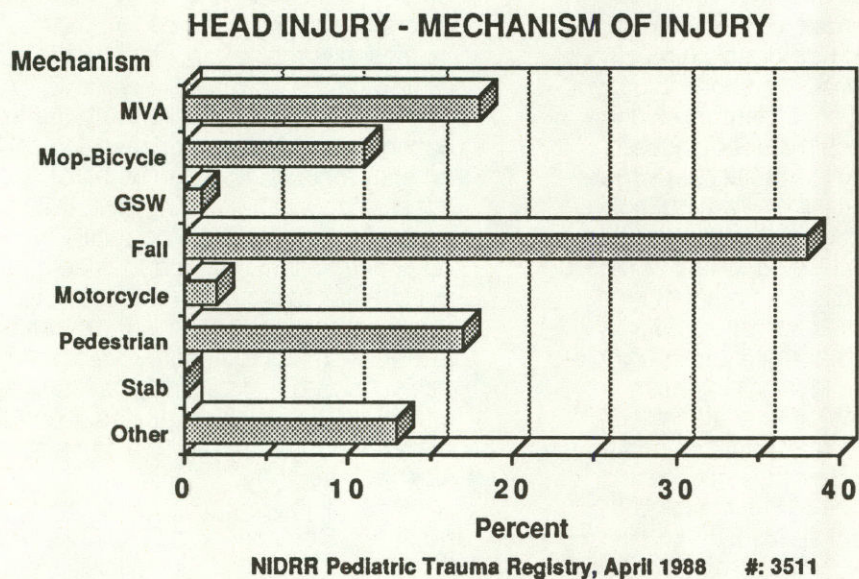
Securing an adequate airway is the first priority when managing the pediatric head-injured patient. The presence of maxillofacial injuries can make this task difficult, but constant attention is necessary. The injured brain rapidly increases its metabolic needs, and facilitation of oxygen/carbon dioxide exchange is crucial. Simultaneous with airway control, proper stabilization of the cervical spine must be obtained by having either a partner or bystander hold the child's head in a neutral position until a cervical immobilization device is applied. The mouth and nasopharynx must be continually evaluated for blood, mucus secretions, or any foreign objects that must be removed manually or by suctioning.

With the cervical spine stabilized, the jaw-thrust technique is usually effective in maintaining an open airway in the unconscious child. The oropharyngeal airway may also be used in the child who has a depressed gag reflex. Using a tongue blade, insert the

Graph 1



Graph 2



airway with a smooth, direct motion along the normal curvature of the tongue. If inserted sideways, rotating the device into place can cause damage to the oral mucosa. The nasopharyngeal airway is not generally used in the pediatric patient.

Upon providing an airway, the prehospital care provider should determine the rate and quality of respirations. Not only will specific respiratory patterns provide clues to the significance of head trauma, but inefficient respiratory efforts may result in hypercapnia, leading to dilatation of cerebral blood vessels, thereby increasing intracranial pressure (see Diagram on page 10). Hyperventilation in the head-injured patient acts to lower $paCO_2$, which in turn constricts blood vessels and decreases ICP. Thus, the pre-hospital care provider should carefully assess the need for assisted ventilation in the patient with abnormal respiratory patterns. All trauma patients should be placed on oxygen regardless of the extent of injuries. It

should be recognized that the use of basic airway adjuncts is a temporary measure until advanced life support can be instituted.

Intubation in the head-injured child is a high-risk, often difficult procedure. The combination of full stomach, intact airway, protective reflexes, and possibility of facial/basilar skull fractures often makes intubation in the more controlled setting of the hospital preferable to attempts in the field. In addition, "awake" intubation results in an increase in intracranial pressure that can be offset by the use of drugs such as sodium pentothal. While irregular/inadequate respiration or long transports are generally considered to be indications for intubation, these problems can often be managed adequately by bag-valve mask ventilation. If intubation in the field is deemed necessary, rapid oral intubation with cricoid pressure should be performed. As much as possible, avoid stimulation of the gag reflex while performing any airway maneuvers.

Early recognition and treatment of shock is crucial to outcome in the head-injured child. Hypovolemic shock is the most common form of shock in children; however, head injury alone will rarely cause hypovolemic shock in the child. Thus, when a child presents with shock, look for additional sources of bleeding. Although a relatively small blood loss (as little as 250cc in toddlers) can cause shock, the pediatric patient's extremely efficient compensatory mechanisms may mask signs and symptoms until a crucial stage is reached. Hypotension is a late sign of shock in the child and demands immediate intervention. Cerebral perfusion pressure (CPP), which is the force necessary to maintain adequate cerebral blood flow, is a function of blood pressure (BP) and intracranial pressure (ICP). This relationship can be stated as $CPP = BP - ICP$. Thus, as intracranial pressure rises or blood pressure drops, cerebral perfusion pressure drops. Whereas there is little that can be done to treat rapidly rising intracranial pressure in the field, a prompt and adequate fluid resuscitation will stabilize blood pressure and begin to correct disrupted circulatory dynamics.

With the likelihood of cervical-spinal injury accompanying head injury, it is important to note the distinction between hypovolemic and neurogenic (spinal) shock. While the child in hypovolemic shock usually presents with tachycardia and cool, clammy skin the child suffering neurogenic shock may demonstrate bradycardia with warm and dry extremities. In either case, treatment includes aggressive airway management as well as fluid resuscitation.

Other vital-sign trends are also important to note. The vagal response of bradycardia is common in the head-injured child and can cause cardiovascular compromise. The three signs that make up Cushing's triad - widening pulse pressure, decreasing heart rate and abnormal respirations - comprise a late indication of increased intracranial pressure. Keep in mind that hypertension may be a physiologically necessary compensatory mechanism when ICP is elevated.

Assessment of neurological status is often difficult in children but is a crucial parameter to monitor. The

Pediatric Trauma Score recognizes this problem and evaluates level of consciousness as simply alert, obtunded or comatose (see Table 1, page 11). Tools such as the modified Glasgow Coma Scale (see Table 2, page 11) or the AVPU acronym (Alertness-Verbal response-Pain response-Unresponsive) may be useful, but the child's developmental limitations must also be kept in mind. In addition, note the child's response to parents as well as appropriateness of response to the situation. Infants and young children normally cry in response to fear and pain; a child who does not cry may have a decreased level of consciousness. Parents may be helpful in eliciting responses from their child and should be included in the assessment when possible. Note motor strength and movement of extremities. Flaccidity or posturing are ominous signs and should be documented.

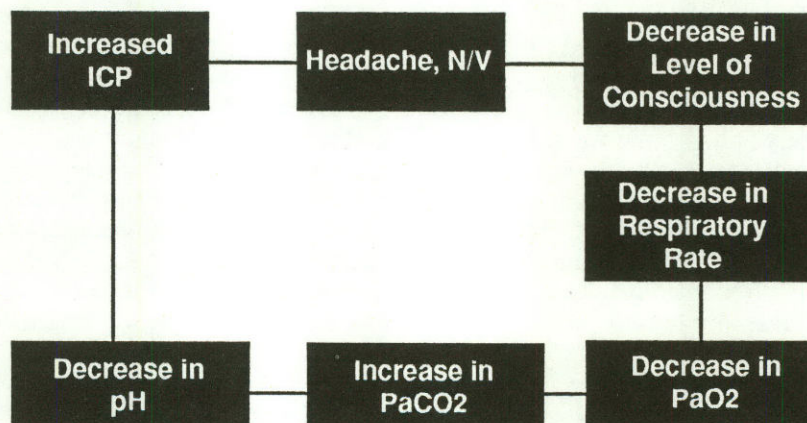
SECONDARY ASSESSMENT

A complete secondary assessment is important and should be performed en route to the hospital after life-threatening injuries have been managed. Major trauma to the pediatric victim usually results in multiple-system injury. In addition the presence of other injuries in combination with head injuries associated with twice the normal rate of mortality from those injuries. As you move into the head-to-toe assessment, continue to note signs of neurological injury. A bulging anterior fontanel is a sign of increased ICP in the infant, along with vomiting, irritability, and a high-pitched shrill cry. Examine pupils for size, equality, and response to light. Fixed and dilated pupils can indicate oculomotor nerve damage from direct trauma, compression from increased ICP, or can be the result of traumatic iridoplegia, defined as paralysis of the sphincter of the iris. Fixed, ipsilateral pupils can also indicate a hypothalamic lesion. Keep in mind that such things as drugs and alcohol can also affect pupillary size and reactivity.

Assess the scalp carefully for lacerations and fractures. Because of the high vascularity of the scalp, lacerations can cause significant bleeding. Cover any

Diagram 1

Early Signs/Symptoms of Increased ICP.



open fractures with sterile, normal, saline-soaked gauze. Do not attempt to remove foreign bodies, as they often tamponade bleeding vessels. Note the presence of contusions as well as drainage from the ears or nose. Ecchymosis of the mastoid bone (Battle's sign) or periorbital bruising ("raccoon eyes") can signal basilar skull fracture. If these signs are observed, do not insert nasal airways or nasogastric tubes.

Examine the eyes carefully for bleeding or foreign objects. If found, cover the eyes gently with gauze or a

shield to prevent further injury. Contact lenses should be removed.

Examine the nose and mouth visually, again ensuring that any matter representing potential airway obstruction is removed. Constant re-evaluation of the airway is essential.

Due to the flexibility of the spinal column and ligaments, children may suffer spinal-cord injury without fractures or other bony abnormalities. Thus, the clinical exam is critical. Ensure cervical spine immobil-

Table 1

PEDIATRIC TRAUMA SCORE

Components	+2	+1	-1
Size	>20Kg	10-20Kg	>10Kg
Airway	Normal	Maintainable	Unmaintainable
Systolic BP	>90mmHg	90-50mmHg	<50mmHg
CNS	No LOC	Obtunded/LOC	Comatose
Wound	None	Minor	Major/Penetrating
Fracture	None	Simple/Closed	Open/Closed-Multi

Sum total points=

The PTS recognizes the problem associated with assessing neurological status of children and so it evaluates the level of consciousness as simply alert, obtunded or comatose.

Table 2

MODIFIED COMA SCALE FOR INFANTS*

Activity	Best Response	Score
Eye Opening	Spontaneous	4
	To Speech	3
	To pain	2
	None	1
Verbal	Coos, babbles	5
	Irritable cry	4
	Cries to pain	3
	Moans to pain	2
	None	1
Motor	Normal spontaneous movements	6
	Withdraws to touch	5
	Withdraws to pain	4
	Abnormal flexion	3
	Abnormal extension	2
	None	1

* From: Hector, JE: "Neurologic evaluation and support in the child with an acute insult." Pediatric Annals, 1986, 15(17)

Tools such as the modified Glasgow Coma Scale may be useful, but the child's developmental limitations must also be kept in mind.

ity and note any deficits in sensation or motor function. As an alternative to standard backboards, pediatric backboards with special adaptations designed for use with the young child will provide secure immobilization while maintaining access to the patient.

Having completed the head and neck evaluation, reevaluate the chest and then assess the back, abdomen, pelvis and extremities.

During transport, continuous monitoring of the airway, vital signs, level of consciousness, and pupil status is essential. Post-traumatic seizures are relatively common in children, so be prepared.

Last but not least, keep in mind that trauma is a frightening experience for a child. Include the child's parents in procedures if appropriate, and prepare the child for events before they occur. Acknowledge the child's fear and pain; comforting words or touch can do much to alleviate anxiety.

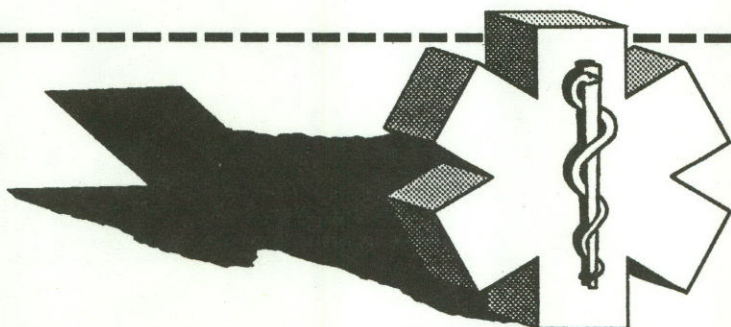
Management of head trauma is a challenging, often complex task. Because of their anatomical and physiological differences from adults, children are susceptible to head injury and may manifest unique responses. The neurological exam, for example, may be affected by the child's developmental level, anxiety, pain and desire to cooperate.

The outcome of severe head injury depends upon an adequate airway, ventilation and circulation. These factors directly affect intracranial pressure and cerebral perfusion pressure, which in turn affect the brain's ability to regulate essential body functions. Outcome is

also closely related to the extent and management of other system injuries. Therefore, while there is often a tendency to direct care toward the injuries that appear to be the worst, it is imperative that a systematic approach be taken in order to correctly identify all life-threatening injuries and institute expedient management. Scene time should be kept to a minimum, providing for attention to the ABCs while the secondary assessment is performed en route. A rapid, thorough assessment coupled with aggressive respiratory and circulatory support provide the keys to successful on-scene management.

While the care of the head-injured child evokes anxiety in most emergency care providers, solid primary assessment skills and a basic knowledge of how children differ from adults will get the patient underway to a definitive care facility.

Ellen Reynolds is the pediatric trauma nurse coordinator for the University of South Alabama Medical Center, Division of Pediatric Surgery. Brent Dierking is the trauma health educator/paramedic for the University of South Alabama College of Medicine, Division of Pediatric Surgery. Dr. Max Ramenofsky is a professor and chief of pediatric surgery, at the University of South Alabama College of Medicine.



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Teddy Bears and EMS

Photos and Story by Tom Ardrey

The phrase Emergency Medical Services means many things to many people. These words can bring to mind the trauma and tragedy of the severe accident scene; the drama and concern of the acutely ill; the helplessness and sympathy felt for the drug abusers and the attempted suicides. These images are all valid, but not inclusive of all EMS.

As an ever-growing, ever-broadening field of service and technical expertise, EMS now has people who are specialists within the medical specialty field of EMS. Some of these people care for a relatively small number of patients whose physical condition and need is so acute that it calls for highly specialized equipment, personnel and transport.

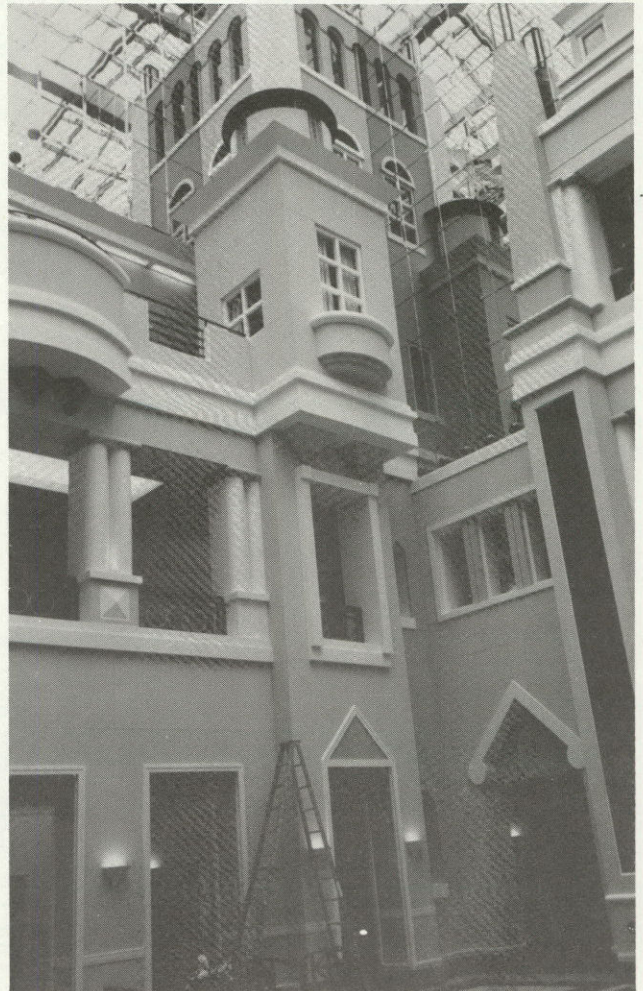
Cook-Fort Worth Children's Medical Center exemplifies this intensive type of EMS. Here, pediatric specialists use three transport vehicles euphemistically called Teddy Bear Air and Teddy Bear Express. The name itself brings a smile to many faces. But this is not an organization which deals mainly in nice words and kind expressions of concern and sympathy. Those things are surely there, but there also is a truly committed team of trained personnel who expertly use the specialized and technical equipment necessary to care for and transport children and infants.

This "Teddy Bear" group is the Emergency Medical Services arm of Cook-Fort Worth Children's Medical Center. This facility has been in Fort Worth since 1918, but the pediatric transport group had its birth in 1981. The hospital itself recently moved into its new \$55,000,000 home, which doesn't look at all like the conventional hospital. But then, it is not a conventional hospital.

In front of the blue, gray and white buildings, growing plants look like large, friendly animals. Arches, balconies, and castle tops bemuse the first-time visitor, and the atrium fills the main building with light. Children and adults find mirrors, windows, more balconies, and delightful places to sit and relax. Play areas invite the children.

But housed also in this whimsical-looking structure is state-of-the-art equipment to care for these small patients.

High frequency respirators here can ventilate up to 600 times a minute with a constantly monitored mixture of humidified air and oxygen. The lungs of a patient too weak or too injured to breathe properly and effectively simply rest and heal while they are bathed continuously in the correct amount of air and moisture.



The playful look of the new Cook-Fort Worth Children's Medical Center belies the hospital patients' serious conditions.

Besides the specialized cardiac life support equipment, entire special units await the sick child—Neonatal Intensive Care Unit and Pediatric Intensive Care Unit. Pediatric intensivists or neonatologists staff these special units.

Once the child is well enough to be in a private room, not only do medical personnel meet their physical needs, but child life program specialists make sure



Very special medical training, very special equipment work together on very special patients.

the child remains mentally entertained and active as physical healing takes place.

Okay, you say, this may be a great children's hospital, but what does this have to do with EMS?

It is a well known fact that trauma accounts for more death among children than any other cause. Blunt trauma causes 80 to 90 percent of serious childhood injuries. Newborns with life threatening cardiovascular and respiratory problems and those in need of specialized surgery must have immediate medical care. Malignant diseases such as leukemia attack the health and well-being of our young.

These tragedies of life occur everywhere. It happens in the big cities and in the rural communities. Then how do you get these critically ill and injured children and infants from across the state to a hospital that specializes in their medical problems? How do you get these critically ill and injured little ones to neonatologists, pediatric intensivists, surgeons who specialize in pediatric surgery, and other pediatric medical specialists, such as oncologists and hematologists, nurses, therapists, and technicians – all working exclusively with and for the health of infants and children?

How do you get these small patients to a place where it is recognized that they are not merely small adults, but are infants and children who have a physiology that is very sensitive to the smallest change in temperature, blood volume, acid-base balance, blood pressure, respiration rate, and medications? These patients need people trained and experienced in recognizing these minute changes, knowing the effects, and knowing how to administer the care necessary to control these changes.

But again, how do you move these patients who are so sensitive and whose physical condition is so delicate from one locale to another? The answer to this question, according to this Children's Medical Center,

is to use transportation which is designed specifically and exclusively for this purpose. All vehicles must be designed to carefully control temperature and must contain the life support equipment designed strictly for the very young. All personnel should be trained and experienced in critical care neonatal and pediatric transport.

Cook-Fort Worth Children's Medical Center has its own aircraft – Teddy Bear Air. When this Beechcraft King Air 90 was first obtained, it was completely stripped of all seats and interior accommodations, except the pilots' seats and the flying instruments. Pediatric and infant cardiovascular and respiratory life support equipment approved for in-flight use and a communications system were installed, making the aircraft an airborne Intensive Care Unit. With the highly qualified medical staff aboard, any pediatric emergency can be cared for.

While in flight there are always 2 or 3 medical personnel. Two patients and at least one parent can be accommodated, and parents are encouraged to accompany their children. Since 1987 when fixed wing service began, Teddy Bear Air has flown 121,000 miles, and has brought children and babies into the medical center from all across the state.

According to the crew, each trip and patient is special in the minds of the staff.

This summer the emergency crews have responded to five near drownings involving children in the 3 to 5 year age group. These young children in every case had fallen into a pool while playing or trying to retrieve a toy.

In addition to near drownings, Children's Medical Center receives calls for aid with premature babies who are born after 28 to 32 weeks gestation. These "preemies" suffer from marked respiratory distress because of their immature lungs.

The specialized Teddy Bear Transport services also transport into Cook-Fort Worth Children's Medical Center many children born with birth defects such as spina-bifida, open abdominal walls and congenital heart problems.

In addition to Teddy Bear Air, there are two ground vehicles, Teddy Bear Express number 1 and number 2.

Number 1 is possibly the largest EMS transport vehicle in the state of Texas. It was built by International Harvester and is large enough to carry two patients, and a full medical staff, including RN/paramedics and respiratory therapists. One parent is always encouraged to accompany the patient. The unit has a generator, sink, refrigerator and X-ray view box, and all the medical equipment necessary to make it a Mobile Intensive Care Unit. It even has its own specially designed hydraulic lift to pick up a critical care incubator and gently place it inside the ambulance.

Number 2 is a typical MICU vehicle, except the equipment is designed specifically for caring for pediatric and infant patients. Last year these land vehicles made 2400 runs including non-emergency transports.

Debra Marr Vopal, R.N., Paramedic, administers this intensive care transportation system as its Program Director. Vopal has 10 years experience in intensive care transportation and works with four other



Debra Vopal is the medical center's transportation director; the pilot is David Shafer.

One of four Pediatric intensivists or seven neonatologists handle consultations and referrals. Referring physicians receive directions for patient preparation prior to the arrival of the Cook-Fort Worth Children's Medical Center team. If extreme urgency is the case, CareFlight dispatches a helicopter.

In 1988, this group cared for 950 emergency patients. A two percent increase projected for this year has proven to be entirely too conservative, as the system has already experienced a 28% increase over last year. This means that approximately 1200 infants and children will be cared for this year.

The primary concern throughout this entire operation is for the Teddy Bear organization and this hospital to use its expertise and intensive care environment for the betterment of the health of the patient in question.

If Emergency Medical Services is defined as the emergency care and transportation of the critically sick and injured patient, then this organization is definitely involved in that endeavor and adds some new dimensions to the concept. Teddy Bear Air, the Teddy Bear Expresses, and Cook-Fort Worth Children's Hospital, provide a unique and valuable Emergency Medical Service.

For consultation with Cook-Fort Worth Children's Hospital, call 1-800-KID HURT. For transportation information call (817) 885-4282.

coordinators and 32 team members who have been selected for their training and experience.

Cross-training in all disciplines of the Teddy Bear group is standard and on-going. In addition to their basic training and experience, the nurses receive training in intraosseous and umbilical artery infusion. Basic EMTs are an integral part of Teddy Bear Express and contribute significantly through their knowledge of emergency pediatric care.

Tom Ardrey is with the Bureau's Public Information Program, and contributes to the Texas EMS Messenger on a variety of subjects.

Besides the patient, this ambulance can carry a medical team and parents — and parents are always encouraged to accompany their child.



Texas EMS Conference '89 - A Tradition of Excellence

by Alana Mallard

The Texas Department of Health's annual EMS Week gift to Texas' EMTs and paramedics is almost upon us again! The fourth annual Texas EMS Conference will be September 14 through 16 at the Double-Tree Hotel in Austin, Texas. Pre-conference activities are scheduled for Wednesday, September 13. Conference workshops will be offered Thursday afternoon, Friday morning and afternoon, and Saturday morning.

Registration is \$50 until September 1. After September 1 it jumps to \$75. A registration form is on page 19. Preconference activities are \$25 and \$20.

CONTINUING EDUCATION TRACKS

Workshops will be organized into special Tracks this year - Trauma, Medical, Volunteers, Managers, and Educators - but you will not be required to stay within one track. You may have to put up with some crowded rooms that way. However, we have five classrooms that will seat 300, 300, 300, 100, and 100 students, so maybe we have you covered there.

As every year, the faculty members **make** our conference. Since we do not pay presenters, you can thank them for the continued low registration fee that we have. Texas is fortunate to have so many EMS leaders and excellent educators and innovators who are willing to contribute their time and talent to the conference.

Some of our returning faculty members include Michael Wainscott, now of Dallas; MedStar's Doug Key; Gary Kesling, Fort Worth; Bureau Chief's Award winner Gene Gandy; Bill Aston, Harlingen EMS; ex-State employee and current medical student Rodger Mitchell; TAEMT president Doug Stevenson, and we have many new faculty members this year. Presenters will teach a total of 30 workshops.

Trauma Track topics include pedi trauma, burns, chest trauma, electrical/lightning injuries, and head injury. Medical Track topics will feature topics like early defibrillation, pedi emergencies, respiratory emergencies, diabetic and psych emergencies, and shock.

Educators can attend workshops on problem students, CE programs, techniques, and outreach; while managers and volunteers will have lectures on volunteer EMS standards, documentation, recruitment, prevention, grants, SOPs, PI&E, quality assurance, and motivating volunteers.

Twelve hours of CE for EMS recertification will be given for workshop attendance.

PRECONFERENCE EDUCATION

Wednesday, September 13, precon activities include an overnight Search and Rescue Medic course taught by STAR Rescue and a Medical /Legal Issues Seminar taught by Gene Gandy.



The Search and Rescue Medic Course, an overnight fundamentals course, will be physically demanding.

Rod Dennison, James Davis, and Gail McNeely from Public Health Region 1 will lead you in map and compass work, tracking, improvisational medical skills, and search techniques in the woods above Lake Austin's City Park beginning about 8 am Wednesday. You won't return to the hotel until Thursday at 5 pm. This overnight search mission will be physically demanding. It requires an additional registration fee of \$25, and you will earn 16 hours of CE towards EMS recertification. When you preregister for this course, we will send you additional information or call Rod Dennison at (817) 778-6744. Enrollment is limited to 10 hardy people who can withstand mosquitoes, ants, heat, dehydrated food, and hard ground. Use the registration form on page 19.

Gene Gandy, paramedic and attorney at law, will return again this year — this time to teach a precon seminar worth 8 hours of CE on medical/legal issues confronting prehospital medical caregivers. The additional registration fee is \$20 and enrollment is limited to 30 people. Again, the registration form is on page 19.

EMS WEEK AWARDS

The EMS Conference is when we announce winners of TDH's EMS Week Awards. This year our awards banquet will be at Friday night's dinner, and Tom Ardrey has planned a fabulous meal with the DoubleTree. No more chicken fried steak.... But about the awards — be sure to make your nominations; information is on page 24. We will honor a medical director, an administrator, an educator, a citizen, and three EMS organizations.

TEMSAC

Texas EMS Advisory Council will have its quarterly meeting Thursday afternoon from 3:30 pm til 5:30 pm. This is a public meeting, and the TEMSAC members urge everyone at the conference to attend.



Gene Weatherall judges photographs entered in the 1988 EMS Photo Contest.

EMS WEEK PHOTO CONTEST

Those of you who have enjoyed seeing your photos in the **EMS Messenger** and in our brochures may want to enter the EMS Week Photo Contest again. And this year the two first place winners will win \$50. The entry form is on page 25.

VALSALVA BOWL COMPETITION

Valsalva Bowl Competition will begin Thursday morning before the Conference's 1 pm opening session, so be sure to pre-register for that. Valsalva Bowl will not interfere with any workshops this year, and the finals will again be held during our closing session on Saturday.



Wayne Medical Products sponsors the Valsalva Bowl Competition each year, and entrants push hard to win.

BUT WHAT'S TO EAT?

Food this year will include a buffet lunch on Friday, dinner on Friday evening followed by a dance, and a continental breakfast Saturday morning. There will be coffee/tea breaks throughout the meeting days. And like we said, no more chicken fried steak. . .

For conference information call 512/458-7550, or write Texas Department of Health, Bureau of Emergency Management, 1100 West 49th Street, Austin, Texas 78756. Jan Brizendine, Registration; Tom Ardrey, Hotel and Exhibitors; Alana Mallard, Conference Coordinator.

TEXAS EMS CONFERENCE '89

A Tradition of Excellence

Preconference Activities

Wednesday, September 13

9:00 am

Precon: Search and Rescue Medic Course
(overnight, ends 5 pm Thursday)

9:00 am - 5:00 pm

Precon: Medical/Legal Issues

2:00 pm - 5:00 pm

Gene Gandy, PEMT, Attorney at Law
Registration

Conference Activities

Thursday, September 14

9:00 am - 5:00 pm

Registration

10:00 am - 1:00 pm

Exhibits Open, Coffee and Tea

10:00 am - 12:30 pm

Valsalva Bowl Registration and
Competition

1:00 pm - 2:00 pm

Opening Session

Introductions - Gene Weatherall,

Chief, Bureau of Emergency Management

Welcome - Robert Bernstein, MD

Texas Commissioner of Health

Keynote - Terry Bavousett, PHR 2

2:15 pm - 3:15 pm

Continuing Education Tracks

Trauma, Medical, Educators, Managers, Volunteers

3:30 pm - 5:30 pm

Texas EMS Advisory Council Meeting

5:30 pm - 7:00 pm

Cash Social, Exhibits Open

Friday, September 15

8:00 am - 8:30 am

Exhibits Open, Coffee and Tea

8:30 am - 11:30 am

Continuing Education Tracks

Trauma, Medical, Educators, Managers, Volunteers

11:30 am - 1:00 pm

Buffet Lunch, Exhibits Open

1:30 pm - 5:00 pm

Continuing Education Tracks

Trauma, Medical, Educators, Managers, Volunteers

5:30 pm - 7:00 pm

Valsalva Bowl Competition

8:00 pm - Midnight

Awards Dinner and Dance

Saturday, September 16

7:30 am - 9:00 am

Continental Breakfast, Exhibits Open

9:00 am - 11:00 am

Continuing Education Tracks

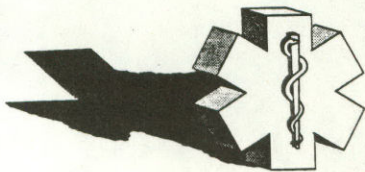
Trauma, Medical, Educators, Managers, Volunteers

11:30 am - 1:00 pm

Closing Session

Valsalva Bowl Finals - Joe Tyson

Keynote

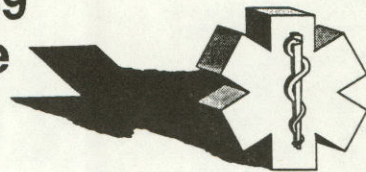


Texas EMS Conference '89

A Tradition of Excellence

September 14-16, 1989

CONFERENCE REGISTRATION FORM



NAME _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

EMS Organization _____ Level of Certification _____

Telephone (work) (____) _____ (home) (____) _____

FOR CONFERENCE REGISTRATION INFORMATION CONTACT:
Jan Brizendine (512) 458-7550

PLACE: DoubleTree Austin
6505 IH 35 North
Austin, Texas 78752
For Hotel Reservation
call (512) 454-3737

Conference Fee - \$50 (\$75 after Sept. 1) \$ _____

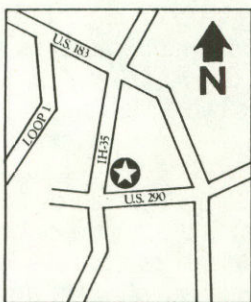
Plus activity fees:

Medical/Legal Issues Seminar - \$20 \$ _____
Sept. 13 - 9 am-5pm

Valsalva Bowl \$10 (per team)..... \$ _____

Team Name _____
Members 1. _____
(names) 2. _____
3. _____

Search and Rescue Medic \$25\$ _____
9/13/89 - 9/14/89
(limited to 10 registrants)




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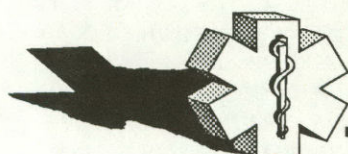
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your profession!

Home Meds: For good patient care you need to know them

by Dan Finley

Each year, **Pharmacy Times** reports on the most commonly prescribed drugs in America. As EMTs and paramedics, we see a lot of medicine bottles in the homes of our patients. This is the second in a series of five articles covering the drugs we most often see. The eleventh through twentieth medicines are:

(11) **Ceclor**: is the brand name for cefaclor produced by Ely Lilly and Company. Ceclor comes in a 250 mg purple and white capsule and a 500 mg purple and gray capsule. Cefaclor is a semi-synthetic-synthetic cephalosporin antibiotic, which works by interfering with the bacteria's ability to produce new cell walls.

The indications for its use include otitis media (ear infections), upper and lower respiratory tract infections, urinary tract infections, dermal infections, and staphylococcal infections. The usual adult dose is 250 mg every eight hours.

(12) **Seldane**: is the brand name for terfenadine produced by Merrell Dow Pharmaceuticals. Seldane comes in a 60 mg round white tablet. Terfenadine is a histamine (H1) receptor blocker, which acts to ameliorate allergic reactions.

The indications for its use include symptomatic relief of sneezing, rhinorrhea, pruritus, and tearing associated with seasonal allergic rhinitis. Usual adult dose is 60 mg twice daily.

(13) **Synthroid**: is the brand name for levothyroxine sodium produced by Boots-Flint Pharmaceuticals. Synthroid comes in a 25 mcg round orange tablet, a 50 mcg round white tablet, a 75 mcg round purple tablet, a 100 mcg round yellow tablet, a 125 mcg round brown tablet, a 150 mcg round blue tablet, a 200 mcg round pink tablet, and a 300 mcg round green tablet.

The drug is a synthetic replacement for the body's L-thyroxine hormone, normally secreted by the thyroid gland. The drug works by increasing the rate of cellular metabolism. The indication for its use is the treatment of patients with reduced or absent thyroid function. The usual adult dose is 100 to 200 mcg daily.

(14) **Capoten**: is the brand name for captopril produced by Squibb Pharmaceuticals. Capoten comes in a 25 mg square white tablet, a 20 mg oblong white tablet, and a 100 mg oblong white tablet. Captopril is an angiotensin I-converting enzyme (ACE) inhibitor. The drug works by suppressing the renin-angiotensin-aldosterone system, the result of which is a decrease in peripheral arterial resistance and reduction in sodium and fluid retention.

Indications for its use include (a) hypertensive patients who have side effects to or have not responded to multidrug antihypertensive regimens, i.e., combination of diuretics, beta blockers, and vasodilators, or (b) heart failure patients who have failed to

adequately respond to conventional diuretic and digitalis therapy. While the dosage is individualized, the usual adult starting dose for both hypertension and heart failure is 25 mg two or three times daily, and may be increased as necessary. Maximum daily dose is 450 mg.

(15) **Tylenol with Codeine**: is the brand name for acetaminophen with codeine and is produced by McNeil Pharmaceuticals. Each tablet contains 300 mg of acetaminophen and varying amounts of codeine. Tylenol #1 is a round white tablet containing 7.5 mg (gr. 1/8) codeine; Tylenol #2 is a round white tablet containing 15 mg (gr. 1/4) codeine; Tylenol #3 is a round white tablet containing 30 mg (gr. 1/2) codeine; and Tylenol #4 is a round white tablet containing 60 mg (1 gr.) codeine.

Codeine is a centrally acting opioid analgesic-antitussive, while acetaminophen is a peripherally acting analgesic-antipyretic. The indication for its use is the relief of pain. This drug may be habit forming. The usual adult dosage for mild to moderate pain is two #1 tablets, two #2 tablets, or one #3 tablet. For moderate to severe pain, the dose is two #3 tablets, or on #4 tablets.

(16) **Halcion**: is the brand name for triazolam produced by the Upjohn Company. Halcion comes in a 0.25 mg oblong blue tablet and a 0.5 mg oblong white tablet. Triazolam is categorized as a triazolobenzodiazepine hypnotic agent which works by decreasing sleep latency, increasing sleep duration, and reducing the number of nocturnal awakenings.

The drug is indicated for short term management of insomnia. Patients should avoid using alcohol while taking this medication. The usual adult dose is 0.25 to 0.5 mg before retiring.

(17) **Vasotec**: is the brand name for enalapril maleate produced by Merck Sharp and Dohme. Vasotec comes in a 2.5 mg gray barrel shaped tablet, a 5 mg white barrel shaped tablet, a 10 mg red barrel shaped tablet, and a 20 mg peach barrel shaped tablet. Enalapril is an ACE (angiotensin I converting enzyme) inhibitor with a mechanism of action similar to captopril (see drug #14).

The indications for this drug are the same as captopril, i.e., hypertension or heart failure which have not responded to conventional first line therapies. The usual adult dose for hypertensive patients is 10 to 40 mg daily in a single or divided dose. The dosage heart failure patients is 5 to 20 mg daily in two divided doses.

(18) **Procardia**: is the brand name for nifedipine produced by Pfizer Laboratories. Procardia comes in a 10 mg oblong orange soft gelatin capsule. Nifedipine is a calcium channel blocker, which works by dilating

coronary arteries, inhibiting coronary artery spasm, decreasing peripheral vascular resistance (afterload), decreasing myocardial oxygen consumption, and decreasing the workload of the heart.

The indications for this drug include vasospastic angina and chronic stable angina. A patient taking this drug may use sublingual nitroglycerine to control an acute anginal attack. The usual effective dose range is 10 to 20 mg three times daily. Maximum daily dose is 180 mg.

(19) **Lasix** is the brand name for furosemide produced by Hoechst-Roussel Pharmaceuticals. Lasix comes in a 20 mg oblong white tablet, a 40 mg round white tablet, and an 80 mg round white tablet. Furosemide is a diuretic which works on proximal and distal tubules and in the loop of Henle of the kidney's nephrons to inhibit sodium and chloride reabsorption. Onset of diuresis is within one hour of oral administration.

The indications for its use include (a) treatment of edema associated with heart failure, liver cirrhosis, or renal disease, and (b) treatment of hypertension, alone or in combination with other antihypertensive agents.

Usual adult dose in 20-80 mg as a single dose.

(20) **Lopressor**: is the brand name for metoprolol produced by Geigy Pharmaceuticals. Lopressor comes in a 50 mg oblong pink tablet and a 100 mg oblong blue tablet. Metoprolol is a cardioselective beta receptor blocking agent. The drug acts by reducing the sympathetic effect on the heart by occupying the cardiac beta receptors, the result of which is decreased heart rate, decreased cardiac output, and decreased systolic blood pressure. Since metoprolol only blocks the pulmonary B2 receptors at high doses, it may be used in cardiac patients who have lung disease.

The drug is indicated for control of hypertension. Lopressor is believed to reduce the cardiovascular mortality in patients with hemodynamically stable myocardial infarction. While the dosage of the drug should be individualized, the usual effective dose range is 100-450 mg daily in divided doses. Lopressor should be taken with meals.

Dan Finley is a paramedic instructor with Austin Community College.

Book Review

by Tom Ardrey

Pediatric Emergency Medicine for the House Officer

This newly released reference is primarily intended for the practicing emergency pediatrician in the hospital Emergency Department. The book is organized into 4 major emergency sections, "Life Threatening," "Medical," "Surgical," and "Ethical/ Legal Considerations". Each of these major sections has a number of special chapters named according to the subject material such as No Pulse and No Respiration, Shock, Bleeding, Near Drowning, Seizures, Stiff Neck. Each chapter starts with an "Introduction" which gives a general description of the condition to be discussed. The second heading is almost invariably entitled "What To Do First". This is where the text will be valuable to the practicing street paramedic as well as the E.D. nursing staff and the emergency pediatrician. This text could almost be used as a basic protocol.

Bureau Chief Gene Weatherall, a practicing street paramedic for approximately three years: "This is a well organized text, as it gives basic care first, then proceeds into more definitive care and diagnosis of the patient's condition. I think this is especially useful to the paramedic as it gives more in-depth information concerning a patient's care once the patient has been delivered to the Emergency Department."

In the first part of each discussion there are a few medical terms which might require some minor referencing; however, it is basically easy reading. As the discussion continues, more advanced terminology is appropriately used.

If you want a good basic pediatric reference text, look at **Pediatric Emergency Medicine for the House Officer**, edited by Steven M. Selbst, M.D. and Susan B. Torrey, M.D. The publisher is William and Wilkins.

Variances reduced in 1989

On June 1 only 22 EMS firms were listed as having variances in vehicle staffing or equipment required by state law. Last year the Bureau allowed 29 variances.

State law requires that BLS vehicles in service be staffed with at least two Emergency Care Attendants or higher. Minimum staffing for ALS vehicles is at least one EMT and one EMT-Special Skills; for MICU vehicles, at least one paramedic and one EMT.

Texas had 1,191 EMS firms on July 1, 1989. Variances from minimum standards are allowed based on specific hardships.

Paramedic Exam Subscale Averages

January 1989 - May 1989

These paramedic test results include initial and refresher training testing for groups of five or more. The subscales are:

- Subscale 1: Assessment, Airway, Shock, Pharmacology (30 questions)
- Subscale 2: Trauma, Burns, Rescue (30 questions)
- Subscale 3: Cardiovascular (60 questions)
- Subscale 4: Medical (45 questions)
- Subscale 5: OB/GYN, Pediatrics, Geriatrics, Behavioral (25 questions)
- Subscale 6: Prehospital Environment (10 questions)

The critical subscales are 1 - 5. Subscale 6 is non - critical. The test has 200 questions; no more than 15% are basic level questions.

City	Coordinator	Date	Class Size	Class Average	Averages by Subscale					
					S1	S2	S3	S4	S5	S6
SAN ANTONIO	GARONI	01/03/89	30	79.62	76	78	81	81	75	90
DALLAS	GOODYKOONTZ	01/12/89	30	80.31	71	80	86	83	72	87
SAN ANTONIO	GARONI	01/17/89	13	87.04	82	84	91	90	78	95
FALFURRIAS	STOVER	01/18/89	9	78.33	77	81	81	77	70	86
MERCEDES	ROBLES	01/26/89	10	81.80	81	83	86	80	73	85
PASADENA	BOWLING	02/01/89	7	81.14	77	78	86	82	71	99
LOVELADY	DIVIN	02/14/89	8	76.19	74	75	83	75	63	92
BRYAN	SCHAER	02/22/89	10	76.70	70	78	81	74	71	93
BEAUMONT	ROBINSON	03/01/89	8	75.81	74	76	79	75	67	90
HOUSTON	STEVENSON	03/07/89	7	86.57	82	89	91	85	79	91
BAYTOWN	VASKOMP	03/10/89	5	77.10	72	76	84	75	66	88
HOUSTON	HATCH	03/15/89	14	81.97	79	81	89	79	71	92
HURST	WILLIS	04/18/89	24	77.81	74	73	83	78	69	92
LUBBOCK	JACKSON	04/27/89	8	81.94	75	84	87	79	79	91
ODESSA	HOWARD	05/09/89	12	89.42	86	88	91	92	85	94
BROWNWOOD	FREEMAN	05/09/89	5	79.30	73	83	77	83	74	96
DALLAS	CASON	05/10/89	33	82.21	76	77	88	84	75	89
AUSTIN	MONTGOMERY	05/11/89	14	85.89	79	81	92	86	80	94
BRENHAM	HAUSSECKER	05/11/89	9	84.33	84	82	87	86	76	86
WACO	MICHALSKI	05/11/89	6	82.25	78	83	84	86	73	87
ELPASO	BROWN	05/11/89	8	81.50	79	77	86	82	73	91
STATEWIDE	TOTALS		270	81.31	76	78	86	80	74	93

Compiled by Saleem Zidani, EMS Education Program

Answer sheets bomb out

by Paul Tabor

Lately the Education Program has received some answer sheets which our optical scanner cannot read. This necessitated some students filling in a new answer sheet and delayed our getting your score back to you. Therefore, we would like to remind you of the following:

1. State personnel may not (and will not) alter or correct improperly filled out answer sheets. This is the student's responsibility.
2. Stray marks ANYWHERE on the answer sheet may cause the optical scanner to misread.
3. Be sure to ERASE COMPLETELY any answers you wish to change and ALL stray marks. We suggest that if you have over five erasures, please check with your test proctor as you may need to fill out a new answer sheet.
4. Of course, mark only one answer for each question and use only a #2 pencil.
5. Be sure to read carefully the page marked IMPORTANT at the beginning of your exam booklet.

Some of the errors we have seen which cause the scanner to reject an answer sheet are: small marks in

the margin beside a question number, a signature so large that it extends up into the answers at the bottom of the answer sheet, shading in the whole block rather than just between the brackets, putting just a single line between the brackets and not shading in the area completely, writing the unique number or social security number in the blank boxes at the top but forgetting to shade in the same number between the brackets below it. For paramedic answer sheets, the scanner will not grade side two if the SSN is not written and filled in correctly.

Since Texas Department of Health personnel cannot alter your answer sheet in any way, we will return scanner-rejected answer sheets to the Public Health Region office. The regional office will contact you to fill out another one. We realize this is an inconvenience, so please be extra careful to follow the directions when filling in your answer sheet.

Each question has only one correct answer. There is a chapter in **The EMT Review Manual** by Donald J. Ptacnik (NNR Publishing Company, 1989) which you might find especially helpful called "The Art of Effective Test Taking."

Paul Tabor, P-EMT, is the administrator of the EMS Division's Education Program.

EMS Division Director

Plan Ahead for Recertification

by Pam West

Recently there have been several instances where people have asked to have their "grace period" extended because they had been ill, hospitalized, involved in an accident, there has been a death in the family....the list goes on and on. There is no problem with creativity when it comes to excuses as to why continuing education hours and retesting was not accomplished within the four year certification period. However, these people have a very definite problem with planning and with understanding the rule regarding recertification.

THERE IS NO GRACE PERIOD! Writers of the rule incorporated a 90 day time frame past the expiration date merely as a failsafe and to handle any number of reasons why a certificant may not have their recertification by the expiration date - computer break-

(see Director continued page 26)

*"...test well
ahead of
your
expiration
date..."*



Call for Nominations for 1989 EMS Week Awards

Each year during EMS Week the Texas Department of Health recognizes outstanding achievement in the EMS field. Awards are divided into the following categories:

EMS Educator Award - Honors a state-certified EMS Instructor or Course Coordinator who has advanced EMS education in Texas.

EMS Medical Director Award - Honors a physician who has served as a medical director, on-line or off-line, for either a BLS or an ALS service in Texas.

EMS Administrator Award - Honors an administrator, researcher, or manager on the local, city, county, COG, or State level who has made a positive contribution to EMS.

Public Information Award - Honors an EMS group or individual for outstanding achievement in public education, injury prevention, or health promotion.

Citizen Award - Honors a private citizen for heroic lifesaving act or unique advocacy of EMS.

Private Provider Award - Honors a privately-owned commercial organization which assumed a leadership role in EMS by achievement in areas of patient care, public access, medical control, disaster preparedness, public education, and training.

Public Provider Award - Honors an organization operated by a county, municipality, tax-based hospital, or state or local government agency which assumed a leadership role in EMS by achievement in areas of patient care, public access, medical control, disaster preparedness, public education, and training.

Volunteer Provider Award - Honors an organization staffed by volunteers which assumed a leadership role in EMS by achievement in areas of patient care, public access, medical control, disaster preparedness, public education, and training.

Recipients are chosen from nominations made by EMS personnel, organizations, or individual citizens. Nominations should be no more than 5 pages typed or printed. Each should have a cover letter which lists

- 1) Category for which nomination is being made;
- 2) the name of the individual or organization being nominated;
- 3) the name of the individual or organization submitting the nomination (include complete address and daytime phone number); and
- 4) the names, addresses, and phone numbers of two other people who know the nominee's accomplishments.

The nomination should describe the significant accomplishment for which the nominee should be considered as a recipient. Deadline for nominations is September 1, 1989. An EMS organization may nominate itself. You must submit 5 copies of your nomination.

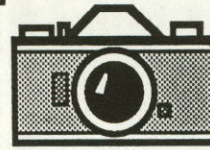
Mail 5 copies of nomination to:
1989 EMS Week Awards
Bureau of Emergency Management
Texas Department of Health
1100 West 49th Street
Austin, Texas 78756-3199

If you have any questions, contact:
Gail McNeely (512) 834-8673 or
Alana Mallard (512) 458-7330

Winners will be announced at the Texas EMS Conference '89 during the Awards Banquet on September 15.

DEADLINE FOR NOMINATIONS IS SEPTEMBER 1, 1989

1989 EMS Week PHOTO CONTEST ENTRY FORM



NAME: _____
please print (last) (first) (mi)

ADDRESS _____

CITY _____ STATE _____ ZIP _____

TELEPHONE: (work) _____ (home) _____

PHOTO SIZE:
5" X 7" [] Color [] Black/White []
8" X 10" [] Color [] Black/White []

NAME OF PHOTOGRAPHER: _____

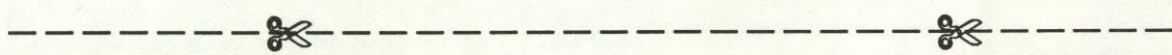


PHOTO CONTEST THEME: EMS in Texas

DEADLINE: September 1, 1989

AWARDS: First, Second and Third place awards will be given for Black/White and Color categories. First place winners will receive \$50.

SEND PHOTOGRAPHS TO: Bureau of Emergency Management
Texas Department of Health
EMS Photo Contest
1100 West 49th Street
Austin, Texas 78756-3199

CONTEST RULES

- Contest is open to anyone.
- Photographs must be either 5" X 7" or 8" X 10"
- Photographs do not have to be submitted by the person that actually took the picture, but the name of the photographer must be submitted.
- Winners will be announced at the Texas EMS Conference '89 and in the November/December Texas EMS Messenger
- Photographs will not be returned.

FOR INFORMATION CONTACT: Alana Mallard (512) 458-7550

downs, paper snafus, et cetera. Under no circumstances should an individual wait until the expiration date and then begin to be concerned about making arrangements for testing or an even worse scenario, begin looking for qualifying continuing education hours. Too many have been caught up in this situation and each has received the bad news that special treatment will not be afforded any one person. To us, each certificant is special, and if staff were allowed to change procedures for one the time that is spent processing the paperwork of those who did follow the rules and plan well would be jeopardized. We cannot and will not allow this to happen.

There is a reason that we ask applications and fees to be sent to Austin at least 30 days prior to anticipated testing. Your fees are processed through the Department's fiscal office and that takes additional time. You cannot expect to mail your application today and have it in the hands of the Registry staff within two to three days.

So please make it easy on yourself and play by the rules. Go today as you read this and check the expiration date on your certificate. Mark your calendar! Plan to keep up with your continuing education credits throughout the four years. Plan to test well ahead of your expiration date so that if by some chance a retest is necessary there will be time to plan for this before your certification expires. Plan to study for the exam. Do not depend on experience to get you through. Facts get hazy and one of the purposes of examining is to keep skills and knowledge base attuned.

Now you have the message. Careful planning on your part will smooth the way to a successful and well earned recertification.

Pam West, RN, MSN, is director of the Bureau's EMS Division.

POSITIONS AVAILABLE

EMT-SS/Paramedic: Texas Department of Corrections is hiring EMTs with Special Skills. Choice of location in Texas, excellent benefits, \$1545/month. Requires Texas certification as EMT-SS/Paramedic or TDC certification as EMT. Prefer experience. Contact Texas Department of Corrections, P.O. Box 99, Personnel Annex, Huntsville, Texas 77342 or call (409)294-2755.

A note of immediate importance to RNs and LVNs:

Discover our competitive salaries, improved benefits pack and innovative management style. 100% tuition reimbursements for critical care training. \$2000. sign on bonus for critical care. Professional opportunities in: ICU, telemetry, PD, PDICU, Level 3 NICU, medical, surgical and more. Contact Rori Cantu RN, McAllen Medical Center, 301 W Expressway 83, McAllen, Texas 78503, call collect (512)632-4673 or 1-800-633-3658.

EMT Instructor: Teach basic EMT and ECA courses. Handle EMT-ECA recertification, CPR and First Aid training for local industry. Requires minimum 5 years EMS experience and eligible Texas Paramedic certification. Degree preferred. Need strong communication skills, able to explain program to industry. Contact Dr. Joe Hendrix, Kilgore College, Longview Center, 300 South High Street, Longview, Tx 75601.

Paramedic Instructor Needed: the University of Texas Southwestern Medical Center has an opening for full time paramedic faculty. PA or RN registration required. Minimum salary \$25,000. Send CV to Debra Cason, Department of Internal Medicine, 5323 Harry Hines, Dallas, Texas 75235-9030 or call (214)688-3131. The University of Texas Southwestern Medical Center is an equal opportunity employer.

Paramedics: offshore - 28 days on, 14 off. \$795 week. Please send resume to Offshore Pipelines, Inc., Attn: John Brady, 14035 Industrial Road, Houston, 77015. No calls please.

Paramedics, EMT-SS: LifeLine EMS accepting applications. Prefer ACLS. Send resumes to Jerry Cox, LifeLine EMS, P.O. Box 2063, Wichita Falls, Texas 76301.

EMTs: Applications being accepted for EMT, Special Skills, Paramedic for West Texas Ambulance Service with Alpine and Monahans Divisions. Send Resume to WTAS, P.O. Box 338, Alpine, Texas 79831.

EMS INSTRUCTOR/INSPECTOR: Prefer EMS-I and street experience, contact Thelma Lemley, City of Houston Health and Human Services, (713)794-9645.



Okay, we'll try again...

These Texans attended the National Association of EMTs Educational Conference in Kansas City. And this time National Paramedic of the Year Allan Boutwell really is on the far left. Boutwell is a flight paramedic with Austin, Texas, STAR Flight.

Editor's Notes

The cobbler's kids go barefoot

by Alana S. Mallard

One of the most important jobs we have is educating the public about the use and misuse of EMS and 9-1-1. Entire jobs are dedicated, in fact, to public information and education, particularly to what we have tagged "accessing the system." My job is one of those. All of which makes a couple of situations that have recently occurred all the more ironic.

A 65-year-old white male wakes in the night. He's sweating, nauseous, his left shoulder hurts. After taking a hot shower to try to work some of the pain out of his arm, he wakes his wife to drive him to the hospital. She hasn't driven in several months, however, and they decide that he will have to drive the 8 miles to the ED.

A 45-year-old female begins to act inappropriately at work. She's loud, and vacillates between paranoia and extreme friendliness. She's in and out of the office, up and down the elevator, restless and wandering. Coworkers, who are nurses, finally isolate her in an empty office and talk to her to assess her problem. They decide to take her in a private car to the ER.

My dad and my coworkers. These things happen everywhere, because the desire to be in control, to deny death, and to take care of self and intimates is high. When it is your loved ones and your workmates doing the denying, though, it makes you stop and think how tough our job is.

I joked with some of my coworkers and with my parents about the irony of these incidents. But it's not a joking matter. My dad acknowledges now that he could have lost consciousness and killed himself and Mother. The nurses discovered during their ride to the ER that the coworker's condition was more dangerous to herself and to them than they realized.

Our job of educating the public about appropriate use of EMS and 9-1-1 is not an easy one. We have to get people to act against lifetime values of self-sufficiency and personal strength, and that is not an easy transition to make in the heat of an emergency. Especially if they are trying to deny that an emergency exists.

So, cobbler's kids go barefoot, preacher's kids are the most devilish, and even those of us who know about EMS don't always dial 9-1-1. What to do?

Make sure the public you serve knows what EMS is and how it works. Give talks and hand out brochures to teach your community members the do's and don'ts of accident victims and illnesses. Get your local TV station or newspaper to run features on EMS treatment so viewers and readers will know what to expect when EMS arrives. And, most importantly, keep talking to people about how and when to call EMS.

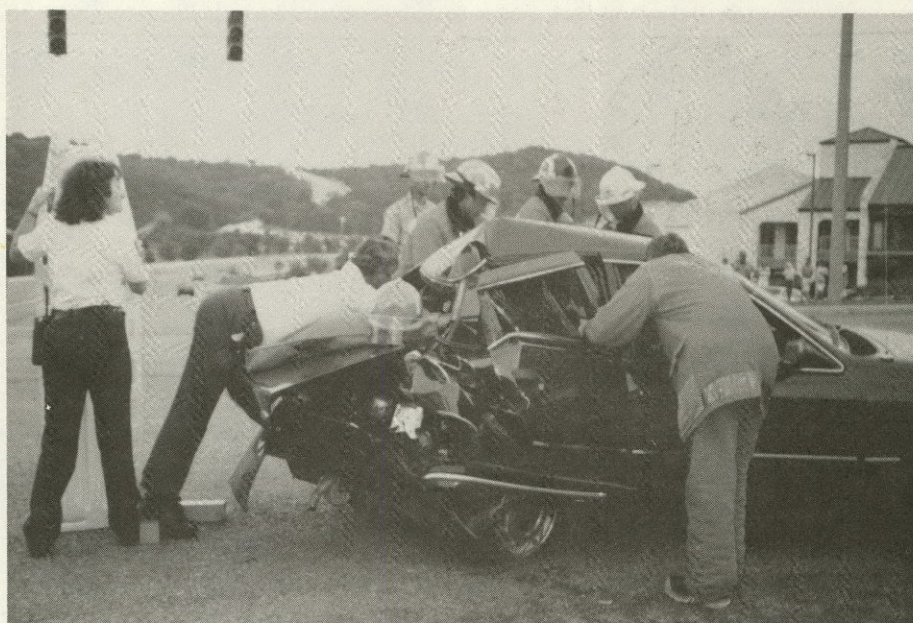
I've sent my Daddy copies of the **EMS Messenger**, and I've taken him brochures about EMS. He's told me he can get to the hospital before EMS even gets to his house, and I tell him that as soon as the paramedics arrive they can immediately start treatment and be in contact with a doctor. Of course, I hope he's never in the position to have to call for emergency medical services again, but if he has another heart attack at least he knows what he should do and why.

And that's what we need to teach everyone.

Alana S. Mallard

Editor

*Don't guess. Call EMS.
Community residents
need to know when and
how to call EMS. It is
our job to teach them.*



AROUND THE STATE

August 15-18, 1989, **Global Health Care Development**. Hyatt Regency Crystal City, Arlington, Virginia. Contact Tami McConnell (619)481-5267.

September 6-10, 1989, **Emergency Nurses Association (ENA) 1989 Scientific Assembly**, "Monumental Moments" filled with education, networking and enjoyment! Earn up to 18 CECH - select from 130 courses; for further information contact: Emergency Nurses Association (ENA), 230 East Ohio, Suite 600, Chicago, Illinois 60611, (312)649-0297.

September 14, 1989, **Texas EMS Advisory Council Meeting**, Doubletree Hotel, Austin. Contact Harold Broadbent, TDH, (512)458-7550.

September 14, 15, 16, 1989, **Texas EMS Conference '89**. Doubletree Hotel, Austin. Conference registration \$50. Contact Jan Brizendine, TDH, (512)458-7550.

September 17-23, 1989, **Texas & National EMS Week**.

October 6, 7, 8, 1989, **Garner State Park, Wilderness Rescue**, sponsored by TAEMT Region 3, Contact Nancy Hare (512)899-7428 or Stan Irwin (512)684-8268.

November 28 - December 1, 1989, **ASTM Committee Meeting**, Committee F-30 on Emergency Medical Services, Hilton at Walt Disney World Village, Orlando, Florida, Contact Anne Mcklindon (215)299-5490.

FOR SALE: Defibrillators and battery support system. Two Liteguard 9 defibrillators made by Marquette Electronics. Seven batteries, external power pack, battery support system, all accessories. \$5500 for each defibrillator; \$700 for the battery support system; \$9750 for everything. Call Bob Knowles (409)982-4357.

FOR SALE: 1986 Ford Type I Ambulance, gasoline engine, remounted Springfield Box. Only 40,000 original miles, excellent condition. Must sell! Ron Young, Citizens EMS, Clyde, Texas. (915)893-4111.

FOR SALE: Ford Type II Ambulance; 1-person cot, power inverters, brand new 2-way radio, fully BLS equipped - ALS adaptable, excellent condition; \$11,000 or best offer. Joyce Smith (214)554-8826.

FOR SALE: 1976 Chevrolet Type II, 1976 Dodge Type II Ambulance, asking \$3000 each or best offer. Call Mike Scudder, Alpine EMS (915)837-7471.

COORDINATOR CLOSE-OUT SUPPLIES:

Mast Trousers (new)
Traction Splints (used)
Oxygen unit with emand valve
Bag valve masks
Extrication collars (Philly brand)
20 Emergency Training brand slide/tape units
Written tests with computer disks for all levels

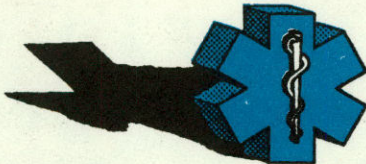
Vic Dwyer (713)469-8197 - Call for price list

EQUIPMENT NEEDED: South Anderson County Volunteer Emergency Corps. is looking for the following items free or at a reasonable price:

1. Portable two-way radios
2. Bunker gear
3. Light bars
4. Voice pager

If you can help, please contact Randy McCoy, Elkhart, Tx (214) 764-5566.

**TEXAS EMS
WEEK
SEPTEMBER
17-23, 1989**



BUREAU OF EMERGENCY MANAGEMENT
TEXAS DEPARTMENT OF HEALTH
AUSTIN, TEXAS 78756-3199

SECOND CLASS RATE PAID
AT AUSTIN, TEXAS