

Texas EMS

Serving Texas Emergency Care Professionals



National Registry:
*The truths and myths
of basic testing*
Page 30

CE: Capnography
*Ride the wave of new
technology*
Page 40

Texas EMS

M a g a z i n e

\$25 for 2 Years

Your point of contact with the agency that regulates Texas EMS—taking state and national EMS issues and answers to emergency medical services professionals serving in every capacity across Texas.

New subscription

\$25 for 2 years \$45 for 4 years

Renewal subscription

(Please print or write clearly)

First name _____

Last name _____

Address _____

City _____ State _____

Zip+4 _____ - _____

Area code _____ Phone number _____

Gift Subscription
Fill in gift information above
and put *your* name below

First name _____

Last name _____

Make check or money order to:
Texas Department of Health

Send subscriptions to:
Texas Department of Health-EMS
PO Box 149200
Austin, TX 78714-9200

Amount enclosed \$ _____
ZZ083 - Fund 008

Order these free materials for your community education programs.

FAX your request to: 512/834-6736

Shipping information:

Contact _____

Organization _____

Shipping Address _____

City/State/Zip _____

Telephone _____

Amount ordered Description

_____ "Ready Teddy" coloring book. 16 pages of injury prevention and EMS awareness tips by the Texas EMS mascot. English-(4-61)

_____ "When Minutes Count—A Citizen's Guide to Medical Emergencies" brochure. A foldout first aid guide. Can be personalized by the EMS service. (EMS-014)

_____ "EMS—A System to Save a Life" brochure. Explains emergency medical services and includes public health region office info. Explains BLS and ALS. (EMS-012)

_____ "I'm an EMS Friend" sticker. Ready Teddy in a 2-1/2 inch, 3-color sticker.

_____ "EMS Questions and Answers about Citizen Participation" brochure. Answers questions about how to call, what to do and how the community can help EMS. (EMS-008)

Mail or fax order form to: Bureau of Emergency Management
Texas Department of Health,
1100 West 49th Street, Austin, TX 78756
or Fax to (512) 834-6736

ADDRESS/NAME CHANGE FORM

- Address/Name change for magazine
 Address/Name change for certification
 Address/Name change for both

MAIL OR FAX TO: Bureau of Emergency Management
Texas Department of Health,
1100 West 49th Street, Austin, TX 78756
FAX (512) 834-6736

New information

Name _____ Phone _____ - _____ - _____

Address _____ City _____ State _____ Zip _____ - _____

Please fill in current information already in our records

Name _____ Phone _____ - _____ - _____

Address _____ City _____ State _____ Zip _____ - _____

FEATURES

14 Texas EMS Conference 2002

It's not too late. Register online until November 15 or at the Austin Convention Center, Austin, Texas.

30 The truths and myths of National Registry testing

Do you think you know the facts about National Registry testing EMTs? You may be surprised at some of what you read here.

By Eddie Walker

34 Air quality check

Tuberculosis is on the rise again in Texas. Do you know what to look for and how to protect yourself?

By Ann Tyree

37 Heading off a problem

If someone has a possible concussion but refuses transport, what can you do? Now you can send them home with a card that outlines the symptoms to watch for in the coming days and weeks that would indicate that they need to seek medical help. Available in Spanish and English.

CONTINUING EDUCATION

40 Continuing education: Capnography

What do you know about the newest trends in ventilation – capnography? Earn 1.5 hours of airway continuing education. CE article provided by EmCert.com.

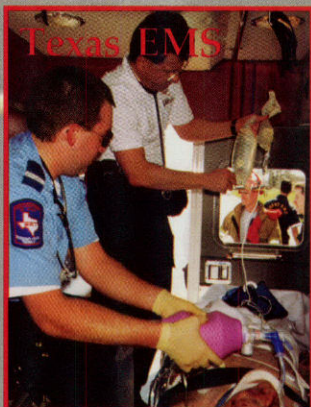
Texas EMS

Magazine

DEPARTMENTS

- 5 From This Side
Kathy Perkins
- 6 Letters
- 7 Deaths
- 8 On Duty
Kelly Harrell
- 22 Local and Regional News
Penny Workman
- 28 Defensive Tactics
Ray DuGray
- 29 FAQ: Standards
Linda Reyes
- 50 Did You Read
Penny Workman
- 53 Disciplinary Actions
Chris Quiroz, EMT-P and Anthony Luna
- 58 Calendar
Nicole Rivers
- 60 EMS Profile
Bill Campbell, LP, NREMT-P

Table of contents photo shows response to a bus wreck in June. Photo courtesy of *Wills Point Chronicle*.



ABOUT THE COVER:
MEDICS FROM CLEBURNE WORK ON A PATIENT IN THE BACK OF AN AMBULANCE. PHOTO BY DAN BRUNNER



BUREAU OF EMERGENCY MANAGEMENT MISSION

To facilitate statewide, regional, and community systems that provide emergency and health care for all individuals.

EDITORIAL REVIEW BOARD

James Atkins, MD,
Dallas

Scott Bolleter, EMT-P
San Antonio AirLife, San Antonio

Neil Coker, LP
Temple College, Temple

Rod Dennison, EMT-P
Texas Department of Health, Temple

Gene Gandy, LP, Attorney at Law,
Tucson, Arizona

Don J. Gordon, MD, PhD
The University of Texas Health Science
Center-San Antonio

Dr. J. Charles Hinds, EMT-P
Cypress Creek EMS,
Houston

Loretta Jordan, MPA, LP,
El Paso FD

James McGraw, RN, MN, CCRN
Tarrant County College,
Fort Worth

Jim Moshinskie, PhD, EMT-P
Baylor University

Debbie Peterson, MSHP, RRT
Texas Department of Health, Austin

Pauline VanMeurs, BA, EMT-P
Austin Community College,
Austin

Tom Ward, MD

Sherrie Wilson
Dallas Fire Department,
Dallas

Jim Zukowski, EdD
Texas Department of Health,
Austin

Contributors: Chuck Allen, Kevin Barnes, Bill Campbell, Susan Curtis, Sandra Dailey, Ray DuGray, Julie Gilbreath, Kathy Griffis-Bailey, Chris Hughes, Jill McFarren, Marjorie Mellot, Bob Page, David Pearse, Kathy Perkins, Linda Reyes, Russel Richter, Max Smith, Ron Smith, Ann Tyree, Eddie Walker, Debbie Weir, Shannon Wilks-Bingham

Texas EMS Magazine (ISSN 1063-8202) is published bimonthly by the Texas Department of Health, Bureau of Emergency Management, 1100 W. 49th Street, Austin, Texas 78756-3199. The magazine's goals are to help organizations function professionally as EMS providers, to educate individuals so they can perform lifesaving prehospital skills under stressful conditions, and to help the public get into the EMS system when they need it. *Texas EMS Magazine* brings state and national EMS issues and answers to ECAs, EMTs and paramedics serving in every capacity across Texas.

Editor's office: (512) 834-6700, 1100 W. 49th Street, Austin, Texas 78756-3199 or FAX (512) 834-6736.

Subscriptions to *Texas EMS Magazine* are available for \$20 for two years. Sample copies on request. Subscriptions are free to licensed provider firms and course coordinators. To order a subscription or to request a change of address in a current subscription, write to *Texas EMS Magazine* at the address above or call (512) 834-6700 or FAX (512) 834-6736.

We will accept telephone and mail queries about articles and news items. Manuscript and photograph guidelines available upon request. Materials will be returned if requested.

Periodicals Postage Paid at Austin, Texas. POSTMASTER: Send address changes to *Texas EMS Magazine*, 1100 W. 49th Street, Austin, Texas 78756-3199.

Texas EMS

M a g a z i n e

November/December 2002
Publications No.

Vol. 23 No. 6
01-10658

A bimonthly publication of
TEXAS DEPARTMENT OF HEALTH

EDUARDO J. SANCHEZ, M.D, MPH
COMMISSIONER OF HEALTH

CHARLES E. BELL, MD
EXECUTIVE DEPUTY COMMISSIONER

GARY BEGO
CHIEF OPERATING OFFICER

BEN DELGADO
DEPUTY COMMISSIONER FOR ADMINISTRATION

DEBRA STABENO
DEPUTY COMMISSIONER FOR PROGRAMS

RICHARD BAYS
ASSOCIATE COMMISSIONER FOR
CONSUMER HEALTH PROTECTION

BUREAU OF EMERGENCY MANAGEMENT

KATHY PERKINS, BUREAU CHIEF

JIM ARNOLD, ASSISTANT CHIEF - REGULATION

STEVE JANDA, ASSISTANT CHIEF - SYSTEMS

TEAM LEADERS

KELLY HARRELL PHIL LOCKWOOD

CHRIS QUIROZ HAROLD BROADBENT

GREG WILBURN

Texas EMS Magazine

KELLY D. HARRELL

PENNY WORKMAN

JAN M. BRIZENDINE

NICOLE RIVERS

Editor

Associate Editor

Art Director

Editorial Assistant

National Registry exam process set to take effect in February 2003



KATHY PERKINS, CHIEF
BUREAU OF EMERGENCY
MANAGEMENT

It's early October as I write this, and we are just beginning our first month of EMT testing under the National Registry. It's still early in the process, but there don't seem to be any major challenges so far. If we have any, we'll handle them quickly as soon as we know about them. We know this is a big change for everyone—including us. We're working to make the transition as smooth as possible. To help answer questions more efficiently, we've added a National Registry link off the front page of our website (www.tdh.state.tx.us/hcqs/ems). Click on that and it will take you to a page of links that should answer most questions. If you don't find the answer to your question, drop us an email and we'll get back to you. We will add any new questions we get to the FAQs so that everyone will benefit from the question. The National Registry exam process for EMT-Is and paramedics takes effect on February 1, 2003.

I know the conference is approaching because the EMS Information team, the group that is responsible for putting on the conference, goes into high gear. They are especially busy this year as we are moving into larger space at the Austin Convention Center, adding another 50,000 square feet of exhibit space to what we had last year. If you haven't registered yet, go to page 14 for information about registration and the conference. Hope to see you all there.

Right after we get back from the conference, we turn our attention once again to the state capitol as the Legislature comes back into session in January. This should be a challenging session in several ways. First, TDH has included EMS/trauma systems in a special request—called an exceptional item—for funding. This may put us in the spotlight this session, which we would welcome. However, the state comptroller is projecting a large budget shortfall, so lawmakers may not be able to provide more funding to existing programs. We will be watching the session closely and will keep you updated on what's going on. You can also go to www.capitol.state.tx.us and search for any bills that pertain to EMS or trauma systems.

GETAC's Strategic Plan is in the final stages of editing and should be printed and ready to go in November. Budget constraints won't allow us to print as many as we would like for distribution, but the plan will be available in its entirety on the bureau website. Please take the time to read it. This plan is a fascinating look at where we are in EMS/trauma systems, and where we are going. Copies of the strategic plan will be sent to every legislator.

And finally, come make your views known—and find out what your advisory council is doing—during the GETAC meetings at Texas EMS Conference. (See page 7 for meeting schedule.) We schedule the meetings during the conference so as many people as possible can attend. And we moved the meetings to Saturday and Sunday this year so that you do not have to miss any conference workshops. See you at the conference!

L e t t e r s



To *Texas EMS Magazine*:

Editor's note: A bus carrying teenagers to a church camp crashed into a concrete pillar in June on I-20, just outside Terrell.

First of all I want to say "job well done" to all the emergency personnel who responded to and assisted at the church bus crash scene on Interstate 20 in June. It was an incident that I hope no one else has to deal with. The call for help came about 0915 this morning. Within ten minutes, Wills Point Fire Department and East Texas Medical Center EMS were on scene, the first to arrive. Paramedics found several fatalities and multiple injured. The injuries ranged from minor scratches to multi-system trauma. Ten MICUs were dispatched from East Texas EMS; Champion EMS out of Canton and Wills Point Fire/EMS each responded with two MICUs. There were six CareFlite helicopters, two helicopters from East Texas Medical Center in Tyler and one helicopter from Mother Frances in Tyler. We transported 35 patients away from the scene in just over an hour. Nine patients were airlifted and 26 patients were transported by ground EMS to various hospitals.

This was a very unusual incident for all involved. Every EMS agency involved works on a different radio channel as does the fire department. However, incident command was established and everything just flowed from

there. It was amazing on how well it all played out. The hospitals in Terrell and Kaufman were notified prior to units arriving on scene and advised of situation. They went into disaster mode and nurses and doctors were called back in. All of the people at Parkland Memorial Hospital, Methodist Medical Center, Children's Medical Center, Baylor Medical Center, Mother Frances Hospital, and East Texas Medical Center were very helpful, too. All of the critical patients who were airlifted from the scene or were transferred from Medical Center of Terrell or Presbyterian Hospital of Kaufman went to one of the above trauma centers. Special thanks to Karen Yates at Methodist and to BioTel, our medical control, for help in answering some of our questions and getting us the help that we needed. We couldn't have done it without the help.

The multiple fire departments that were involved did a fantastic job of working together to get the patients packaged and moved to the treatment sector. The troopers and sheriff's deputies did an awesome job of assisting in whatever task they were given.

The fire departments that assisted in various tasks were Wills Point Fire Department, College Mound Fire Department (Fire Incident Command), Terrell Fire Department, Elmo Fire Department, Kaufman Fire Department and Able Springs Fire Department. I

am sure there are other fire departments that I am forgetting. Law enforcement agencies involved included Texas Department of Public Safety, Kaufman County Sheriff's Office, Van Zandt County Sheriff's Office and Wills Point Police Department. I apologize if I have left anyone off. The Red Cross responded and played a major role in keeping rescue workers hydrated with bottled water and Gatorade. The heat took a toll on everyone there.

I would like to thank all the off-duty metroplex firemen who stopped and assisted. We would also like to thank the fire departments that either assisted us in restocking our equipment or just offered their assistance.

We held a incident critique later that day in Wills Point for all the agencies involved that wanted to participate. We discussed what we could have done better, but there wasn't much. Most of it was praise for rescue workers and discussion about how well things went and how well we all worked together given the radio communication problem. Only a handful of people on scene had actually been at an incident of this magnitude. Those needing critical incident stress debriefing received it in the next day or so.

There was no doubt that this was team effort—whether on the scene or just keeping those of us that worked the incident in prayers. Trust me, everyone appreciated it.

*Chuck Allen, LP, NREMT-P
Public Information Officer
Wills Point Fire Department*

To Texas EMS Magazine:

Frio County EMS medic Carla A. Gibbs, 37, an EMT, died on June 22, 2002, outside her home in Dilley,



Gibbs

Texas, from multiple gun shot wounds. Carla is survived by her beloved daughters ages 10 and 17, and her parents and brother of Indiana. Carla was an active volunteer for our EMS system while being a receptionist for the local newspaper.

Carla was shot, allegedly by her ex-husband, in the presence of her youngest daughter. Carla was to begin her EMT-I school the following week.

Carla was dedicated to Frio County EMS and was very eager to learn anything that she could. She had a wonderful personality and a smile that would light up the room.

Carla always had a word of encouragement when someone needed it, and always strived to be the best medic she could. In the short time we knew Carla, we all grew fond of her and her children. To be a medic was a life-long dream of Carla's as she had always wanted to help people. She was having a blast. At her memorial service we all remembered how she was the comic relief that we needed at times when calls didn't go the right way. And we realized exactly how much she was a part of our lives and this system. Her family was overwhelmed at how she was embraced by this community. Her memorial service was a time for us to reflect on her life and her death, and to cherish all of the memories that we will take with us forever. To this day, we still feel her with us on the units, and hope that she's watching over us everyday.

*Sandra Dailey, EMT-I
Pearsall*

EMS Obituaries

Annie Andrus, of Dripping Springs, died at her home on September 28. She was 43. A paramedic, she had been in EMS for the last 17 years in various locations across Texas. In 1992, she was named TDH's EMS Educator of the year and later she coordinated the Mobile Training Unit for TDH.

Don Fryman, of Mount Enterprise, died August 22 from injuries sustained in a motor vehicle crash. He was 61. An EMT, he had been with Henderson Hospital EMS for six years.

Eric McBride, 28, of Saint Jo, died at his home on August 5. An EMT-I, Eric had first become certified as an ECA in 1992 and had been a volunteer with the Saint Jo Fire since 1991.

Dwayne McDowell, of Houston, died August 8 from an MI at his home. He was 36. He was a licensed paramedic.

Peter Page, of Channelview, died October 9 of cardiac arrest as he was rehabilitating from a motor vehicle crash. He was 24 and an EMT with NorthStar EMS. In August as Page left his shift, his car was hit by a tow truck that ran a red light.

GETAC meets during Texas EMS Conference

GETAC will meet November 23 and 24 during Texas EMS Conference. All meetings are at the Hyatt, 208 Barton Springs Rd., Austin.

Saturday, November 23, 2002

3:00pm - 5:00pm Injury Prevention Committee, Big Bend A, B, & C
12:00pm - 2:00pm Funding Task Force, Foothills II
2:00pm - 5:00pm Trauma Systems Committee, Foothills II
7:00pm - 9:00pm Air Medical Task Force, Foothills I

Sunday, November 24, 2002

9:00am - noon EMS\Education Committees, Foothills II
1:00pm - 3:00pm Pediatric Committee, Foothills II
1:00pm - 3:00pm Rural Task Force, Padre Island Room
3:00pm - 5:00pm Medical Directors Committee, Foothills II
5:00pm - Governor's EMS and Trauma Advisory Council, Foothills II

Monday, November 25, 2002

Convention Center, 500 East Cesar Chavez, Austin, Texas
9:00am - noon Regional Advisory Council Chairs, Room 15

Please note: Room assignments for these meetings are subject to change. Please see the meeting information lists at hotel or hotel front desk.

AROUND THE STATE AND NATION EMS NEWS AND RESOURCES

By Kelly Harrell

NY volunteers feel the heat

How far can you go to raise money to pay for your department's survival? An Oceanside, New York, volunteer fire department has found that even a good cause isn't enough to keep you out of hot water. Two officers of the South Side Hose Company No. 2 were suspended in September when they refused to cancel the fundraiser billed as "Catfight Babes." The Oceanside Fire District commissioners had directed the volunteer fire department to cancel the event. The October 26 fundraiser at the 78-man fire company is scheduled (as of presstime) to feature topless waitresses ripping at each other's clothes while wrestling in oil and chocolate syrup. A fire district attorney had threatened to seek an injunction in the state Supreme Court if the event was not cancelled. The volunteer department could also lose two pumper trucks and its equipment if it goes through with the event.

Ground Zero brings new ailment

There's a new ailment in New York, and its origin can be traced directly to the events of September 11, 2001. Physicians in New York have now officially identified the World Trade Center cough, a dry, nonproductive cough that affects hundreds – maybe thousands—of people who lived or worked around Ground Zero. The ailment, recently described by FDNY's chief medical officer, is characterized by reduced lung capacity and a hyper-reactivity to inhaled particles, bacteria and viruses. At first, officials focused on asbestos but recently determined that the culprit appears to be microscopic bits of glass coated with contaminants such as soot, mold and human cells. It is possible that some people will never have full lung function again.

Dallas 9-1-1 system fails for two hours

Dallas lost its 9-1-1 system for two hours in September when South-



western Bell technicians accidentally turned power off to a telephone switch that serves 31,000 lines

while doing a test of power backup systems. The action might have caused the fiber-optic equipment to malfunction. That equipment carries telephone calls to a second switch that serves Dallas and 39 suburban 9-1-1 centers. Normally, SBC redirects emergency calls in a failure to different ten-digit phone numbers. However, the Dallas 10-digit number had been disabled by the technicians' error. Officials estimate that they lost 1,600 emergency calls while the system was down.

Corsicana takes over ambulance service

On October 1, the Corsicana Fire Department took over ambulance service for that city and Navarro County. Now the same people who dispatch fire and law enforcement will take emergency medical calls. The fire chief plans to send dispatchers through EMD training.

A matter of the heart

Fighting fires is risky business for firefighters, but fires aren't the leading cause of death for on-duty firefighters: heart attacks are. In 2001, 99 firefighters died in the line of duty, excluding those who died in the World Trade Center attacks. Of that number, heart attacks caused 40 of the deaths; only 12 of those deaths occurred at fires. More than half of the victims had a previous heart attack or known heart disease. The second leading cause of death was being struck by an object, a category that included those killed in motor vehicle crashes. Twenty-four deaths occurred while firefighters were trapped, and five firefighters died from falls.

Too much education about 9-1-1?

In the category of educating the public a little too well: a 4-year-old Austrian boy was so disgusted by his grandmother's plum dumplings that he dialed emergency services for help, an Austrian television station reported. When quizzed by the police officer on the other end of the line, the boy did not know what he thought the police should do. The officer finally convinced the boy to give his grandmother's plum dumplings another chance.



Suicide bombers threaten from beyond grave

A suicide bomber's harm may not end with his or her final act. Israeli doctors found fragments of bone infected with hepatitis B from a suicide bomber embedded in a woman who survived an attack. Doctors believe it is the first report of human bone fragments acting as a foreign body in a blast injury. As a result, survivors of attacks are now being vaccinated for hepatitis B. Doctors also believe that embedded bone fragments should be routinely tested for other diseases, including HIV.

Bees attack Guadalupe County man

A Guadalupe County man was stung more than 400 times in September by what officials suspect were Africanized bees, more popularly known as 'killer bees.' The man was mowing some grass when he accidentally disturbed the nest. The bees attacked, leaving the man barely conscious. Two men who witnessed the attack dragged the 300-pound man to the bed of their pickup truck and drove him to a fire station. An ambulance transported the man to the hospital, where doctors removed 400 to 500 stingers, and found two live bees in the victim's ears. The man says he credits the McQueeney Fire Department, the hospital staff and the two men who pulled him to safety for saving his life.



Volunteer charged in traffic death

A Rosehill volunteer firefighter has been charged with negligent homicide after he crashed into a woman's car on his way to a grass fire in June. Samuel Lee Magritto, 50, was traveling 86 mph in a 45-mph zone when he hit the car of a 40-year-old woman who had slowed to make a left turn. Magritto's pickup, which was operating with lights and sirens, hit her from behind. A Harris County sheriff's lieutenant said that Magritto failed to keep a proper lookout while approaching the intersection and was trying to pass in a no-passing zone. Emergency responders on their way to emergency calls may violate certain traffic laws but must still operate their vehicles with appropriate regard for the safety of others. A similar case is pending against a volunteer firefighter in Utica, Indiana.

Amber Alert set up in Texas

The Amber Alert Network, a system for quickly broadcasting information about missing children, has been set up statewide. The network, which is named for a 9-year-old Arlington girl who was abducted and killed in 1996, has been set up in several other states. The network had been used in the Dallas-Fort Worth area but had not previously been available statewide.

The Texas Amber Alert Network provides the state's law enforcement officers with a mechanism to provide rapid notification of abducted child cases to the media and the public. These alerts encourage the public to report any information about the missing child or the suspect.

Only local law enforcement officers can activate the system. A call to the Texas Department of Public Safety (DPS) will result in a notice being issued over the Texas Association of Broadcasters' Emergency Alert System to television and radio stations within a 200-mile radius of the abduction. DPS also will notify the Texas Department of Transportation to flash messages on state highway signs in appropriate areas warning motorists to watch for the sus-

TDH has toll-free complaint line

TDH has a toll-free complaint line to report EMS violations: (800) 452-6086. Callers are instructed to leave a message; an investigator will return the call. Callers should be prepared to provide names of the person or service and dates of alleged incidents. Callers may remain anonymous. In addition, callers can file a complaint online by going to www.tdh.state.tx.us/hcqs/ems/Qihome.htm and clicking on an email address. The site also has Frequently Asked Questions about filing a complaint, and more information about criminal history background checks.



Website offers injury prevention abstracts

A website from Center for Injury Prevention Policy and Practice at San Diego State University provides abstracts of reports relevant to preventing unintentional injuries, violence and self-harm. SafetyLit staff and volunteers regularly examine more than 100 journals and scores of reports from government agencies and organizations. For a weekly update, go to safetylit.org.

pect's vehicle. An alert also will be sent to local law enforcement agencies across the state and the appropriate federal agencies.

Local law enforcement agencies also will have a direct connection to a national alert system that will send additional information and a photo to media outlets in the search radius. The criteria to issue an alert are:

- The child is under the age of 18.
- Law enforcement believes the abducted child is in danger of serious bodily harm or death.
- There is enough descriptive information about the child, the abductor or the suspect's vehicle to make a broadcast alert to the public helpful.

Since going statewide, the network has been instrumental in the return of at least two children. For more information about the Amber Alert and for tips on keeping children safe, go to www.governor.state.tx.us/amber.htm.



FEMA pays for Allison's damage

The Federal Emergency Management Agency is paying \$5.2 million to repair and replace medical equipment at Texas Medical Center in Houston that was damaged in last year's Tropical Storm Allison. The fund will help move equipment to higher ground, replace a 3-D organ scanner, retrieve data off damaged computers and other damaged storage media and replace a voice and data communication system. FEMA funds pay 75 percent of the costs while local funds cover the rest.

Allison, the costliest tropical storm in U.S. history, caused more than \$5 billion damage and killed 22 people in June 2001.



South Grayson County gets new ambulance services

When Life Tech Ambulance pulled out of Grayson County in April, it briefly left that part of the North Texas county without EMS. Fortunately, services in Sherman and Bells/Savoy stepped in to fill the gap until a new contract could be approved. The Howe City Council recently gave the nod to the Van Alstyne Fire Department to provide coverage to Howe and the south end of Grayson County. Bells/Savoy will continue to cover Whitesboro, Collinsville, Tioga, Southmayd and Sadler. Howe native Brett Bearden, a paramedic with VAFD, supervises the service, which has a total of four paramedics and four EMTs staffing two ambulances. VAFD will also use volunteer medics.

On Duty

Grants available to eligible hospitals

As reported at the GETAC's Trauma Systems Committee in August, a little more than \$46.8 million is available for various hospital programs—including designated trauma facilities of all levels and hospitals affected by the Texas floods of 2002—through the Tertiary Medical Care Program.

The purpose of this program is to provide funding to eligible hospitals for unreimbursed tertiary medical care services and stabilization services. The following are eligible for tertiary medical care services funding:

- (1) state-designated Level I, II, or III

trauma centers; and

- (2) primary teaching hospitals of medical schools.

The following are eligible for stabilization services funding:

- (1) state-designated Level I, II, or III trauma centers;
- (2) primary teaching hospitals of medical schools; and
- (3) Level IV trauma centers.

TDH distributes an application package inviting eligible hospitals to apply for reimbursement. A total of \$46,886,590 is available for expenses incurred in state fiscal year 2002

Info available on child fatality review teams

Do you want to be a part of a child fatality review team but don't know where to begin? Not sure



what a CFRT is? Child fatality review teams, created by the Texas Legislature in 1994, are panels composed of volunteers from several state agencies and different areas of public safety. The panels review information about deceased children to understand the causes of childhood deaths in a particular community. Members of the panel hear information about deceased children from agency records, and then develop strategies for a more coordinated response to prevent more child deaths. The goal of the

group is to determine how children die and to put prevention strategies into place in local communities. For more information, go to www.tdh.state.tx.us/epidemiology/ and click on Child Fatality Review Teams. The site carries a listing of state and local teams, annuals reports, statistics and a manual of CFRT operating procedures.

(September 1, 2001 through August 31, 2002). Five percent of these funds are earmarked by legislation for TDH's County Indigent Health program. An additional five percent of these funds must be held in reserve and used only for extraordinary emergencies. Of the remaining funds, \$40,510,013 is available for unreimbursed tertiary medical care services and \$1,687,917 for unreimbursed stabilization services.

Hospitals affected by the Texas floods of 2002, which qualify as extraordinary emergencies, may submit an application for unreimbursed tertiary medical services and stabilization services for the period July 4,

2002 through August 3, 2002. The application due date for services provided in state fiscal year 2002 for unreimbursed tertiary medical services, stabilization services, and extraordinary emergency services is December 31, 2002. Available funds will be distributed among applicants by February 28, 2003, on the basis of pro rata share.

For full details, including important Definitions and Frequently Asked Questions, go to www.tdh.state.tx.us/hosprfp/tmcp.htm. For more information, email Peggy Belcher at peggy.belcher@TDH.state.tx.us.

Good – and bad – news about AED grant

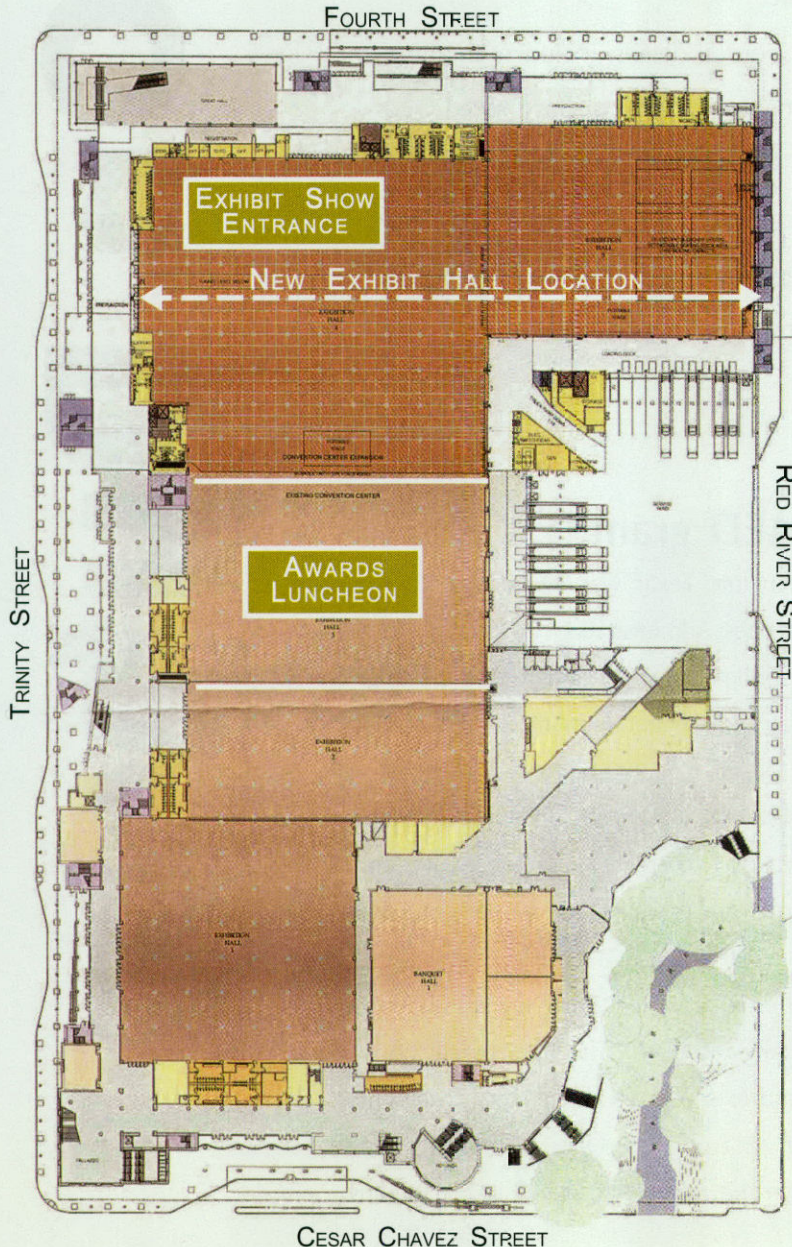
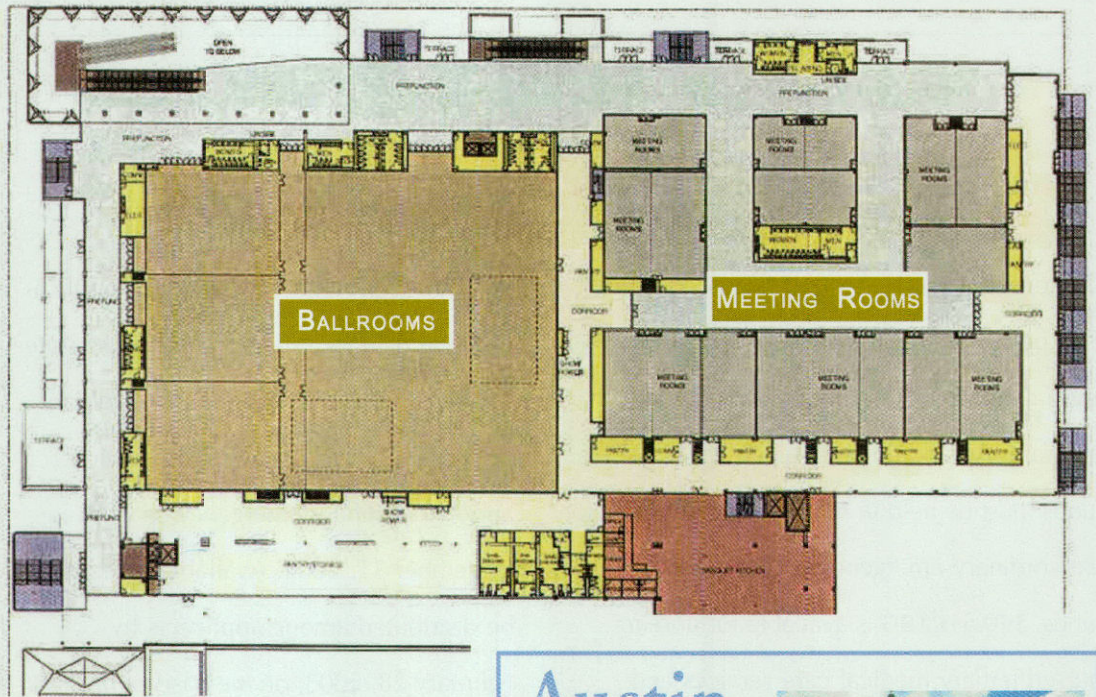
In early October, the Bureau received official notification that Texas was awarded a Rural Health Devices Grant from the U.S. Human Resources and Services Administration (HRSA) in the amount of \$269,500 for the purchase of automatic external defibrillators (AEDs) and related training. For this grant, the Bureau partnered with the Office of Rural and Community Affairs (ORCA). That's the good news. The bad news is that when developing the grant, 2,800 requested for AEDs were received. While the Bureau requested \$1.8 million to distribute 600 AEDs and provide training, the grant amount actually awarded received represents only 15 percent of that request. Administrative costs are five percent and anticipated training costs are estimated at 30 percent. That leaves \$175,000 for the purchase of AEDs.

Based on a price survey of several AED manufacturers, that would allow the distribution of 90 AEDs, less than five percent of the 2800 requests originally received. The Bureau will be working with manufacturers to see about getting a better price and to see if we can partner with some other organizations that might have leftover funding for AED projects. Once we know exactly how many AEDs we can purchase, the Bureau will begin the process of awarding the funding.

On Duty

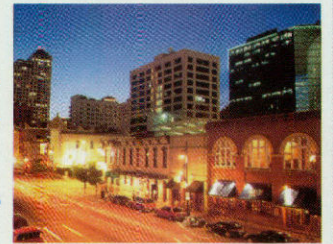
Austin
Convention
Center
Austin, Texas

The new meeting
space and new
exhibit hall will
be ready for
Texas EMS
Conference 2002.



Austin

As the Capital City of Texas, it's only natural that the State Capitol Building is the cornerstone of Austin's sights (top photo). Some of Austin's additional attractions include Sixth Street (middle photo), which houses a wide variety of restaurants and shops; and beautiful Town Lake (bottom photo)



Hotels

Conference Hotels: Texas EMS Conference has contracted for special rates with eight downtown Austin hotels.

Hyatt (Host Hotel)	\$80/105	(512) 477-1234
Radisson	\$80/100	(512) 478-9611
Four Seasons	\$120/160	(512) 478-4500
Omni Hotel	\$80/105	(512) 476-3700
Crowne Plaza (Sheraton) ..	\$70/90	(512) 480-8181
Embassy Suites	\$149/159	(512) 469-9000
Marriott Capitol	\$72/72	(512) 404-6946
Holiday Inn-Town Lake ...	\$62/62	(512) 472-8211

*Rates may be higher as of November 1.

Schedule

Conference At-A-Glance

Tuesday, November 26

Sunday, November 24

- 1:00 pm - 7:00 pm Registration in Convention Center Inside Exhibit Hall
- 3:00 pm - 7:00 pm Exhibit Hall Opens with Welcome Reception

Monday, November 25

- 7:00 am - 6:00 pm Registration in the Convention Center Inside Exhibit Hall
- 8:15 am - 9:30 am Opening Session in Ballroom D
- 9:45 am - 10:45 am Workshop Breakouts
- 10:00 am - 6:00 pm Exhibit Hall Open
- 11:00 am - 12 noon Workshop Breakouts
- 12 noon - 1:00 pm Lunch in Exhibit Hall
- 2:00 pm - 3:00 pm Workshop Breakouts
- 3:15 pm - 4:15 pm Workshop Breakouts
- 4:30 pm - 5:30 pm Workshop Breakouts

Workshop Breakouts in Ballrooms D-G, Rooms 12,14 and 16-19

- 7:00 am - 3:00 pm Registration in the Convention Center Inside Exhibit Hall
 - 7:30 am - 8:30 am Early Bird Workshop Breakouts
 - 8:45 am - 9:45 am Workshop Breakouts
 - 9:00 am - 11:45 am Exhibit Hall Open (closed during Awards Luncheon)
 - 10:00 am - 11:00 am Workshop Breakouts
 - 11:45 am - 1:15 pm Awards Luncheon Exhibit Hall (Exhibit Hall open immediately after Awards Luncheon)
 - 1:15 pm - 3:00 pm Exhibit Hall Open
 - 2:00 pm - 3:00 pm Workshop Breakouts
 - 3:00 pm Exhibit Hall Closes
 - 3:15 pm - 4:15 pm Workshop Breakouts
 - 4:30 pm - 5:30 pm Workshop Breakouts
- Workshop Breakouts in Ballrooms D-G, Rooms 12,14 and 16-19*

Wednesday, November 27

- 8:30 am - 9:30 am Workshop Breakouts
 - 9:45 am - 10:45 am Workshop Breakouts
 - 11:00 am - 12 noon Workshop Breakouts
- Workshop Breakouts in Ballrooms D-G, Room 19*

Conference Adjourns

Directions to the Austin Convention Center

Coming from north on I-35

Exit on 8th Street, turn right on 1st Street (East Cesar Chavez Street); the convention center will be on the right.

The Austin Convention Center parking garage is at 1st Street (East Cesar Chavez Street) and Brazos Street; the entrance is on Brazos Street.

Texas EMS Conference registration area will be at the entrance of the Texas EMS Conference Exhibit Hall (in the Austin Convention Center on 4th Street side).

Coming from south on I-35

Exit on 1st Street (East Cesar Chavez Street) and go left across I-35; the convention center will be on the right.

The Austin Convention Center parking garage is at 1st Street (East Cesar Chavez Street) and Brazos Street; the entrance is on Brazos Street.

Texas EMS Conference registration area will be at the entrance of the Texas EMS Conference Exhibit Hall (in the Austin Convention Center on 4th Street side).



It's not too late!

You can still register for Texas EMS Conference. Just go to the registration area at the Austin Convention Center on Sunday afternoon, November 24th, or Monday morning, November 25th. You can also register online at www.texasemsconference.com until November 15. Don't miss out on all the food, fun, CE and lots of EMS exhibits. The price after November 1 is \$150.

CE changes at Texas EMS Conference 2002

The good news: no more waiting in line at the end of each conference workshop to pick up your CE sheets!

More good news: CE will now be as simple as writing down a number at the end of each class!

Here is how it will work:

1. When you register, you will be given a CE booklet. Immediately write your name and phone number on the front of the booklet. That way, if you lose your book and we find it, we will know how to get hold of you.
2. Sign the statement in the front of the booklet. This statement will outline your responsibilities, which include not sharing the information in your book with other people and storing the book in a safe place when you return home in case of audit.
3. You will find a page in the booklet for each day of the conference. As you go to class, write in the time of the class and the name of the class. At the end of class, the facilitator will read out a unique number for the class that you must write down in the blank next to the class name. Do not leave class without getting this number. You will not be able to get the number later.
4. At the end of each day, sign the statement at the bottom of each page.
5. Keep this CE booklet for your records. You will be asked to produce the original book if you are audited.

Important notes:

- **Lost CE booklets will cost \$25 to replace.**
- The workshops fill on a first-come, first-served basis. If a class is full when you arrive, you may be turned away. Have a second choice in mind.
- No name badge – no entry into workshops.
- No one will be admitted ten minutes after the workshop has started.



Ride out with Austin-Travis County EMS

Want a chance to ride out with an urban service that responds to about 86,000 calls per year? Austin/Travis County EMS is offering ride-outs at no charge during the conference. Different times are available. Sign up at the Austin/Travis County EMS booth at the back of the exhibit hall beginning Sunday on a first-come, first-served basis. Bring dark pants and shoes and a white, collared shirt. Call Warren Hassinger at (512) 972-7205 or e-mail him at warren.hassinger@ci.austin.tx.us.

Texas EMS/Trauma Registry Training

Come learn about the new Texas EMS/Trauma Registry System in a two-hour session. CE provided. Austin Convention Center, room 13B. No preregistration required. Features include how to manage your registry account, create your data reports, complete your web-based data entry form, internet data transmission, automatic data quality feedback and data analysis tools.

Times:

- Sun: 1-3 & 4-6
- Mon: 10-12; 1-3 & 4-6
- Tue: 9-11; 2-4 & 4-6

MONDAY

8:15 am – 9:30 am Ballroom D DuGray EMS Defensive Tactics: When All Else Fails					
Room/ (Capacity)	9:45 am – 10:45 am	11:00 am – Noon	2:00 pm – 3:00 pm	3:15 pm – 4:15 pm	4:30pm – 5:30pm
Ballroom D (2,858)	Racht, MD Determination of Death in the Field: When to Start & Stop Resuscitation Prep	Gordon, MD Obesity & the US Epidemic of Diabetes, Type II Med	Shook, MD Medical Emergencies in Pediatric Patients Spec Cons	Wagenhauser, MD Gero-Trauma: When Old Folks Break Spec Cons	Genzel, MD Penetrating Trauma to the Heart Trauma
Ballroom E (478)	Salter Head Trauma Trauma	Sirbaugh, MD Children With Special Needs: The Out-of-Hospital Experience Spec Cons	Pepe, MD Immediate Countershock for V- Fib: Elemental or Detrimental? Med	Rich The Emergency Airway: OB & Pediatric Aspects Spec Cons	Schaffer EMS Response to Tactical Violence Prep
Ballroom F (478)	Wigginton, MD Studies Re: Pedi Drowning Related Incidents Spec Cons	Bledsoe, DO & Mitchell, PhD CISM: What Does the Research Say? CRO	Rubin, PhD Hospital Emergency ICS: An Orientation CRO	Rubin, PhD Working With Hospitals in Disasters CRO	Turner Positional Asphyxia & Sudden In-Custody Death Syndrome Airway
Ballroom G (448)	Phillips Hip & Pelvic Fractures Trauma	Hinson Seizures Med	Page Kick Butt Cardiac: This Rocks Med	Schaffer Left Behind: The Responder Initiated Patient Refusal Prep	Grovdahl Feelin' No Pain: Narcotic Pain Medication Use in the Field Prep
Room 12 (219)	Hollett Trauma for Two: Trauma in Pregnancy Trauma	Mercer, PhD & Childs, MD Outcome From Disorders of Consciousness & Severe TB I Trauma	Bolleter Surgically Yours: Advanced Airway Mgmt. Airway	Mailman, MD Dive Medicine: What EMS Providers Need to Know Med	Dummett Flood Rescue Response Prep

MONDAY					
Room/ (Capacity)	9:45 am – 10:45 am	11:00 am – Noon	2:00 pm – 3:00 pm	3:15 pm – 4:15 pm	4:30pm – 5:30pm
Room 14 (219)	EDUCATORS Dees & Haake How to Develop an A&P Program Prep	EDUCATORS Villers Teaching Skills by Distance Learning Technology Prep	EDUCATORS Gandy, JD How to Teach Legal Documentation Prep	EDUCATORS DeMartino How to Develop Valid, Reliable Exams Prep	EDUCATORS Hill & Smith Virtual ECA Course Prep
Room 16 (498)	Rinnert, MD Preparing for Weapons of Mass Effect: New Risk Mgmt Challenges Prep	Pepe, MD Exciting Innovations in Trauma Resuscitation Trauma	Linsky, MD Disposition of Bodies in Mass Deaths CRO	Gandy, JD Pharmacology for EMT Basics Prep	White Communication Techniques That Make a Difference Prep
Room 17 (506)	Wright Assessment of the Unconscious Patient Pt Assess	Linsky, MD Explosive Events: Triage & Treatment Pt Assess	Phillips Effective Motor Vehicle Collision Management Pt Assess	Continuation of Effective MVC Management Pt Assess	Walker National Registry Rollout Information Prep
Room 18AB (400)	Fowler, MD Capnography Airway	Bouvier Changes Following 9-11-01 Prep	Bledsoe, DO Folk Medicine: EMS Implications Prep	Puryear Shattered Dreams: Saving Young Lives Prep	Sheiner, MD EMS Data Management CRO
Room 18CD (400)	Benitez, MD, Persse, MD, & Loflin, MD On-Scene Supervision of EMS: Recommendations CRO	Benold, MD Doing a Better Neurological Exam for Spinal Injuries Trauma	Stevenson Patient Restraint in the Field: Reasonable Force Prep	Summers & Glenn Maintaining the Mental Health of Emergency Service Providers Prep	Harbert EMS Systems: Its Effect on EMS CRO
Room 19 (436)	Yates Line of Duty Death CRO	Turner When Love Hurts: Domestic Violence Spec Cons	Kocurek, MD Pulmonary Edema: How Not to Miss the Diagnosis Med	Waites Roles & Responsibilities at HazMat Incidents CRO	Morris Vicarious Trauma Trauma

TUESDAY						
Room/ (Capacity)	7:30 am–8:30am	8:45 am–9:45 am	10 am–11 am	2:00 pm–3:00 pm	3:15pm–4:15pm	4:30 pm-5:30pm
Ballroom D (2,858)	Spranger Eight-Legged Squishing Things: The Spiders of Texas Med	Bolleter Cultural Jeopardy: Clinical Reality Prep	MD Panel Best Practices in BioTerrorism Preparedness CRO	Hollett When Humpty Dumpty Fell: Traumatic Brain Injuries Trauma	Page Understanding Seizures Med	Rich Traumatized Airway & C-Spine Protection Trauma
Ballroom E (478)	Salter I Missed My Dialysis: Chronic Renal Failure Med	Racht, MD Errors in the Field CRO	Simonson, DO Current Trends in Trauma Care Trauma	Pepe, MD Ten Golden Axioms for Dealing With MCIs Trauma	Spear, MD EMS Telemedicine CRO	Spear, MD EMS Ultrasound Update Prep
Ballroom F (478)	Gonzalez Assessment Based Treatment of Pediatric Patients Spec Cons	Fowler, MD Temperature Regulation of EMS Drugs Prep	White Pediatric Emergencies Spec Cons	Rich Surgical Airway Management Airway	Gandy, JD Snakebite: A Four-Year Old's Survival Spec Cons	DuGray Achieving Personal & Professional Excellence CRO
Ballroom G (448)	Charpentier Pt Care: Only as Good as Pt Assessment Pt Assess	Taylor Pediatric Cardiology Spec Cons	Turner Crime Scene Considerations for EMS CRO	Bledsoe, DO Myths of EMS Prep	DuGray Stress for Success in EMS Prep	Glenn Stalking & Mass Murders Prep
Room 12 (219)	Johnson Reperfusion & Beyond Med	Rainone Grieving Behind the Badge CRO	Continuation of Grieving Behind the Badge CRO	Baker Understanding AV Blocks Med	Dummett Flood Rescue Response Prep	Kocurek, MD Mistakes in EMS CRO

Texas EMS Conference 2002 Workshops

TUESDAY						
Room/ (Capacity)	7:30 am- 8:30am	8:45 am- 9:45 am	10:00 am- 11:00 am	2:00 pm- 3:00 pm	3:15pm- 4:15pm	4:30 pm- 5:30 pm
Room 14 (219)	EDUCATORS Cloud Reading, Writing & Resuscitation Prep	NURSING Elliot Bites & Stings of Crawly Things Prep	NURSING Jones What About Burns Med	NURSING Freeman Forensics: Saving Pt & the Evidence Prep	NURSING Klein Mechanism of Injury Trauma	Gardner Transforming a Student To an Employee CRO
Room 16 (498)	Waites An Overview of ICS & MCI Prep	Wright Operations Stroke Med	Wigginton, MD Alternative Resuscitation Devices CRO	Wigginton, MD Cardiac Arrest: Genetic Related Differences? Med	Wagenhauser, MD Prehospital Morbidity & Mortality 2002 CRO	Villers 12-Lead ECG Case Studies Med
Room 17 (506)	Rinard, Isaaks, Valles & Gutierrez TxDOT/Tx Tech EMS Education Grants Prep	Gordon, MD Viral Weapons: Smallpox & Hemorrhagic Fever Med	Salter Burns Med	Page Gone in 60 Seconds: The First Minute of Life Spec Cons	Hollett Cardiac Trauma Trauma	Yates Improving ER/EMS Relations CRO
Room 18AB (400)	Turner The Suicidal Patient Med	Kuper Gerontology: A New Spin on an Old Topic Spec Cons	Etheridge Neurological Emergencies Med	Wallace Diabetic Emergencies Med	Sheiner, MD The Management of Change CRO	Bottorff-Patton & Brown Mgmt of the EMS Comm Center CRO
Room 18CD (400)	Gandy, JD HIPAA Unraveled CRO	Linsky, MD & Rinnert, MD Formal Training in Gov't Emergency Medical Security Services Prep	Villers Drug Review: Understanding the Antidepressants Prep	Dodson & Petrilla Child & Senior Safety: A Community Responsibility Spec Cons	Olthoff Do you Drink? It Can Happen to You Med	Etheridge Anti-Depressive Medications Prep
Room 19 (433)	Hinson Concepts in Pre- Hospital Sedation Prep	Stout, MD Pre-Hospital Use of Thrombolytics Med	Phillips The Use of Restraints Prep	Rubin, PhD Heat Exposure Med	Cloud Withdrawal Syndromes Med	Hudson Texas Child Fatality Review Initiatives Spec Cons

WEDNESDAY			
Room/ (Capacity)	8:30 am – 9:30 am	9:45 am – 10:45 am	11:00 am – Noon
Ballroom D (2,858)	Ricketson When Kids Can't Breathe Spec Cons	Wallace Assessing the Elderly Patient Pt Assess	Thomas When to Deliver the Baby on the Ambulance Med
Ballroom E (478)	Gonzalez Diabetic Emergencies Med	Brogan III, MD Life's a Rhythm, Then You Die Med	Puryear Capnography: The Wave of the Future Airway
Ballroom F (478)	Baker ECG Physiology: Making Sense of the Squiggly Lines Med	Rubin, PhD Cold Exposure Med	Wheeler Communicating With the Deaf/ Hard of Hearing Prep
Ballroom G (448)	Northway Injury Prevention Program: Quick, Easy, Cheap & Effective Spec Cons	Cudaback MCI: Is Everyone On the Same Page? CRO	Crawford Response to Explosive Incidents CRO
Room 19 (436)	Knappage Risks & Rewards of Integrating Paid Personnel Into Volunteer Systems CRO	Burns Inborn Metabolic Disorders: An Overview Med	Seeber Legal Aspects of EMD Prep

Other groups' meetings during the conference

Saturday, November 23

TX Assoc of Air Med Services, 7-9pm, Hyatt, contact Dennis Hehner, 956/365-2711.

TX Trauma Coordinators Forum, 8:30am-12noon, Hyatt, contact Margie Lygas, 713/704-5297.

Sunday, November 24

EMS Assoc of Texas, 12-3pm, Hyatt, contact Ron Haussecker, 979/277-6267.

TCEP Med Directors meeting, 1-3pm, Hyatt, contact Nancy Davis, 512/306-0605.

Monday, November 25

TAA Board meeting, 12-4pm, Hyatt, contact Ron Beaupre, 972/417-2877.

BLTS Board meeting, 6-8pm, Hyatt, contact Nancy Davis, 512/306-0605.

EMS Educators Assoc of Texas, 6-8pm, contact Carl Voskamp, 361/572-6417.

Tuesday, November 26

TAA Billing/HIPPA class, 8am-5pm, Hyatt, contact Ron Beaupre, 972/417-2877.

Patch Exchange

Monday, November 25
1-2 pm outside Exhibit Hall

Bring patches for trading! Sponsored by La Porte EMS. For information, email Joe Berry at berryj@ci-la-porte.tx.us

Key to CE

- Prep=Preparatory
- Med=Medical
- Trauma=Trauma
- Spec Cons=Special Considerations
- Airway=Airway
- CRO=Clinically Related Operations
- Pt Assess=Patient Assessment

Local & Regional EMS News

Is your EMS service mentioned in Local and Regional EMS News?

It needs to be! Are you planning a fundraiser? A training class? A public education program? Do you have new people on board? Have you elected new officers?

Send your news to:
Texas EMS Magazine
Kelly Harrell, Editor
Bureau of Emergency
Management
1100 West 49th Street
Austin, Texas 78756-3199
(512) 834-6700
Fax (512) 834-6736

We welcome letters to the editor on EMS issues, magazine articles or other topics of interest. We print letters to the editor as we have space.

Coastal Bend College adds EMS program to new campus

Coastal Bend College began offering the EMS Professions Program at its Pleasanton campus in the fall 2002 semester. Coastal Bend College now offers the EMS Professions Program in Beeville, Kingsville, Alice and Pleasanton. The program offers all classes necessary for EMT, EMT-Intermediate and EMT-Paramedic certification.

MCEMS participates in child safety seat event

Martin County EMS recently took part in a child safety seat inspection at the Martin County Community Center in Stanton.

The event was sponsored by Martin County Hospital and staffed by personnel of MCEMS, Stanton PD, Midland Memorial Hospital, City of Andrews EMS, Martin County Home Extension and the MCEMS Explorer Program. Families who needed child safety seats or replacement seats were provided with new ones given by the TDH SafeRiders program and the Texas Trauma Service Area J.

Val Verde SAFE KIDS opens child safety seat inspection station

The Val Verde SAFE KIDS opened its first permanent child safety seat inspection station in September. Located at Val Verde Regional Medical Center, the station has set hours of op-

Two volunteers check a child who is strapped into a child safety seat during a child safety seat inspection held in Stanton. Martin County EMS, along with several other area emergency response and medical providers, participated in the child safety seat inspection.



Local & Regional EMS News

eration and takes inspection appointments. Certified technicians offer parents and caregivers personal instruction on the proper installation and use of car seats. VVSK received one of 30 National SAFE KIDS Campaign grants to establish inspection stations in the local communities as part of the campaign's goals to educate parents and caregivers on the importance of properly buckling up their children on every ride.



Distributed by Fingerprint America 1(888)372-1999

WCEMS implements WHALE program

Williamson County EMS recently implemented the WHALE (We Have A Little Emergency) program. The program is a two-sticker emergency notification system. The first is a brightly colored sticker that is placed on a car's window directing emergency responders to look for a second informational sticker. The second sticker, placed on the child's car seat, has information about the child, including emergency contact information. Upon seeing the first sticker,



Lazbuddie VFD/EMS recently received a new 2002 Ford ambulance and a new station for housing the ambulance. Pictured, from left, are: Julie Mason, EMT-P; Debbie Weir, EMS director, EMT; Dustan Jesko, LP; Connie Barnes, EMT; Glenn Lust, EMT; Carolyn Scott, EMT; and Mat Goe, ECA.

WCEMS will know that information about the child is available, regardless of the condition of the adults in the vehicle. All new parents in area hospitals and interested citizens' groups will be shown a video about the program and given stickers for cars and car seats.

Lazbuddie VFD/EMS gets new ambulance

Lazbuddie VFD/EMS recently took delivery of a new 2002 Ford F-350 ambulance. LVFD/EMS purchased the ambulance with grants from the Meadows Foundation of Dallas, TDH's Local Projects Grants program and Parmer County Precinct 4 Commissioner Raymond McGehee. LVFD/EMS also has a

new building for housing the new ambulance and several fire response vehicles, and a new AED purchased with a matching grant from the American Heart Association. LVFD/EMS does not charge for services; funding comes from Parmer County, Friona Hospital District and donations.

STECF receives CAMTS accreditation

South Texas Emergency Care Foundation, Inc./Emergency Medical Services/Valley AirCare received accreditation from the Commission on Accreditation of Medical Transport Systems (CAMTS) in July. STECF is among 97 services in the United States and Canada to

Local & Regional EMS News

TEXAS EMS CERTIFICATIONS AS OF OCTOBER 14, 2002

ECA	5,218
EMT	26,062
EMT-I	4,038
EMT-P	9,498
Lic-P	5,705
TOTAL	50,521
COORDINATOR	366
INSTRUCTOR	2,019



The most recent Laredo Fire Academy welcomed 42 students to the EMS and fire training program.

be awarded this accreditation. This accreditation extends to the rotor wing, fixed wing and ground divisions of STECF, making STECF one of only 13 services to have the three divisions accredited.

Laredo FD trains local emergency personnel

Laredo Fire Department began its latest Laredo FD academy class in July. Forty-two cadets will go through fire suppression and paramedic training. Eight U.S. border agents also joined the academy class.

Schertz EMS receives donations for child car safety seat program

The City of Schertz EMS recently received donations for its

child car safety seat program. Block Distributing donated \$2,500 and HEB grocery stores donated \$1,000 to SEMS for the child car safety seat program. SEMS, Schertz PD and Schertz FD personnel have been trained as child safety seat inspectors and offer free child car seat inspections.

Two NMCVFD personnel struck by lightning

In July, Mark Rodriguez, firefighter, and Ricky Smith, EMT-P/firefighter, two North Montgomery County Volunteer Fire Department personnel, were struck by lightning while preparing equipment for an 18-wheel trailer response training. It was not raining at the time. Rodriguez, who was having chest pains following the strike, managed to pull the fire truck out of

the station, call for help with the radio and use the defibrillator on Smith, who was in cardiac arrest. A neighbor assisted Rodriguez in giving CPR to Smith. According to the AED tape, after one shock Smith regained an organized heart rhythm. Both men were treated and released at different times from Conroe Regional Medical Center. Smith is also a paramedic and fire chief for Grangerland VFD.

SFD and bystanders awarded for saving man trapped under tractor

A publication of the United Cooperative Services recently honored United employees Bud Hutton and Jerry Malcott, and Stephenville FD employees for saving the life of a man who had been trapped under a tractor for

Local & Regional EMS News



A little girl tries out her new child car safety seat during a Stamford area child car safety seat inspection in April. TSA-D and several Stamford area agencies participated in the inspection, giving child car safety seats to families who needed them.

more than two hours. Hutton and Malott were led to the injured man by other individuals. Hutton used the cooperative's truck to lift the tractor off the man and Malott radioed the cooperative's office, asking them to call 9-1-1 for medical assistance. SFD arrived on scene shortly after receiving the call and transported the victim to the local hospital. Responding SFD personnel were Cody Wells, LP; Mickey Belew, LP; F.H. Croft, EMT; and Keith McLain, EMT-I. The victim had a dislocated shoulder and deep lacerations on his head, ear and elbows.

Stamford area car seat inspections see results almost immediately

Big Country Regional Advi-

sory Council TSA-D, Stamford Memorial Hospital, Stamford EMS, Hamlin Memorial Hospital, Hamlin EMS, Stonewall Memorial Hospital, Stonewall County EMS, Knox County Hospital, Knox County EMS and the Texas Department of Health's area office hosted child car safety seat inspections in April at a local Wal-Mart.

Certified car seat technicians taught parents and caregivers about the proper installation of child car safety seats in the vehicle and of the child in the car seat. Technicians also issued car seats to families who didn't have car seats. At this event, 46 new car seats were issued and 28 car seats and booster seats were destroyed. Two months later, a family who had received a new child car safety seat was in-

volved in a vehicle crash in which the child was the only car occupant to not sustain injuries. TSA-D RAC has received a grant for approximately 900 car seats and is planning more child car safety seat inspections.

Medic among those recognized for saving family near Galveston

The *Dallas Morning News* and *Reader's Digest* recently recognized Joe Richardson and others for saving a family when the driver of the family's minivan drove into the waters near Galveston.

Joe Richardson, a student at Texas A&M at Galveston and a paramedic, and other sailors were manning a sailboat race when they saw the minivan crash into the water. The driver had managed to get to the surface, but three children and two other adults had to be rescued from the submerged vehicle. The rescuers performed CPR on the five who had been submerged. All responded to treatment and have recuperated. Interestingly enough, Richardson's father had also saved a woman from a vehicle that had been submerged after going off another bridge 26 years earlier.

Medic receives award from DPS

Al Lewis, a licensed paramedic who works with the Office of Rural Community Affairs,

Local & Regional EMS News



Kids gather up candy, stickers and toys after a piñata was broken open at the Kid's Corner during the Texas SFFMA annual conference in Beaumont.

Texas SFFMA has Kid's Corner safety education at conference

The State Firemen's and Fire Marshals' Association of Texas had EMS and safety education in its Kid's Corner at its annual conference in Beaumont in June. The kids were given Ready Teddy stickers and coloring books and took part in a coloring contest to win ribbons and prizes. The kids also made Dalmatian hand puppets and broke piñatas.

Thrall FR members who have been trained in using TFR's new AED are, front row from left, Russel Richter, EMT-P; Dawn Hehmann, EMT; and Chris Meyer, EMT; and back row from left, Willie Herzer; Randy Hehmann, ECA; and Cindy Hehmann, ECA.

received the Director's Award from Texas Department of Public Safety in September for his actions in response to an April tractor-trailer fire in Ward County. The award is designed to honor non-DPS individuals for cooperation, bravery, and investigative assistance, and DPS officers are responsible for nominating individuals they feel deserve recognition for their actions. In April, Lewis rescued a driver who was trapped in the cab of a burning tractor-trailer. Lewis suffered smoke inhalation and second-degree burns on his hands during the rescue.

Thrall FR adds AED, upgrades response

Thrall First Responders recently upgraded its response capabilities by adding an AED to its equipment. The AED was purchased entirely from donations made to TFR by local citizens following a letter campaign to the community explaining the benefits of early defibrillation during a heart attack. Within four weeks, TFR had received enough donations to purchase the AED and other equipment. Several TFR members have been trained in the use of the AED.



Local & Regional EMS News

Texas Department of Health EMS Offices

**Bureau of
Emergency Management**
<http://www.tdh.state.tx.us/hcqs/ems/regions.htm>
 1100 West 49th Street
 Austin, Texas 78756-3199
 (512) 834-6700

Public Health Region 1
<http://www.r01.tdh.state.tx.us/ems/emshome.htm>

Terry Bavousett
 P.O. Box 60968, WTAMU Station
 Canyon, Texas 79016
 (806) 655-7151

Denny Martin
 1109 Kemper
 Lubbock, Texas 79403
 (806) 744-3577

Public Health Regions 2 & 3
<http://www.tdh.state.tx.us/hcqs/ems/r2&3home.htm>

Kevin Veal
 1301 South Bowen Road, Suite 200
 Arlington, TX 76013
 (817) 264-4500

Jerry Bradshaw
 4309 Jacksboro Hwy, Suite 101
 Wichita Falls, Texas 76302
 (940) 767-8593

Andrew Cargile
 1290 S. Willis, Suite 100
 Abilene, Texas 79605
 (915) 690-4410

Public Health Regions 4 & 5
<http://www.r04.tdh.state.tx.us/hcqs/ems/emstyler.htm>

Brett Hart
 1517 W. Front Street
 Tyler, Texas 75702-7854
 (903) 533-5370

Public Health Region 6
<http://www.r06.tdh.state.tx.us/ems/r6home.htm>

C. Wayne Morris
 5425 Polk Street, Suite J
 Houston, Texas 77023
 (713) 767-3333

Public Health Region 7
<http://www.r07.tdh.state.tx.us/ems/ems.htm>

Rod Dennison
 2408 S. 37th St.
 Temple, Texas 76504-7168
 (254) 778-6744

Public Health Region 8
<http://www.r08.tdh.state.tx.us/r8home.html>

1021 Garner Field Road
 Uvalde, Texas 78801
 (830) 278-7173

Steve Hanneman
 Fernando Posada
 7430 Louis Pasteur
 San Antonio, Texas 78229
 (210) 949-2050

Public Health Regions 9 & 10
<http://www.tdh.state.tx.us/hcqs/ems/r910home.htm>

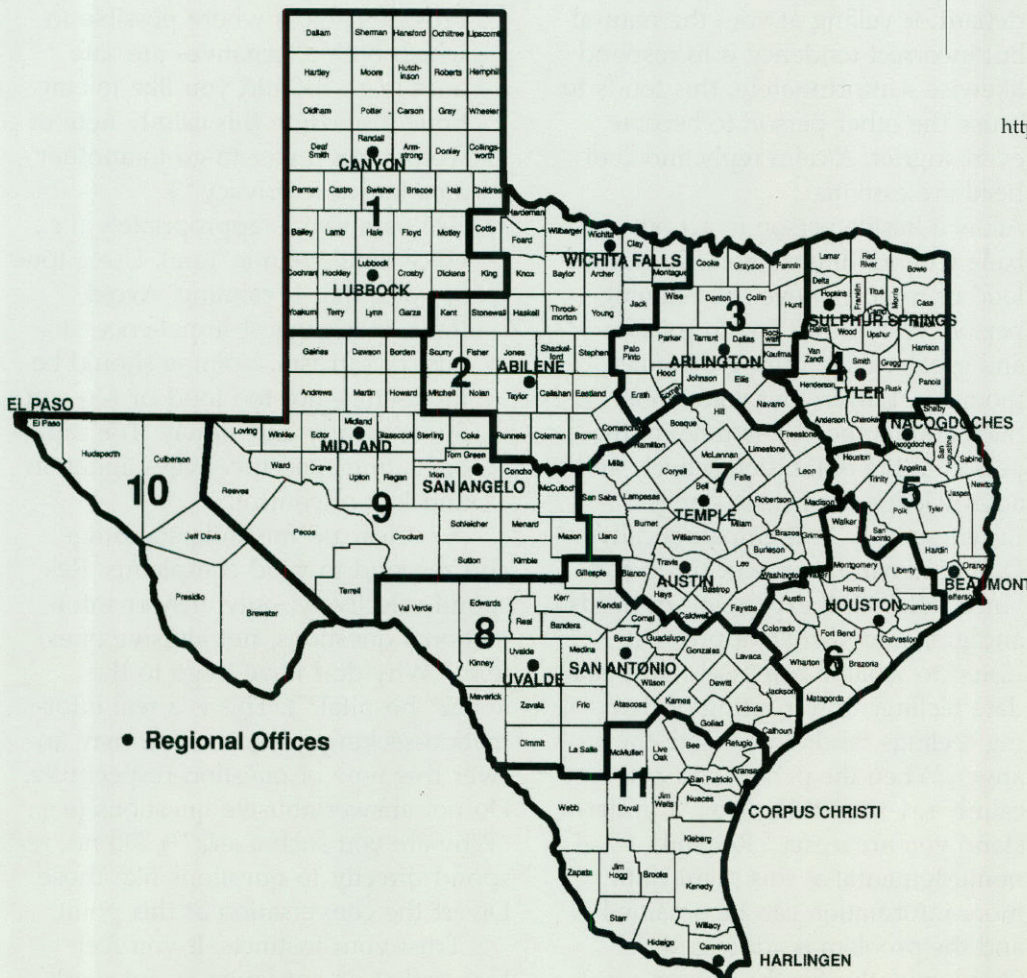
Anthony Viscon
 401 E. Franklin, Suite 210
 El Paso, Texas 79901
 (915) 834-7708

Leland Hart
 2301 N. Big Spring, Ste. 300
 Midland, Texas 79705
 (915) 683-9492

Public Health Region 11
<http://www.tdh.state.tx.us/hcqs/ems/r11home.htm>

Noemi Sanchez
 601 W. Sesame Dr.
 Harlingen, Texas 78550
 (956) 423-0130

Rothy Moseley
 1233 Agnes
 Corpus Christi, Texas 78401
 (361) 888-7762 x281



• Regional Offices

This is the third in a series about how EMS personnel can keep themselves safe in violent situations.

By Ray DuGray

EMS Defensive Tactics

Verbal de-escalation techniques

In the next article, we will discuss the topic of safety and security measures for EMS personnel. In the meantime, practice these verbal de-escalation behaviors in your day-to-day confrontations. Until next time, stay safe! I'll see you at the Texas EMS Conference!

As the founder and president/CEO of Interaction Communications Inc., DuGray specializes in professional development training and consulting for the public, corporate and industrial markets. His background includes 20 years experience as a paramedic and firefighter. DuGray speaks at local and national conferences across Canada and the U.S. DuGray will deliver the keynote address at the Texas EMS Conference 2002 and will be on a five-city tour of Texas in January, 2003, to provide a number of two-day certified PROTECH Professional Defense courses. For more details check out www.trainingexperts.biz/protech. He can be reached at www.trainingexperts.biz.

The main objective in verbal de-escalation when encountering hostile behavior is to reduce the level of arousal so that discussion becomes possible. The following tips and techniques may be practiced to verbally de-escalate a hostile person.

- Remain calm and in control. Breathe normally to help control your own emotional response. Do not become verbally defensive. When someone is defiant or yelling at you, the natural but incorrect tendency is to respond likewise. Unfortunately, this tends to cause the other person to become even angrier. A calm reply and cool head are essential.
- Allow a hostile person to act out verbally without interruption. Do not get loud or try to yell over a screaming person. Wait until a breath is taken and speak calmly during the quiet moments. Lower your voice, tone, pitch and tempo. Allow time for the person to tire out. Listen actively and acknowledge the person's anger.
- Listen actively and empathetically. Don't interrupt, argue or try to convince. Allow full expression of needs and grievances when appropriate. Listen to what is being said and validate feelings. Interrupting or denying feelings tends to escalate the anger. When the person pauses, calmly say something like, "I understand you are upset." Remain nonjudgmental at this point until more information can be obtained and the problem is addressed.
- Show empathy for the person's feelings but not for his or her hostile and abusive behavior (e.g., "I understand that you have a right to feel

angry, but it is not okay for you to threaten me or my partner.").

- Set limits firmly and explain the consequences without threats or anger of inappropriate behavior. Use an authoritative but respectful tone (e.g., "Please sir, stop. If you continue to threaten and show hostility towards us, this conversation is over and we will be forced to leave. We are here to help.>").
 - Provide choices where possible in which both alternatives are safe ones (e.g., "Would you like to continue discussing this calmly here or would you prefer to go to another area for more privacy?").
 - Use paraverbals appropriately (i.e., voice tone, volume, rate). Use a tone of voice that is calming. Avoid tones that suggest impatience, disgust or sarcasm. Volume should be moderate—not too loud or too soft. Speak clearly and slowly. Too rapid or halting speech conveys agitation and loss of control.
 - Clear up misunderstandings and respond to valid complaints. Respond selectively; only answer informational questions, not abusive ones (e.g., "Why do I have to go to the @#&* hospital?"). This is a real information-seeking question. You may answer this type of question respectfully. Do not answer abusive questions (e.g., "Why are you such a jerk?"). Do not respond directly to questions like those. Divert the conversation at this point.
- Trust your instincts. If you feel that verbal de-escalation is not working, stop and get a safe distance away from the hostile person and call law enforcement.

By
Linda Reyes

FAQ *EMS Standards*

Q: *I thought my submission of the Continuing Education (CE) Summary report was all that was needed for my recertification. Why have I not received my new certificate?*

A: You are not certified by CE alone. Though you may be able to use CE as a renewal option, you must submit an application form and fee. (Volunteers meeting exemption criteria are waived from paying application fees.) A verification website is available for certification status and expiration date verification. Go to www.tdh.state.tx.us/hcqs/ems/ and click on certification query.

Q: *I gained reciprocity in Texas using my National Registry (NR) card. Do I have to take a test in order to renew my temporary one-year Texas certificate?*

A: No, you don't have to take a test, even though §157.33(k) requires you to submit an application, fee and pass the state exam or NR exam within the one-year period. Since the Bureau is using NR testing as the state-approved exam (starting in February for advanced applicants), we feel it would be illogical to require you to complete the same exam again. Therefore, Policy 02-E was approved as a renewal process for applicants with your status. The policy allows you to renew by choosing one of the four options available to other state-certified personnel renewing their certificate. Read Policy 02-E at our web site: www.tdh.state.tx.us/hcqs/ems/spolicy.htm

Q: *I will soon be taking a job in Texas and have NR certification. How can I gain certification in Texas?*

A: Submit the Initial Application form for your level of certification and the fee. You will check the National Registry Reciprocity box on page two of the application form. Since the Bureau is using NR testing as the state-approved exam (starting in February for

advanced applicants), we feel it would be illogical to require you to gain reciprocity through the regular route. Such a constraint would require us to issue you only a one-year temporary certificate and would require you to pass the state-approved exam within the one-year period. To provide a common sense solution, we are no longer enforcing those requirements because of our move to exclusive use of the NR exam.

Another change from our regular reciprocity process will be your expiration date. You will be certified for four years from the date your most recent national certification was issued. Applicants with only out-of-state certification, but not National Registry, will be processed according to §157.33 (k) (application, fee, one-year temporary certificate and test within one year period).

Q: *If I choose to renew my Texas certificate by Option 1, written exam, will I also gain NR certification?*

A: No. The NR exam administered for renewal is the NR assessment exam, not the NR initial exam.

Q: *I am a certified paramedic and I submitted my paramedic licensure application, fee and transcript to your office last month. Since I did not meet the 60 academic semester-hour minimum, your web site shows my application as "Pending Deficiencies." Do I still have a chance at becoming licensed with this application?*

A: Yes, as long as you meet ALL requirements within one-year of application date. The revised paramedic licensure rule will allow you one-year from your application date to complete requirements under this application and fee. (The old licensure rule only allowed six months for you to gain licensure.) You will be required, however, to meet the September 1, 2002, requirement to have an associate degree in EMS or a higher degree in any major.

NR testing for EMTs began October, 2002. NR testing for EMT-Is and paramedics begins February 1, 2003.

Bureau web home page address: www.tdh.state.tx.us/hcqs/ems
EMS Standards home page: www.tdh.state.tx.us/hcqs/ems/stdhome.htm
Internet certification verification now on web site
Certification verification phone line: 512-834-6769
Fax number: 512-834-6714
email: emscert@tdh.state.tx.us

By Eddie Walker, EMT-P

ILLUSTRATION PHOTO BY SUMMAR SMITH-ZAK

You've got questions about the National Registry (NR) basic testing, and we've got answers. On October 1, 2002, Texas began using the National Registry of EMTs examination process for EMT-basic candidates for initial certification. (TDH will begin using the National Registry tests for intermediate and paramedic candidates on February 1, 2003). To familiarize the EMS community with the NR process, a series of basic coordinator rollouts were conducted throughout the state in August. The questions and comments listed below were asked during the rollouts. Questions asked during the advanced rollouts were published in the September/October issue of *Texas EMS Magazine*. Both sets of questions are posted on the web at www.tdh.state.tx.us/hcqs/ems. Click on the National Registry link.

Question: *I have current Texas certification as an EMT. Do I have to take the National Registry (NR) basic examination to maintain my state certification?*

Answer: No. Only candidates seeking **initial** Texas certification will be required to complete the NR basic examination process after October 1, 2002. However, currently certified EMS personnel may re-certify by using the NR option under the re-certification rule. The current re-certification rule, Title 25 of the Texas Administrative Code (TAC) Chapter 157.34 can be seen at: www.tdh.state.tx.us/hcqs/ems/. You must follow the Rules/Policies link to the current rules/policies.

Question: *How will candidates get scheduled for an NR basic examination?*

Answer: Scheduling candidates for an examination is different from the current process and is outlined below:

- Coordinator must mail or fax the Course Completion Roster (CCR) to the Bureau's Austin office at (512) 834-6714



National Basic

What's truth an



Registry Testing *and what's myth?*

after students have successfully completed the training course.

- The Austin office will enter the information into the state database within 2 business days of receiving this information. Once the information is put into the state database, prospective test candidates will be able to use the Texas certification query to verify that they are eligible to take the NR exam. There will be the statement "Eligible NR exam" next to the candidate's name, signifying that they are indeed eligible to sit for the exam.

To find the cert query, go to www.tdh.state.tx.us/hcqs/ems. Click on the Certification Query link and enter a name.

- Individual candidates or the course coordinator will be able to schedule exams either online or by calling regional office staff. However, it is ultimately up to the candidate to schedule these exams. Please note that online scheduling may not be available in all regions.

Question: Will candidates still need to submit the Course Completion Certificate (CCC) along with their state application?

Answer: No. The CCR mentioned above will be sufficient to determine the eligibility of a candidate to take the state examination. Coordinators must still give individual CCCs to students to keep in their own files in case of a TDH audit.

Question: I understand the NR basic examination has more questions than the current state exam. Will additional time be given for candidates due to the increased number of questions? If so, how much additional time will a candidate receive?

Answer: The NR basic examination has 150 questions, whereas the current state examination has 120. Currently, TDH basic candidates have two hours (120 minutes) to complete the TDH examination. This time will be increased to two and one-half hours (150 minutes) for candidates taking the NR examination. Those taking any state retest at the basic level (100 questions) will continue to have two hours to complete the examination.

Question: Will candidates be required to pass subscales on the NR basic examination?

Answer: No. Candidates taking the examination must have an overall score of 70 percent to pass. The subscales for the examination are: airway and breathing; cardiology; trauma; medical; obstetrics and pediatrics; and operations. However, the candidate does not have to pass the individual subscales.

Question: Has TDH decided what to do about reimbursement of volunteers for the NR fee?

Answer: No, TDH has not decided how it will reimburse volunteers that take the exam. However, we are considering several options at this time and hope to have a decision soon.

Question: I am confused about the skills that I need to teach the students and how those skills are verified. Looking at the "Statement of Competency in EMT-Basic Skills" section of NR basic application, I do not see some of the skills listed that I currently teach. Do I no longer need to teach those skills?

Answer: Though the NR application does not show all of the skills taught in a Texas EMT class (PASG, nebulizers, Epi auto-pen), those skills will continue to be a part of the Texas course. The way that skills are verified throughout the course will not change.

Question: The NR basic application has a section called "EMT-Basic Practical Examination Verification." Does this mean I will need to conduct a skill examination for my students?

Answer: No. Though the NR application has a section for a practical examination, TDH and NR have determined that skills will be verified as they are currently being done. A coordinator may choose to conduct skills examination sessions for his or her program as they see fit.

Question: I teach a high school EMT class that has many students who will not be 18 years old when they are scheduled to take the exam. Will they be allowed to take the examination?

Answer: Yes. They will be able to take the examination, but NR will not grade their exam until they have turned 18. NR will send the application back to the candidate, along with a letter instructing them to resubmit the application once he or she turns 18. When the NR receives the application, they will score the examination and notify the candidate, training program and the state of the results.

Question: What areas of the basic NR application does the co-

Photo for illustration only, taken by Annette Drowlette



ordinator need to complete?

Answer: There are four areas on the application that the coordinator should provide information. Those areas are:

1. *Program code* This is a three-digit number followed by the letters "TX." This is necessary so that NR may send examination results to the coordinator. Each coordinator should have received his or her program code from TDH. If not, you may contact Eddie Walker at (512) 834-6700 for a program code number.

2. *EMT-Basic Practical Examination Verification* This section is on the application because some states require a practical (skills) examination at the end of each course. Texas does not require such examination. However, TDH does want to be certain each candidate is proficient in the skills necessary to function as an EMT. To accomplish this the department requires either a medical director signature or signature stamp in this section.

3. *CPR Credential* The coordinator has three options for this section:

- Verify each student's CPR card and sign the section; or
- Have the student's CPR instructor sign the section; or
- Have the student attach a copy of the CPR card to the application.

4. *Statement of Competency in EMT-Basic Skills* The coordinator signs this section attesting that all skills necessary have been taught and the student is competent in the skills. Though this section lists skills that NR requires verification on, it does not list all skills currently taught in Texas-approved courses. Remember to keep teaching all skills currently taught.

Question: *I am concerned about persons with criminal backgrounds getting approved by Texas, but denied by NR, or approved by NR, but denied by Texas.*

What will happen with the Texas certification status of that person should this occur?

Answer: This concern was expressed at the majority of basic and advanced roll outs and is one TDH takes seriously. TDH recognizes that an offense that occurred in the past may not be indicative of a person's character now, but TDH does have a responsibility to protect the public from individuals who may pose a threat to the health and/or safety of the public. TDH will work closely with NR to determine the eligibility status of individuals with criminal backgrounds. If denial of certification is proposed at either entity, TDH or NR, the individual may appeal that decision. If, after due process is exhausted, the individual is denied certification, he or she will not be allowed to become certified in EMS in Texas.

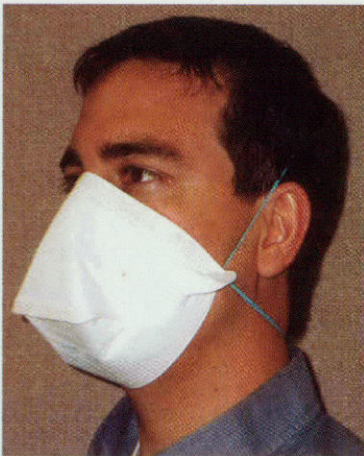
Question: *According to NR policy, a person has two years to take NR exam, which is established as two years from the date of course completion. It also states a person may take the written retest twice before having to complete a refresher class. Texas rules state a person must complete the exam process within one year after course completion date. Texas rules also state a person must take a remedial course after failing the initial exam and one retest. NR policies seem to conflict with state rules.*

Answer: Because we are using the NR exam, we will fall under NR policy for exam eligibility purposes. In the future, TDH may modify the rules to reflect NR policy for those who submit their applications early. Retests will be handled the same way. For instance, NR allows two years after course completion to take the test and will allow three attempts at the exam before having to take a refresher course. NR allows three more attempts after the refresher course as long as the retests fall within the two-year period after course completion.

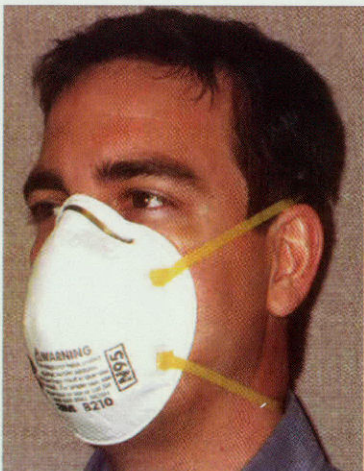
By Ann Tyree

Patients with tuberculosis put medics at risk

Tuberculosis (TB) is on the rise again, and those on the front line of health care are at risk. Health care personnel make up approximately three percent of the tuberculosis cases reported annually in Texas. To evaluate your potential risk to TB exposure, it is critical for you to know your community and the prevalence of TB there, and to know the risks and how to protect yourself.



Since TB is transmitted through the air, medics can protect themselves by wearing a respirator that is grade N-95 or better. The masks come in several different styles.



Where is TB in Texas?

TB is not distributed evenly across Texas. You are more likely to encounter a patient with TB in an urban or a border county. However, even medics in low-incidence rural counties should be prepared to protect themselves if they are transporting a patient with symptoms suggestive of TB. The most observable symptom of TB is a cough producing either sputum or blood. The patient may also tell you about fever, recent weight loss, night sweats, chills, shortness of breath, fatigue, chest pain, a condition that compromises the immune system, a history of exposure to TB or even prior treatment for TB infection or disease. Approximately 15 percent of TB patients in Texas have the disease in areas of the body other than the lungs and may have pain or swelling at the site of the disease. However, only those with TB of the lungs or larynx are generally considered infectious. Those with TB of the larynx may exhibit hoarseness in addition to other generalized symptoms of TB.

Recognizing risk factors

Certain groups of people are more likely to develop TB either because of their past history of exposure or their current health status. Risk factors and associated conditions reported for Texas TB patients in 2001 include birth in a foreign country (43 percent); alcohol abuse (19 percent); diabetes (13 percent); history of incarceration (11 percent); HIV/AIDS (10 percent); homelessness (5 percent); non-injecting drug abuse (6 percent); and injecting drug abuse (2 percent). Remember to ask people with these conditions about other possible symptoms of TB if they have a cough.

Because medics and emergency department personnel may encounter people with active TB before they are diagnosed, properly isolated and started on appropriate therapy, the risk for these workers is higher relative to other medical staff. EMS and emergency departments of hospitals frequently serve patients who are not only at higher risk for TB but who have delayed seeking care until they are very ill because they have inadequate access to routine health care.

Protecting yourself

Since TB is transmitted through the air, medics can protect themselves by wearing a respirator that is grade N-95 or better. The N designates a respirator that is not intended for use in oil mists and the 95 denotes that the filter material is capable of excluding 95 percent of particles 0.3 microns in size. N-95 respirators come in several sizes and

different styles. As part of a respiratory protection program, it is essential for workers to select an appropriate size and style of respirator, be tested for respirator fit, and be trained to check the face seal each time they put on the respirator. Face shape or facial hair may prevent a mask from sealing to the face properly.

The other primary method of protecting emergency medical service personnel is to increase the fresh air flowing through the ambulance from front to back. Dilution and directional airflow during transport are the key factors in reducing the number of TB-containing particles and thus the risk of transmission. Do not recirculate the flow of air. When available, place the rear exhaust ventilation fan on the "high" setting during and after transport.

The bacteria that cause TB can remain viable suspended in the air for several hours in enclosed spaces with little ventilation. Respiratory protection should be worn when entering the home of a person suspected of having TB and in the ambulance while transporting the patient. As an extra precaution, the ventilation system should continue running for a reasonable period after a patient with a cough has been removed from the ambulance. Since TB is transmitted through the air, no special cleaning precautions beyond normal protocol are necessary for surfaces and equipment in the ambulance.

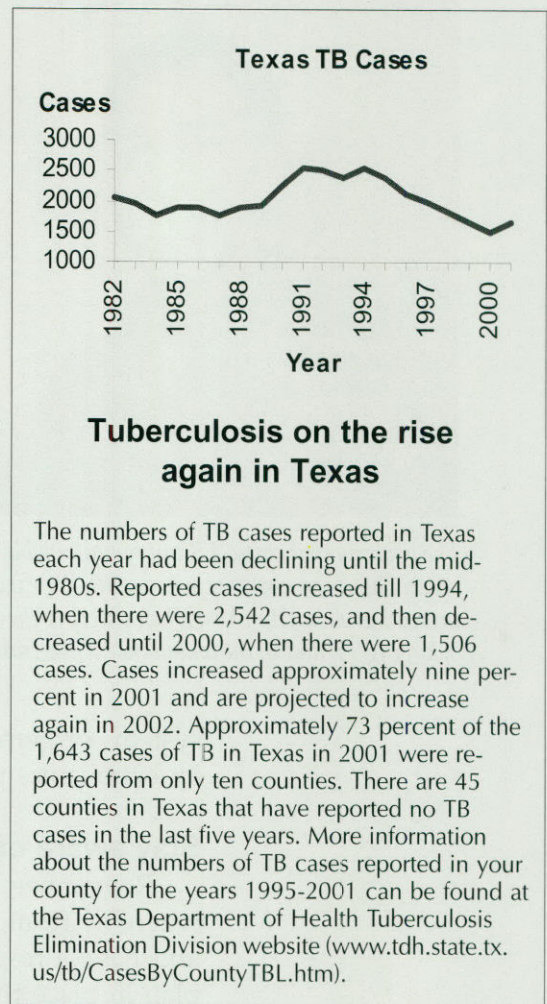
Another way to decrease the number of infectious particles that can become airborne is to have the patient wear a surgical mask or cover the mouth with a tissue when coughing. On long trips, a surgical mask for a coughing patient will be more convenient. The surgical mask should be replaced if it becomes damp. However,

patients should not wear an N-95 respirator as it may impede their already diminished ability to breathe.

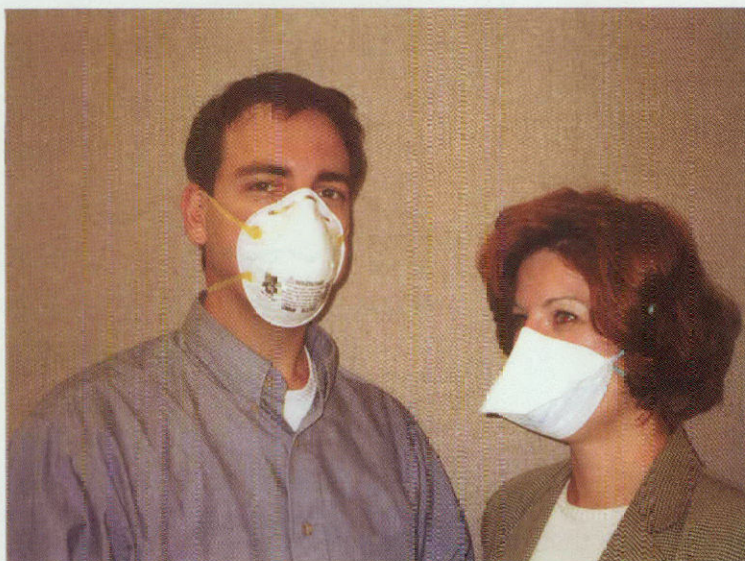
Preparing for patients with TB

Emergency departments should have a plan in place that prepares for the possibility that a person with TB will enter the facility. The most important step is for the staff to "think TB" whenever they see someone with symptoms of TB until tests and clinical evaluation have eliminated TB as a diagnosis. Unless you connect the symptoms with possible TB, the necessary diagnostic tests may not be performed and TB will continue to spread in your community.

Patients suspected of having infectious TB should be placed in a respiratory isolation room immediately once they reach the hospital. Emergency medical service personnel should notify the hospital before arrival that they suspect the patient has TB. Respiratory isolation rooms should have an exhaust system that expels the air outside of the facility. In newer facilities, the ventilation rate should be at least 12 air changes per hour. The exhaust system constantly draws air into the room from surrounding hallways so that droplets containing TB bacteria cannot contaminate adjoining spaces. Sometimes these areas also have high efficiency particulate air (HEPA) filter



As part of her duties for the TB Elimination Division, Tyree edits the *Texas TB Update* newsletter and assists members of the TB Elimination Division in the production of educational presentations and printed materials. She also provides technical assistance to community partners such as the Texas TB Coalition and other special purpose TB workgroups. She wrote the article with input from members of the TB Elimination Division and two regional TB program managers.



The bacteria that cause TB can remain viable suspended in the air for several hours in enclosed spaces with little ventilation. Respiratory protection should be worn when entering the home of a person suspected of having TB and in the ambulance while transporting the patient.

systems or germicidal UV lights as an extra precaution.

Stay aware of risks

Remember TB can occur anywhere in Texas. Know the symptoms and have a respiratory protection plan in place that includes procedures to prevent the transmission of TB and a system of tuberculin skin tests at appropriate intervals (based on risk) to monitor the staff for infection. Take proper precautions to protect yourself and others if you encounter someone with cough and other symptoms suggestive of TB. Adherence to a periodic TB screening program and special screening procedures immediately after a known exposure to TB, plus 90 days after exposure, will identify infection early when it is easiest to treat. If despite your precautions you become infected with TB, take appropriate treatment to prevent the progression of latent TB infection to active TB disease. For more information, contact your local or regional health department TB program.

Council wants to educate, help brain-injured Texans

The Texas Brain Injury Advisory Council (TBIAC) was established in 1997 by Governor George Bush and is dedicated to improving state services for people with brain injuries in Texas. The mission of TBIAC is to ensure all Texans who sustain a traumatic brain injury access to the support and services needed for them to return to full participation in all aspects of community life.

TBIAC members are appointed by and report to the Health and Human Services commissioner. It accomplishes its mission by identifying people with TBI and their needs; by working with agencies and work groups to ensure that policies and programs assist people with TBI; by educating and informing consumers, providers, policy makers and the general public; and by promoting prevention efforts in Texas.

TBIAC is composed of 21 members, including eight people with brain injuries or caregivers, eight representatives of state agencies, a representative of the National Institute for Disability Rehabilitation Research (NIDRR) TBI Model Systems, and four representatives of TBI service providers. One of the representatives is a designated liaison from the Brain Injury Association of Texas.

State agencies represented on TBIAC include HHSC, TDH, Texas Department of Human Services, Texas Rehabilitation Commission, Texas Department of Mental Health and Mental Retardation, Texas Department of Insurance, Texas Education Agency, and the Texas Council for Developmental Disabilities. The Texas Commission on Alcohol and Drug Abuse is an ad hoc member.

— Kathy Griffis-Bailey

By Kathy Griffis-Bailey

Concussion cards free to EMS providers

Several years ago, a 19-year old male was involved in a motor vehicle crash. EMS responded and rendered emergency care at the scene. The EMT, finding the young man somewhat confused and disoriented, tried to encourage him to go to the hospital for an evaluation. The young man refused. A couple of weeks after returning home, the young man's roommates began noticing that he was having some difficulty keeping his train of thought and his balance, and would easily anger. As these and other behavior changes began to grow in frequency and intensity, they became concerned enough to call the young man's parents. His parents made an appointment with a physician, but before he could keep his appointment, the young man died. He had a slow bleed in his brain as a result of a concussion (mild traumatic brain injury) he sustained in the accident. Neither his roommates nor his parents knew what to look for or how urgent his symptoms were.

As part of its education purpose, the Texas Brain Injury Advisory Council (TBIAC) and Traumatic Brain Injury Project collaborated with the Brain Injury Association of Texas and the Bureau of Emergency Management to develop and distribute sample concussion cards to all EMS providers in Texas.

The concussion cards identify possible post-injury symptoms, both short-term and longer-term, following a blow to the head or concussion. In most instances, a mild traumatic brain injury heals without further consequences in a few days, weeks or months. In some

cases, however, a more serious injury results with potential long-term consequences, even death. The concussion card, which can be displayed on a refrigerator or other convenient household location, serves as a reminder to be watchful and provides a guide for what to do if certain symptoms occur.

Initial response to the cards has been enthusiastic, and the TBI Project has had numerous requests for additional supplies. There is no charge for the cards. You may obtain cards by calling or writing the TBI Project, Texas Department of Health M-442, 1100 West 49th Street, Austin, Texas 78756, 512-458-7111, extension 3069, or emailing: braininjury@tdh.state.tx.us. You also may download .pdf files of the concussion cards through the Texas Traumatic Brain Injury Advisory Council web site at www.tdh.state.tx.us/BrainInjury. The cards were made possible by a grant from the U.S. Department of Health and Human Services, Health Resources Service Administration and TDH's Maternal and Child Health Bureau, and through support from the Bureau of Emergency Management and the Texas Health and Human Services Commission.

Crew #: _____ Date: _____ Time: _____
You have chosen not to have your child transported by ambulance to the emergency room. Please read the information on this card.

Concussion in Children
Signs and Symptoms of a Brain Injury

Do not let the child fall asleep for 5 hours. Sleepiness is a sign of a traumatic brain injury. If it is late at night or regular bedtime, wake the child every 1/2 hour for 5 hours. If the child is uncontrollably tired or you cannot wake the child, call 911 immediately.

The signs of a brain injury (concussion) can be subtle. You should be alert for symptoms that may appear immediately and others that may not show up for days, weeks, or even months after the injury.

Dial 911 immediately if the child:




- ▶ Can't stop vomiting
- ▶ Is not speaking clearly, seems confused or doesn't know you
- ▶ Has trouble with vision (seeing double, blurry vision) or has pupils that are different sizes
- ▶ Has severe headache
- ▶ Has blood or clear fluid from the nose or ears
- ▶ Has trouble with balance or walking
- ▶ Has a seizure (convulsions, eyes fluttering, body going stiff, staring into space or a sudden onset of a fixed stare)

Contact your child's physician or your local emergency room if you notice any of these changes following the child's injury:

- ▶ Has changes in sleep patterns
- ▶ Experiences changes in personality, behavior or mood
- ▶ Has changes in school performance
- ▶ Gets upset or frustrated easily
- ▶ Overreacts, cries or laughs too easily

Take this card with you to your physician or emergency room

For additional information, contact:

-  Brain Injury Association of Texas
1-800-392-0040
www.biactx.org
-  Texas Traumatic Brain Injury Advisory Council
512-458-7111 ext. 3069
www.tdh.state.tx.us/braininjury
-  The Texas Traumatic Brain Injury Project is supported in part by Project # H214C20043-01 from the Department of Health and Human Services (DHHS) Health Resources and Services Administration, Maternal and Child Health Bureau.

GETAC recap

GETAC sends paramedic licensure rule to Board of Health

Turn to page 7 for a schedule of the November GETAC meetings.

The Governor's EMS and Trauma Advisory Council (GETAC) met on August 22 and 23, 2002, in Austin. GETAC approved minutes from their May 30 and 31 meeting and heard reports from the chair, staff, committee chairs and task force leaders (a summary of these reports is included following the action items). Chair Dr. Ed Racht introduced Dr. Eduardo Sanchez, commissioner of health, who outlined some of his major priorities for the TDH and returned later to answer questions from attendees. Ed Racht then presented draft revisions to the GETAC rules relating to task forces and combined committee meetings (GETAC took action—see below). GETAC then heard public comment on the reports and other general issues.

Action items: After much discussion and public comment, a motion was made by Maxie Bishop and seconded by F.E. Shaheen to allow proposed rule §157.40 - licensed paramedic (LP), to continue to move forward to final adoption by the Texas Board of Health. The motion passed unanimously. Ed Racht emphasized that adoption of this rule is important so that current LPs will have the "option plan" available to them for re-licensure. However, the issues raised in most discussion and public comment related to scope of practice and definition of licensed versus certified para-

medics, which are not addressed by 157.40. Based on these discussions, GETAC has included the LP issue in the strategic plan and will continue working to better define this.

A motion was made by F.E. Shaheen and seconded by Mario Segura to accept the draft GETAC rule revisions presented at the meeting. The motion passed unanimously.

A motion was made by Dr. Ronny Stewart and seconded by John Simms to re-activate the Air Medical Task Force to evaluate the current situation in Texas and make recommendations. The motion passed unanimously. Ed Racht appointed Dennis Hebner as leader and Gary Cheek as interim GETAC liaison (pending formal appointment of an air medical position by the governor to replace the current vacancy).

A motion was made by F.E. Shaheen and seconded by Gary Cheek asking that Ed Racht send a letter to the commissioner of health that encourages the inclusion of all appropriate EMS/trauma systems entities (e.g. EMS providers, fire departments, and Regional Advisory Councils) in state bioterrorism preparedness planning and implementation. The motion passed unanimously.

After the agenda's actions items, GETAC spent the remainder of the meeting reviewing the current draft of the strategic plan objectives and

strategies, with input from attendees. A motion made by Pete Wolf and seconded by John Simms to approve the draft objectives and strategies in the current draft with the changes recommended passed.

Staff, committee, task force reports: Issues addressed by staff included updates regarding national registry testing implementation; TDH legislative planning; legislative interim studies related to EMS; adoption of §157.38 continuing education; status of comments on §157.40 licensed paramedic; and TRAC-IT implementation. Questions about these staff reports may be directed to the Bureau (512/834-6700) or the Bureau of Epidemiology (512/458-7266).

Dr. Joan Shook reported that the Pediatric Committee would like to see children represented more specifically in the strategic plan. The committee adopted the American College of Emergency Physicians and the American Academy of Pediatrics *Care Of Children In The Emergency Department: Guidelines For Preparedness* (Annals of Emergency Medicine. April 2001; 37:423-427) minimum standards for pediatric emergency care and would like GETAC to adopt them at their next meeting. They plan to consider requesting that TDH adopt those standards into the hospital licensing rules and then begin looking at minimum standards for EMS.

Pete Wolf and Maxie Bishop reported that the combined EMS/Education Committees discussed possible options for EMT clinical requirements in areas where clinical requirements are hard to fulfill and options for ECA testing. BEM staff will be developing concept documents regarding these two issues for their next meeting.

Mario Segura reported that the Injury Prevention Committee continued work on the Injury Prevention Resource Manual and have started looking at the concept of developing an injury prevention strategic plan. The committee will be sharing a booth with the "Think Child Safety" program at Texas EMS Conference 2002.

Dr. Fred Hagedorn reported that the Medical Directors Committee heard an update on the CCMP project; components of this program are currently being piloted by a number of EMS providers. They decided to extend the pilot until March 31, 2003, to be able to get more extensive input. They also discussed possible options for ECA testing and "brain-stormed" prospective subjects for GETAC position papers. The committee agreed to look at the issue of at its next meeting.

Ronny Stewart reported that the Trauma Systems Committee discussed the issues of pre-transfer diagnostics; mid-level practitioners in Level IV trauma facilities; hospital-to-hospital transfers to higher levels of care, including children's hospitals; massive transfusion protocols for Level III and Level IV trauma facilities; and the roles of surgical services in Level IV trauma facilities.

John Simms, F.E. Shaheen and Ronny Stewart reported on the first meeting of the Funding Task Force. There was much discussion about financial needs of the EMS/Trauma System. They plan to coordinate closely with a coalition being facilitated by the Texas Hospital Association and provide a proposal to GETAC at the November meeting.

Pete Wolf reported that the Rural Task Force heard reports from a number of organizations that serve the rural areas of the state (e.g. Office of Rural and Community Affairs, TEEX) and discussed the strategic plan. —Kathy Perkins

Riding the Waves

The Role of Capnography in EMS

Handheld waveform capnograph confirms tube placement and maintains tube vigilance.



Case Presentation

You and your partner are on the scene of a motor vehicle collision. Your patient, a 26-year-old male, was ejected and has massive facial injuries making it difficult to ventilate him adequately. You make the decision to intubate him. After one difficult attempt, you successfully intubate him. After assessing clear bilateral breath sounds and no epigastric sounds, you attach a device to secure the tube. This is a load-and-go situation, so the patient is quickly packaged and loaded and you are enroute in less than ten minutes.

You attach a pulse oximeter that reads 98 percent on 15 lpm with a BVM. A capnography device is also attached, reading a respiratory rate of 15 with an EtCO₂ reading of 40. Cardiac monitor shows sinus tachycardia with a rate of 110. The patient

has a blood pressure of 100/70. IVs are established and

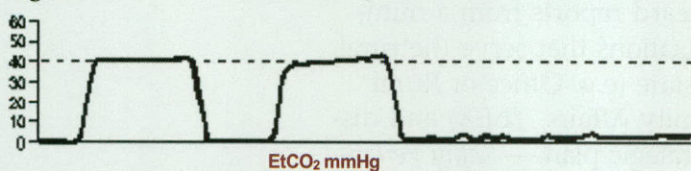
medical control is notified. A first responder accompanying you ventilates the patient.

Suddenly the patient goes into V-fib. You quickly apply the defib electrodes and deliver a shock at 200 joules. The patient returns to a sinus tach with pulses. As you are considering a Lidocaine drip, the capnography unit signals an alarm for low EtCO₂ level. Curious about the alarm, you look over at the pulse oximeter and it still reads 98 percent. You ask the first responder if the patient is still easy to bag and he replies, "I guess so."

Turning your attention to the capnography unit, you notice the display looks similar to Figure 1.

Realizing that the tube has become dislodged during defibrillation, you quickly remove it and instruct the first responder to attempt BVM ventilation as you prepare to reinsert the tracheal tube. You successfully place the ETT and the capnography unit again reads normal. The patient arrives at the trauma center without further incident.

Figure 1.



This is an example of just one of the many uses of capnography in EMS.

The physiology of carbon dioxide (CO₂) production

There are two basic rules of life: "air must go in and out," and "blood must go round and round." We will look at these concepts individually and their relevance to prehospital care.

The respiratory drive in the adult patient is triggered by chemoreceptors in the brain, cerebro-spinal fluid (CSF) and aortic bodies. Primary stimulus is based on the pH of CSF and refined by the CO₂ levels in cerebrospinal fluid. As the pH falls and the CO₂ levels rise, the ventilatory effort is initiated. This occurs through the medulla oblongata that sends the breathing stimulus to the muscles of ventilation.

The diaphragm contracts, moving downward, and the intercostal muscles contract, pulling the rib cage upward and outward, which increases the intrathoracic volume. This creates a pressure difference between the outside and inside of the body. This difference causes air to move into the lungs. On exhalation, the muscles relax and air exits the lungs passively.

Respiration is the exchange of gases between an organism and its environment. Ventilation is the movement of air. As humans, we breathe in oxygen and breathe out CO₂. But how does this occur?

Diffusion is the process by which gas exchange occurs and is based upon the movement of gas from one area of partial pressure to another area of lower partial pressure of gas. Oxygen levels returning to the lungs in the venous blood are about 60 torr (mm/Hg). This is referred to as the PO₂ or the partial pressure of oxygen. Inhaled air contains a PO₂ of about 80-100 torr. In the alveoli, this pressure difference causes oxygen to diffuse across into the bloodstream and be carried to the cells. The diffusion process occurs again at the cellular level. Administration of high flow, high concentration oxygen can raise the

PO₂ levels to around 500 torr. As you can see, that would build up quite a reserve in the blood.

In some patients with chronic obstructive pulmonary disease (COPD), about 15 percent, the stimulus to breathe is the hypoxemic drive that triggers breathing because of low concentration of O₂. This happens because of the gradual buildup of CO₂, which results in a tolerance to high CO₂ levels and a diminishing of the CO₂ stimulus to breathe built up over time. This is the basis behind the precautions given about the administration of high concentration oxygen to patients with COPD. Keep in mind however, that you should never withhold oxygen from someone who needs it. When administering O₂ to a patient with COPD, watch for signs of drowsiness. If the patient gets sleepy, reduce the O₂ concentration.

Where does the pulse oximeter fit in?

Pulse oximetry (SpO₂) doesn't measure the PO₂; rather, it measures the saturation of the hemoglobin molecule with oxygen. PO₂ is a measure of all of the oxygen that is dissolved in blood plasma and not bound to hemoglobin in red blood cells. When the PO₂ levels in the plasma drop, the hemoglobin will give up its oxygen. Once this happens, the pulse oximeter reading will drop. So, pulse oximetry can't tell you how much oxygen to give, but it can warn you when you need to give more! One more pearl: at room air, a pulse oximeter reading of 100 percent means a PO₂ reading of 100 torr. As the pulse ox reading drops to 90 percent, that is equal to a PO₂ reading of 60 torr. Therefore, a pulse ox reading of less than 90 is called hypoxemia (low O₂ levels in the blood).

Just as oxygen diffuses across the membranes, so too does CO₂. Cells produce CO₂ as a normal by-product of metabolism. As metabolism increases, so too does CO₂ production. CO₂ is an acid-producing gas that must be kept within strict limits in

1 torr=1 mm/Hg

After completion of this article, you should be able to:

1. Identify basic technology involved with capnography.
2. Outline the many uses of capnography in the prehospital setting.
3. "Clear the air" about the truths of capnography.

the body. CO₂ is carried back to the lungs in the blood stream to be diffused across into the alveoli and then exhaled. CO₂ elimination is dependent upon good perfusion (to carry the CO₂ back to the lungs). In cases where perfusion is poor, such as shock, pulmonary embolism or cardiac arrest, the levels of EtCO₂ would be lower because the blood flow is not good enough to return CO₂ to the lungs. A more obvious cause of decreased CO₂ levels would be hyperventilation syndrome as more CO₂ is blown off secondary to increases in the tidal and minute volumes.

Since end tidal CO₂ measurement is dependent on perfusion, it can be very useful in monitoring the effectiveness of CPR, confirming the presence of a pulse (mechanical capture) in external pacing, and other changes in perfusion.

Now that you know a little bit about O₂ and CO₂, let's look at the technology itself and how it can be used in the pre-hospital setting.

What is capnography?

Capnography is the measurement and recording of expired CO₂. The term used to describe this is end tidal CO₂ (EtCO₂). Actually, there are two terms used to describe the measurement of CO₂: capnometry and capnography. They mean essentially the same; however, capnography is a printout or waveform of the measured expired CO₂.

A good analogy to remember is capnometry is like getting the heart rate (a number) from a cardiac monitor, and capnography is getting the rate AND the ECG recording.

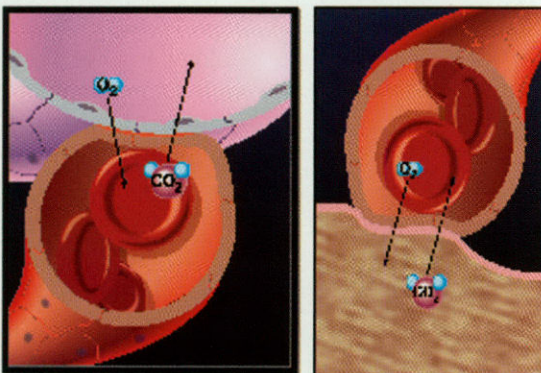
Furthermore, capnometry is split into two types: qualitative and quantitative. With

qualitative capnometry, you confirm the presence of CO₂ by a color change on the device used to detect CO₂. For example, the color changes from purple to yellow on one manufacturer's device. These devices are disposable, for single-patient use and relatively inexpensive. They are not without their drawbacks, however. Qualitative (color change) devices are not recommended for continuous monitoring, only for a brief check of the initial tube placement. They are limited to use with intubated patients. They also will become useless if secretions or other moisture come in contact with the paper that changes color. Finally, the device will detect the presence of CO₂ but will tell you little about the actual amount.

On the other hand, quantitative capnometry provides the user with a number for the measured EtCO₂. The normal range for EtCO₂ is between 35 and 45 mm/Hg. This number closely corresponds with PaCO₂, a value obtained from an arterial blood gas analysis. Blood gas values such as PaCO₂ have been used for diagnosis of critical conditions such as respiratory failure and impending cardiac arrest. Their value in emergency medicine is incredible. Now with EtCO₂ reading, this number is available to the EMS provider without having to draw blood gases, a skill paramedics are not usually trained to do nor have the equipment needed to analyze the information.

The benefits of having actual values are numerous. One situation in which capnometry could be beneficial is in patients with closed head injuries. We were all taught to hyperventilate these patients to blow off CO₂ and cause vasoconstriction in the brain to control the intracranial pressure. However, recent studies and recommendations from a brain trauma foundation suggest these patients should be ventilated to an

Diffusion



EtCO₂ reading of 30 (28-32). The studies also show that an EtCO₂ of 25 or lower can be harmful and must be avoided.

So how do we know just how much to do for each patient? Capnography measures the end tidal CO₂ and gives a very accurate measurement. In fact, on patients with good perfusion to the lungs, the capnography unit's reading is within 5mm/Hg of an arterial blood gas PaCO₂. Therefore, we can get an accurate reading of how much CO₂ is being blown off so that ventilations can be adjusted to where they are just right. Just measuring the amount of CO₂ (capnometry) can be useful in this situation.

Waveform Capnography

"A capnometry reading without a waveform is like a heart rate without an ECG." Anesthesiologists have relied on capnography for years for monitoring patients during surgical procedures. Early capnometry in EMS was promoted for detection of tube placement. Indeed, confirming ET tube placement is a big benefit of capnometry. In fact, early qualitative (color-change devices) were used for that purpose and have been around for about ten years. Next, new devices appeared that gave us a number so we knew the values of EtCO₂. Now, the ultimate ventilatory monitor is available in waveform capnography.

Capnography includes capnometry

A capnography reading displays both a quantitative reading of the actual value for EtCO₂ and gives a waveform to check on perfusion and airway status, making it the ultimate tool for ventilatory assessment. Furthermore, a waveform can be used to continuously monitor EtCO₂ levels during transport. This monitoring ability can also alert the provider to potentially catastrophic events.

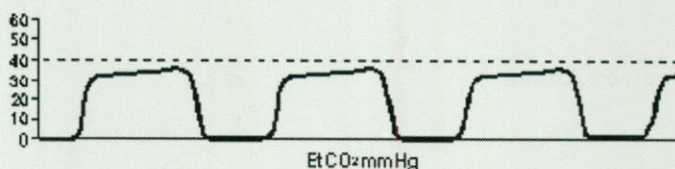


Figure 2. A normal capnogram has all the phases that are easily identified. Note the gradual upslope and alveolar plateau.

Reading the waveform: the normal capnogram

The normal capnogram consists of four main phases:

Phase I: Respiratory Baseline

Phase II: Expiratory Upstroke

Phase III: Expiratory Plateau

Phase IV: Inspiratory Downstroke

- ❑ Phase I: The alveoli are full of inhaled O₂ and CO₂ levels are very low.
- ❑ Phase II: Exhalation begins and the airway dead space is being flushed out with higher levels of CO₂. A rapid upward deflection to the capnogram begins.
- ❑ Phase III: Most of the gases have been flushed from the alveoli and the alveolar CO₂ is reaching the probe and the end of exhalation. Usually a gradual upslope to the capnogram is seen. In cases where bronchoconstriction or airway obstruction is encountered, there will be a loss of this plateau and a "shark fin" appearance may occur on the capnogram. At the end of exhalation, the alveolar CO₂ has reached the probe site and the CO₂ will be at its highest level. A peak or end tidal CO₂ reading is obtained here.
- ❑ Phase IV: The lungs and alveoli are rapidly filling with oxygen, purging the airways of the CO₂.

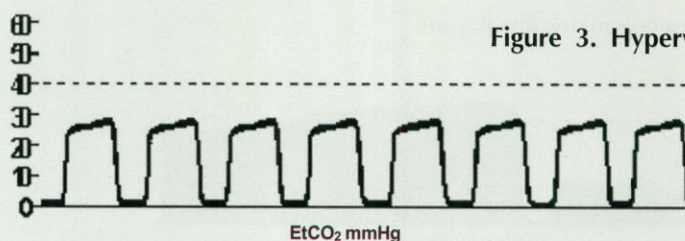


Figure 3. Hyperventilation

Figure 4. Hyperventilation

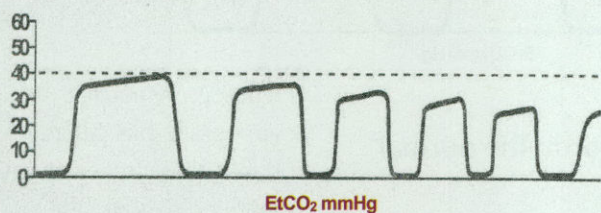


Figure 5. Hypoventilation

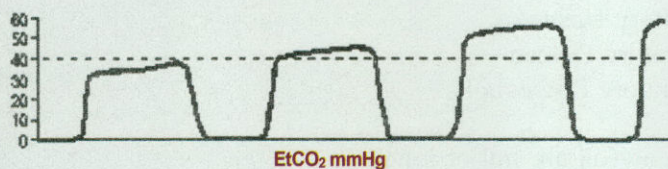


Figure 6. Apnea

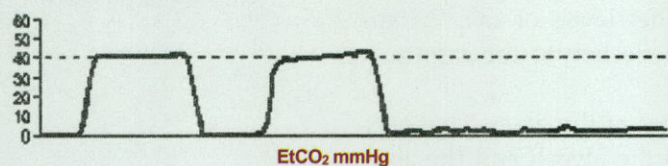


Figure 7. Loss of alveolar plateau

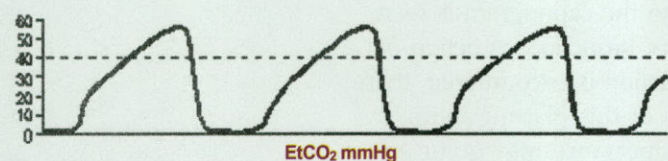


Figure 8. Poor perfusion

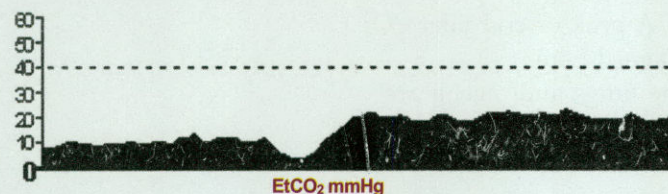
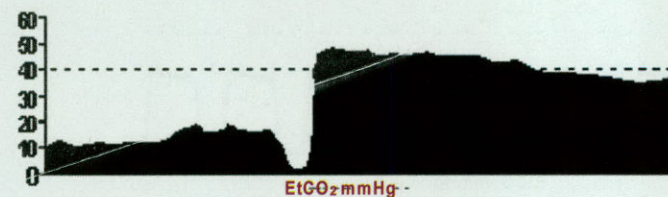


Figure 9. Successful defibrillation



Figures 3 and 4 show hyperventilation.

These capnograms start slow and have an EtCO₂ reading that is normal. Notice as the rate gets faster, the waveform gets narrower and there is a steady decrease in the EtCO₂ to below 30mm/Hg. Causes of this type of waveform include:

- Hyperventilation syndrome;
- Overzealous bagging;
- Pulmonary embolism.

Figure 5 shows hypoventilation.

In this capnogram, there is a gradual increase in the EtCO₂ and a normal alveolar plateau so bronchoconstriction or obstruction is not apparent. Causes of this may include:

- Respiratory depression for any reason.
 - o Narcotic overdose
 - o Central nervous system (CNS) dysfunction
 - o Heavy sedation

Figure 6 shows apnea.

This capnogram shows a complete loss of waveform indicating no CO₂ present. Capnography allows for instantaneous recognition of this potentially fatal condition. Since this occurred suddenly, consider the following causes:

- Dislodged ET tube;
- Total obstruction of ET tube;
- Respiratory arrest in the non-intubated patient; or,
- Equipment malfunction (if the patient is still breathing). Check all connections and sampling chambers.

Figure 7 shows loss of alveolar plateau.

This capnogram displays an abnormal loss of alveolar plateau indicating incomplete or obstructed exhalation. Note the "shark's fin" pattern. This pattern is found in the following conditions:

- Bronchoconstriction.
 - o Asthma
 - o COPD
- Incomplete airway obstruction.
 - o Upper airway obstruction
 - o Tube kinked or obstructed by mucous

Figure 8 shows poor perfusion (cardiac arrest).

The trending capnogram can indicate perfusion during CPR and effectiveness of resuscitation efforts. Note the trough in the center of the capnogram. During this time, there was a change in personnel doing CPR. The fatigue of the first rescuer was demonstrated when the second rescuer took over compressions.

Figure 9 shows successful defibrillation.

This capnogram shows that the patient was defibrillated successfully with a return of spontaneous pulse. Notice the dramatic change in the EtCO₂ when pulses were restored.

Studies have shown that consistently low readings (less than 10mm/Hg) during resuscitation reflect a poor outcome and futile resuscitation.

Technology of EtCO₂ Measurement

The most often used process for detecting EtCO₂ is called Infrared (IR) Spectroscopy. In this method, infrared light is used to expose the sample, which is taken from the stream of the exhaled air. IR sensors detect the absorbed light and calculate a value. The waveform is generated based on the fluctuation of the levels of CO₂ being exhaled. Broad-spectrum IR beams can also be absorbed by nitrous oxide (NO₂) and high O₂ levels.

Sampling Methods

Side-stream sampling

I like to refer to these as "first generation devices" although many are still sold and used today. These devices attach to the ET tube via an adapter and draw a relatively large sample of air into the machine from a perforated connection on the side of the adapter (hence the name side-stream). An advantage is that it can be used on intubated and non-intubated patients with a nasal cannula attachment.

Drawbacks of side-stream

Some side-stream devices can require

large volumes for sampling (up to 300 cc per minute) making them impractical for pediatrics or infants. Also, contaminated liquids and secretions are drawn into the machine. A filter designed to prevent machine contamination clogs easily and requires frequent replacement. Some are not made for continuous monitoring for this reason.

Some devices have a narrow band sensor that is not specific for CO₂ and requires periodic calibration and activation of a separate mode so the device would not be fooled by NO₂ or high concentration O₂. Since the pump runs continuously and draws large samples, battery life is very short.

Mainstream sampling

Mainstream devices were developed for and has widespread use in surgery. The devices address the issue of secretion handling and clogged filters by applying airway-mounted sensors. In other words, the device does not require a pump; the sample is collected from the center of the stream and is analyzed "on the spot" by the sensor that is a part of the ET tube adapter. These units, however, are generally for intubated patients. An adapter has been developed that resembles a mouthpiece for a nebulizer treatment, but is impractical for continuous monitoring.

Drawbacks of mainstream

Since mainstream devices are used primarily in hospital settings, there may be some limitations for use in the out-of-hospital setting. The sensor is heavy and impractical for neonates or some pediatric patients, and can be damaged, leading to costly repair and down-time. The sensors are also position-sensitive and need cleaning. The adapter must be disposed of or sterilized between uses. And, like the side-stream unit, the sensor is not specific for CO₂, so the unit will need calibration or must be set on a special mode.

Micro-stream technology

The latest technology to be introduced for the out-of-hospital environment is micro-stream technology. It employs the best of side-stream devices and main-stream devices, improving on desirable features of both and eliminating the shortcomings of each. For example, the micro-stream device can be used on intubated and non-intubated patients with a nasal cannula, allowing for continuous monitoring. The micro-stream device requires only 1/20 of the sample size for a reading, making it useful and practical for neonates and pediatrics. Position-independent adaptors take the sample from the center of the line. Moisture, secretion and contaminants are handled in many ways: vapor-permeable tubing; sub-micron multi-surface filters; and center-stream sampling. Expensive parts of the unit are protected inside the device and not on the airway. Finally, the micro-beam IR sensor is CO₂ specific, eliminating the need for calibration or special modes of operation.

The true benefits of waveform capnography: as basic as ABC

Waveform capnography can really help monitor your patient's ABCs continuously, whether they are intubated or not.

A is for airway. We have all been taught airway is everything. An open airway must be maintained at all times and kept open. How do we assess for an open airway? Do we watch for chest rise and fall? Does chest rise indicate breathing or the movement of air? Almost any assessment of airway will involve the senses—look, listen and feel. While a person is moving air, CO₂ will come out. The capnograph waveform can indicate obstruction by an abnormal waveform, i.e., "shark fin." Also, in the intubated patient, airway patency and tube vigilance is a must. Waveform capnography

is your best indicator and monitor of correct tube placement.

B is for breathing. Is it adequate? How do you know? Can the pulse ox confirm that? While it can indicate oxygenation, it cannot provide ventilatory adequacy. In one case, a patient is post-ictal after a generalized tonic-clonic seizure. Paramedics administered Valium to halt the activity and moved the patient on his side in the recovery position, and an IV was established. The patient is on O₂ via nasal cannula at 6 lpm. Pulse ox reading shows 98 percent. Respirations are 12/min with slight chest rise noted. Adequate? The capnograph shows an EtCO₂ of 60 and rising. This is not at all adequate. The patient should be rolled over and ventilated with a bag valve mask to bring the CO₂ to normal limits.

Another use for the EtCO₂ is to guide ventilations in closed head injury. We have all heard that it is bad to hyperventilate a patient with head injury. The concept was sound in that it reduces vessel size and can reduce intracranial pressure. But how much do we do? Can we do too much or too little? An EtCO₂ of less than 25 torr can cause severe vasoconstriction and cause more ischemia to the brain. It has been suggested that EtCO₂ be kept at about 28-32 mm/Hg on the patient with signs of deteriorating closed head injury and within normal limits (35-45 mm/Hg) on those not crashing.

C is for circulation. Since EtCO₂ is perfusion dependent, an EtCO₂ within normal or high ranges means perfusion is adequate, at least centrally to the lungs (a major end organ). A low EtCO₂ reading may be the result of poor perfusion, hyperventilation, poor sampling or a combination of all of the above. Check the consistency and depth of ventilations before assuming poor perfusion.

The bottom line

Capnography devices are rapidly hit-

ting the market. Advertising is subtle now, but the hype will soon begin. Money is being spent on 12-lead machines. A quick tour of the latest 12-lead machines reveal units from Physio-Control, Zoll, MRL and HP that offer capnography as a built-in to their top-of-the-line monitors. In addition, several manufacturers offer the devices in hand-held versions, and some a dual unit with a pulse oximeter. Before you run out to buy one, do your homework and look at all the features and their technology. Make a wise decision.

Summary of capnography

In my opinion, capnography is an incredibly beneficial tool whose debut is long overdue. With all its uses and conditions with which it can help, the device will become a must-have tool for ambulances. In fact, it has been suggested that in some cases, confirming tube placement by "bilateral lung sounds, and nothing over the epigastrium" is just not sufficient enough. Capnography comes highly recommended as a tube placement confirming device. As you have seen, that is just the tip of the iceberg of uses for this device.

Bob Page, AAS, NREMT-P, CCEMT-P, I/C, is the director of EMS education at St. John's Regional Health Center in Springfield. A former graduate of Texas Tech University paramedic program, Bob is a national and international speaker, author and educator. His capnography workshop, "Riding the Waves: The Role of Capnography in EMS" is the first nationally-recognized course in out-of-hospital use of capnography. He has presented the course across the United States. Page will present the course as a preconference workshop at the Texas EMS Conference 2002.

CE Questions for *The Role of Capnography In EMS*

ECA's, EMTs and EMT-Is must answer 1-15 for credit; paramedics must answer all 20 for credit.

1. Capnography is:
 - A. the measurement of oxygen in exhaled air.
 - B. the measurement of EtCO₂ in inspired air.
 - C. the measurement of EtCO₂ in expired air.
 - D. the measurement of oxygen in inspired air.
2. Devices that detect EtCO₂ and respond by a color change are:
 - A. quantitative devices.
 - B. qualitative devices.
 - C. capnographs.
 - D. SPO₂.
3. The primary difference between capnography and capnometry is:
 - A. waveform.
 - B. accuracy.
 - C. color change.
 - D. all of the above
4. The normal range for EtCO₂ is:
 - A. 30-50 mm/Hg.
 - B. 80-100 mm/Hg.
 - C. 35-45 mm/Hg.
 - D. 25-50 cm H₂O.
5. With some devices, a color change that would indicate the presence of CO₂ is from:
 - A. black to white.
 - B. green to red.
 - C. yellow to purple.
 - D. purple to yellow.
6. EtCO₂ devices measure EtCO₂ by a process known as:
 - A. infrared spectroscopy.
 - B. radial keratotomy.
 - C. infrared signaling.
 - D. pulse capnography.
7. A waveform that resembles a "shark's fin" with a loss of alveolar plateau may indicate:
 - A. hyperventilation.
 - B. bronchoconstriction.
 - C. hypoventilation.
 - D. hypoperfusion.
8. CO₂ is produced by:
 - A. hyperventilation.
 - B. metabolism.
 - C. diffusion.
 - D. inspiration.

CE questions (con't)

9. A pulse oximeter measures oxygen that is:
 - A. bound to the hemoglobin molecule.
 - B. bound to CO₂
 - C. dissolved in plasma.
 - D. in the lungs.
10. Oxygen dissolved in plasma is known as:
 - A. PCO₂
 - B. hemoglobin.
 - C. PO₂
 - D. SPO₂.
11. Phase III of the capnogram refers to the:
 - A. respiratory baseline.
 - B. expiratory upstroke.
 - C. expiratory plateau.
 - D. inspiratory downstroke.
12. Which of the following could cause the capnogram waveform to increase steadily in size?
 - A. narcotic overdose
 - B. CNS dysfunction
 - C. sedation
 - D. all of the above
13. Which of the following patients would benefit from the use of capnography?
 - A. closed head injury
 - B. seizure patient
 - C. asthma attack
 - D. all of the above
14. In states of low perfusion, such as shock or cardiac arrest with CPR in progress, the EMT would expect the EtCO₂ reading to be:
 - A. higher than normal.
 - B. about normal.
 - C. lower than normal.
 - D. zero.
15. The primary stimulus to breath is:
 - A. Low O₂ levels.
 - B. Low CO₂ levels.
 - C. Low pH levels.
 - D. High O₂ levels.
16. During a nasal intubation of a conscious patient, you place the tube and the patient is trying to breathe on his/her own. You hear lung sounds; the pulse oximeter reads the same 96 percent that it did prior to intubation. As you bag the patient, the capnography unit shows a loss of waveform and no reading. Which of the following best describes what is happening?
 - A. a right main stem intubation
 - B. unsuccessful intubation
 - C. a pneumothorax
 - D. poor perfusion
17. The movement of gas from an area of high particle concentration to low particle concentration is:
 - A. osmosis.
 - B. active transport.
 - C. diffusion.
 - D. hemolysis.
18. Conscious sedation procedures such as those used for intubation, pacing, cardioversion and acute pain need continuous EtCO₂ monitoring because:
 - A. hypoxia induced by the drugs.
 - B. ventilatory depression possible with sedatives.
 - C. hyperventilation secondary to anxiety.
 - D. pain induced hypoxia.
19. Which of the following devices may be used for continuous monitoring of endotracheal tube placement?
 - A. colorimetric device
 - B. micro-stream waveform capnograph
 - C. side-stream capnometer
 - D. esophageal detection device
20. Your patient is a 20-year-old male having an asthma attack. You notice a pulse ox of 94 percent, and an EtCO₂ of 50. The patient's capnogram shows an obvious abnormality with a "shark's fin appearance." Which of the following would be appropriate in the initial management of this patient?
 - A. a bronchoconstricting agent since the waveform shows bronchodilation
 - B. a bronchodilator since the waveform indicates bronchoconstriction
 - C. a diuretic since the waveform indicates fluid in the alveoli
 - D. a diuretic because the patient may have asthma

This answer sheet must be postmarked by December 19, 2002.

CE Answer Sheet *Texas EMS Magazine*

Name _____ SSN _____

Certification Level _____ Expiration Date _____

Organization _____ Work Phone _____
area code

Address _____ City _____
street

State _____ Zip _____ Home Phone _____
area code

Note: Due to the cost of processing CE, each answer sheet must be accompanied by a check or money order for \$5, made out to UT Southwestern.

For TDH CE credit, mail your completed answer sheet with a **check or money order for \$5 made out to UT Southwestern to:**

Debra Cason, RN, MS
 EMS Training Coordinator
 The University of Texas
 Southwestern Medical Center
 5323 Harry Hines Boulevard
 Dallas, Texas 75390-8890

You will receive your certificate for 1.5 hours of CE about six weeks after the closing date. A grade of 70 percent is required to receive CE credit.

Answer Form

Check the appropriate box for each question.

ECAs, EMTs and EMT-Is must answer 1-15 for credit; paramedics must answer all 20 for credit.

- | | | | | | | | |
|---------------------------------|-----------------------------|-----------------------------|-----------------------------|---------------------------------|-----------------------------|-----------------------------|-----------------------------|
| 1. A. <input type="checkbox"/> | B. <input type="checkbox"/> | C. <input type="checkbox"/> | D. <input type="checkbox"/> | 11. A. <input type="checkbox"/> | B. <input type="checkbox"/> | C. <input type="checkbox"/> | D. <input type="checkbox"/> |
| 2. A. <input type="checkbox"/> | B. <input type="checkbox"/> | C. <input type="checkbox"/> | D. <input type="checkbox"/> | 12. A. <input type="checkbox"/> | B. <input type="checkbox"/> | C. <input type="checkbox"/> | D. <input type="checkbox"/> |
| 3. A. <input type="checkbox"/> | B. <input type="checkbox"/> | C. <input type="checkbox"/> | D. <input type="checkbox"/> | 13. A. <input type="checkbox"/> | B. <input type="checkbox"/> | C. <input type="checkbox"/> | D. <input type="checkbox"/> |
| 4. A. <input type="checkbox"/> | B. <input type="checkbox"/> | C. <input type="checkbox"/> | D. <input type="checkbox"/> | 14. A. <input type="checkbox"/> | B. <input type="checkbox"/> | C. <input type="checkbox"/> | D. <input type="checkbox"/> |
| 5. A. <input type="checkbox"/> | B. <input type="checkbox"/> | C. <input type="checkbox"/> | D. <input type="checkbox"/> | 15. A. <input type="checkbox"/> | B. <input type="checkbox"/> | C. <input type="checkbox"/> | D. <input type="checkbox"/> |
| 6. A. <input type="checkbox"/> | B. <input type="checkbox"/> | C. <input type="checkbox"/> | D. <input type="checkbox"/> | 16. A. <input type="checkbox"/> | B. <input type="checkbox"/> | C. <input type="checkbox"/> | D. <input type="checkbox"/> |
| 7. A. <input type="checkbox"/> | B. <input type="checkbox"/> | C. <input type="checkbox"/> | D. <input type="checkbox"/> | 17. A. <input type="checkbox"/> | B. <input type="checkbox"/> | C. <input type="checkbox"/> | D. <input type="checkbox"/> |
| 8. A. <input type="checkbox"/> | B. <input type="checkbox"/> | C. <input type="checkbox"/> | D. <input type="checkbox"/> | 18. A. <input type="checkbox"/> | B. <input type="checkbox"/> | C. <input type="checkbox"/> | D. <input type="checkbox"/> |
| 9. A. <input type="checkbox"/> | B. <input type="checkbox"/> | C. <input type="checkbox"/> | D. <input type="checkbox"/> | 19. A. <input type="checkbox"/> | B. <input type="checkbox"/> | C. <input type="checkbox"/> | D. <input type="checkbox"/> |
| 10. A. <input type="checkbox"/> | B. <input type="checkbox"/> | C. <input type="checkbox"/> | D. <input type="checkbox"/> | 20. A. <input type="checkbox"/> | B. <input type="checkbox"/> | C. <input type="checkbox"/> | D. <input type="checkbox"/> |

Did you enclose your \$5 check or money order?



Did you read?

Researchers at the State University of New York at Buffalo recently found that people performed better on standard tests used to measure reactions to stressful tasks when they were accompanied by a pet than when accompanied by a spouse or friend, leading researchers to theorize that fear of potential criticism might offset the positive effects of affection. The tests asked people to do reverse mental subtraction, spelling tasks and to hold their hands in ice water. The study included 240 couples in which one person from each couple performed the tasks in the presence of either a pet (or a close friend if they had no pet), and a spouse and then alone. The people who tested with their pets had the lowest blood pressure increases during the test and had their heart rates return to normal more quickly than the other groups. People accompanied by friends and spouses also tended to perform worse on the tests, possibly indicating nervousness. From *The New York Times*, "Behavior: A Best Friend in Times of Stress," by John O'Neil, October 4, 2002.

Doctors are currently testing the safety of sterilized blood in 520 humans. In a process called pathogen inactivation, a chemical added to the donated blood bag breaks up genetic material of viruses and bacteria in the blood. Two different companies are currently conducting human trials in Europe and the U.S. to answer several questions about the chemical process: does the sterilization work consistently; does this process alter red blood cells beyond their abilities to function normally; and does the chemical leave any by-products that

could be harmful or build up in humans? One company has already received approval to use sterilized platelets in Europe. While today's blood supply is considered very safe because of the numerous tests it undergoes, the emergence of new threats such as West Nile virus have shown that blood banks can't test for new, unknown disease risks, and many diseases do not yet have reliable tests. From *Houston Chronicle*, "Studies probe safety of blood sterilization," by Lauran Neergaard, October 4, 2002.

Many deaths from chronic obstructive pulmonary disease may actu-

Researchers recently found that people performed better on tests used to measure reactions to stressful tasks when they were accompanied by a pet than when accompanied by a spouse or friend.

ally be caused by newly-encountered bacterial strains. Doctors at the Veterans Administration Hospital in New York tested the sputum of 81 patients once a month for more than 56 months. They found that 33 percent of life-threatening episodes of emphysema and chronic bronchitis, which progress into COPD, were reported when new bacterial strains were found in the sputum. The researchers theorized that COPD episodes were more likely to be caused by new strains of bacteria. These findings would not affect the way that patients are currently treated for emphysema,

chronic bronchitis and COPD, but they could increase approaches for research. From *Dallas Morning News*, "New strains of germs found in lung problem," August 19, 2002.

A recent study suggests that rheumatoid arthritis might be caused by the body's immune system attacking a particular type of carbohydrate, glycosaminoglycans, which is a main component in skin, bones, cartilage, connective tissue and joint fluid. Scientists found that injecting mice with glycosaminoglycans would induce symptoms of arthritis such as inflammation around the mice's joints and lesions on their tendons and skin. Scientists also found high amounts of glycosaminoglycans in and near the mice's rheumatoid areas and bone marrow and in joint tissue from nine humans suffering from rheumatoid arthritis. Humans suffering from other forms of arthritis did not have high levels of glycosaminoglycans. The human body produces immune system cells in the bone marrow that bind glycosaminoglycans in an effort to control the amount of carbohydrates in the blood. The scientists believe that if the level of carbohydrates in the blood surges, the immune system then will produce more cells to bind with the excess carbohydrates in the blood. Some could end up binding with glycosaminoglycans in the joints instead of in their blood, causing rheumatoid arthritis. Approximately 2.1 million people in the U.S. have rheumatoid arthritis; about 75 percent of them are women. There is currently no cure, but there are drugs to treat the arthritic inflammation. From *The New York Times*, "Study Suggests Carbohydrates Are Attacked in Arthritis," by Kenneth Chang, August 22, 2002.

Alcohol-based hand rinses may be more effective in cutting the number of infections spread to patients from their hospital care providers than the tried and true method of hand-washing with soap and water, according to researchers at a recent American Society of Microbiology meeting. The alcohol rinses are more effective in reducing the number of hospital-acquired infections since they are rubbed on the skin and dry in 15 seconds, requiring no water; contain moisturizers to keep from drying the skin; and still kill more germs. Handwashing requires staff to spend a full minute scrubbing at a sink and is often skipped in hectic hospital wards, and, when diligently carried out, results in dry skin. Studies at Veterans Administration Medical Center in Washington, D.C. and the University of Geneva Hospitals in Switzerland found that the number of hospital-acquired infections in these facilities dropped by 50 percent after the personnel switched to using the alcohol rinses instead of washing their hands between each patient. The ASM is planning to suggest to the Centers for Disease Control and

Your health is probably very similar to your spouse's health, according to *Social Science and Medicine*.

Prevention that they recommend hospitals use the alcohol rinses exclusively except when dirt can be seen on the personnel's hands. From *Houston Chronicle*, "Hospitals find alcohol gel quick, kills more microbes," by Daniel Q. Haney, October 7, 2002.

Your health is probably very similar to your spouse's health, according

Did you read?

Did you read?

to *Social Science and Medicine*. A study found that people in excellent health were approximately five percent likely to be married to someone with fair health, but people in fair health were approximately 24 percent likely to be married to people in fair health and 13 percent likely to be married to people in poor health. These figures were derived from data obtained in a 1992 nationwide survey of more than 4,700 couples in their 50s. Reasons for health similarities in couples could include tendencies for couples to have the same eating and health habits, have the same economic status and live in the same environment. These findings led the authors to suggest that medical providers treating ill patients should look at treating the potential ills of the entire family. From *The New York Times*, "Patterns: Spouses Also Share State of Health," by Eric Nagourney, September 11, 2002.

A new defense against melanoma may soon be available. White blood cells are drawn from the individual and multiplied to billions more than the human body could produce quickly. The cultured white blood cells are also exposed to a sample of the tumor, so that the white blood cells will recognize and target the tumor cells. Then the white blood cells are placed back into the body. Scientists recently treated 13 patients who had intractable, malignant melanoma and had exhausted conventional medical therapies. Six of the patients had significant shrinkage of subsequent tumors, one patient had a volleyball-size tumor disappear and four patients had many tumors disappear. Three patients died. More research is being done on the long-term effects

of this treatment. From *Houston Chronicle*, "Multiplying patients' own blood cells kills melanoma in research," by Delthia Ricks, October 7, 2002.

Medical providers' impressions of parents may actually lead them to underdiagnose child abuse in white children, according to a study lead by Children's Hospital of Philadelphia. In studying records of children under 3 who were treated for arm, leg or skull fractures at the hospital between 1994 and 2000, researchers found that minority children were more than

A new defense against melanoma might involve taking white blood cells from the individual and multiplying them to billions more than the human body could produce quickly and then injecting them back into the body.

twice as likely to be subjected to a detailed X-ray looking for other signs of abuse and were reported to child welfare authorities for possible child abuse twice as often. The race of the doctors was unknown. These findings agree with other studies that have found that shaken baby syndrome is commonly missed in children of white, educated households. Researchers suggested that medical providers might need to be reminded to be aware of the biases that their impressions of the child's parents might cause. From *Houston Chronicle*, "Hurt minority children often checked for abuse," October 7, 2002.

DISCIPLINARY ACTIONS

THE INFORMATION IN THIS SECTION IS INTENDED TO PROVIDE PUBLIC NOTICE OF DISCIPLINARY ACTION BY THE TEXAS DEPARTMENT OF HEALTH AND THE BUREAU OF EMERGENCY MANAGEMENT AND IS NOT INTENDED TO REFLECT THE SPECIFIC FINDINGS OF EITHER ENTITY.

THIS INFORMATION MAY NOT REFLECT ANY NUMBER OF FACTORS INCLUDING, BUT NOT LIMITED TO, THE SEVERITY OF HARM TO A PATIENT, ANY MITIGATING FACTORS, OR A CERTIFICANT'S DISCIPLINARY HISTORY. THIS LISTING IS NOT INTENDED AS A GUIDE TO THE LEVEL OF SANCTIONS APPROPRIATE FOR A PARTICULAR ACT OF MISCONDUCT.

TO FILE A COMPLAINT REGARDING AN EMS SERVICE OR PERSONNEL, CALL (800) 452-6086.

The Texas Health and Safety Code can be found at <http://www.capitol.state.tx.us/statutes/hstoc.html>

All of the Texas Administrative Code can be found at <http://lamb.sos.state.tx.us/tac/>

To find EMS-specific information in the Texas Administrative Code, go to www.texas.gov, click on Laws and Criminal Justice, click on Laws, Codes and Statutes, click on Texas Administrative Code, click on TAC Viewer, click on Title 25 Health Services, Part I Texas Department of Health, Chapter 157 Emergency Medical Care.

TDH Index of EMS/Trauma Systems Policies can be found at <http://www.tdh.state.tx.us/hcqs/ems/spolicy.htm>

Adams, Chadwick, Tyler, TX. 24 months probated suspension of EMT-P certification through October 12, 2003. EMS Rules 157.37(c)(2)(3)(G).

* **Advanced Ambulance Services Inc.**, San Antonio, TX 24 months probated suspension of the EMS provider's license through August 2004 and a \$2,500 administrative penalty. EMS Rules 157.16(d)(1); 157.16(d)(19); and 157.11(l)(13).

* **Alaniz, Rene**, Mission, TX. 48 months probated suspension of ECA certification through August 29, 2006, a misdemeanor conviction. EMS Rules 157.37 and/or, 157.36(b) and/or, (c).

* **AMCARE Medical Services, Inc.**, San Antonio, TX 24 months probated suspension of the EMS provider's license through

August 2004 and a \$1,000 administrative penalty. EMS Rules 157.16(d)(1); 157.16(d)(19); and 157.11(l)(13).

* **Americana Ambulance**, San Antonio, TX \$17,000 administrative penalty of which \$15,000 is probated for 6 months through February 2003. EMS Rules 157.16(d)(1); 157.16(d)(19); and 157.11(l)(13).

* **AMR - Arlington**, Arlington, Texas 12 months probated suspension of all but \$2,500 of a \$25,000 administrative penalty. EMS Rules 157.16 (d) (1); 157.16 (d) (19); and 157.11(l)(13).

* **Baccus, Tommy**, Santa Fe, NM. Suspension of the EMS-I certification through August 2003. EMS Rules 157.44(i)(1)(2)(1).

Baldwin, John, Spring, TX. 24 months probated suspension through August 2003. EMS Rules 157.36(b)(1)(2)(26)(27) and (28).

Barrera, Richard L., Round Rock, TX. 24 months probated suspension of ECA certification through March 14, 2003. EMS Rules 157.37(c)(2)(3)(G).

Blake, Danny, Dayton, TX. 24 months probated suspension of EMT certification through August 13 2003. EMS Rules 157.37(c)(2)(3)(G).

Boettcher, Laura G., Houston, TX. 24 months probated suspension of EMT certification through August 3, 2003. EMS Rules 157.37(c)(2)(3)(G).

Brooks, Michael, Temple, TX. Twelve (12) month probated suspension of EMT certification through August 7, 2003, a misdemeanor conviction. EMS Rules 157.37 and/or, 157.36(b) and/or, (c).

Broom, Arthur, White Deer, TX. 12 months probated suspension of EMT certification through April 12, 2003, a misdemeanor convictions and deferred adjudication. EMS Rules 157.37 and/or, 157.36(b) and/or, (c).

Brown, Jack D., Cleburne, TX. 48 months probated suspension of EMT certification through November 3, 2004. EMS Rules 157.37(c)(2)(3)(G).

Brown, Kelly James, Kilgore, TX. Suspension of EMT-I certification through November 22, 2002. EMS Rules 157.51(b)(5) and (24).

Bryan III, Charles, Baytown, TX. 12 months suspension of the EMT-P certification through February 2003. EMS Rules 157.36(b)(1); 157.36(b)(2); 157.36(b)(26) and

157.36(b)(28).

Buford, Justin F., Lafayette, Louisiana. 12 months probated suspension of EMT certification through December 13, 2002. EMS Rules 157.37(c)(2)(3)(G).

Buchanan, Christopher, Midland, TX. 24 months probated suspension of EMT certification through June 4, 2004, misdemeanor convictions. EMS Rules 157.37 and/or, 157.36(b) and/or, (c).

* **Bull, Kenneth**, Fort Worth, TX Suspension of the EMT-P certification through September 2004. EMS Rules 157.36(b)(1); 157.36(b)(2); 157.36(b)(3); 157.36(b)(9); 157.36(b)(26); and 157.36(b)(28).

Buster, Zack, Glenn Heights, TX. 12 months probated suspension of EMT certification through March 4, 2003, a misdemeanor conviction. EMS Rules 157.37 and/or, 157.36(b) and/or, (c).

Byers, Danny, Earth, TX. 60 months probated suspension of the EMT-P certification through March 2007. EMS Rules 157.36(b)(1); 157.36(b)(2); 157.36(b)(23); 157.36(b)(25); 157.36(b)(26); 157.36(b)(28); 157.36(b)(29); 157.37(a)-(c); and the Occupations Code Chap 53.

Caldwell, Kenneth, San Antonio, TX. 48 months probated suspension of EMT certification through August 7, 2006, a felony deferred adjudication. EMS Rules 157.37 and/or, 157.36(b) and/or, (c).

Campos, Roberto, Harlingen, TX. 12 months probated suspension of ECA certification through March 12, 2003, a misdemeanor conviction. EMS Rules 157.37 and/or, 157.36(b) and/or, (c).

Cantu, Jr., Fernando, San Juan, TX. 12 months probated suspension of EMT certification through March 23, 2003, a misdemeanor conviction. EMS Rules 157.37 and/or, 157.36(b) and/or, (c).

Cerda, Gilberto, Laredo, TX. 6 months suspension and eighteen months probated suspension of EMT certification through November 2002. H&SC 773.064 (a).

* **City of South Houston EMS**, Houston, TX 24 months probated suspension of the EMS provider's license through September 2004. EMS Rules 157.16(d)(1); 157.16(d)(4); 157.16(d)(6); 157.16(d)(14); 157.16(d)(19); 157.11(e)(3); and 157.11(l)(13).

Coffman, David, Normangee, TX. 3 months suspension and 45 months probat-

ed suspension of EMT certification through June 30, 2005, a felony conviction. EMS Rules 157.37 and/or, 157.36(b) and/or, (c).

Colburn, Robert, Cuero, TX. 12 months probated suspension of LP certification through March 4, 2003, a misdemeanor conviction. EMS Rules 157.37 and/or, 157.36(b) and/or, (c).

* **Cole, Joseph**, Jasper, TX. 12 months probated suspension of EMT certification through August 12, 2003, a misdemeanor conviction. EMS Rules 157.37 and/or, 157.36(b) and/or, (c).

Contreras, Camile, North Charleston, South Carolina. 24 months probated suspension of EMT certification through February 5, 2003. EMS Rules 157.37(c)(2)(3)(G).

Cox, Jeremy, Kilgore, TX. 12 months probated suspension of EMT-P certification through April 2003. EMS Rules 157.36(b)(1); 157.36(b)(2); 157.36(b)(3); 157.36(b)(7); 157.36(b)(26); and 157.36(b)(28).

Crane, Truman, Leander, TX. 12 months probated suspension of EMT certification through February 8, 2003, a misdemeanor conviction. EMS Rules 157.37 and/or, 157.36(b) and/or, (c).

Cranfill, Jamie, Goldsmith, TX. 24 months probated suspension of EMT certification through August 8, 2003. EMS Rules 157.37(c)(2)(3)(G).

Crowe, Gary, Dale, TX. 48 months probated suspension of EMT certification through November 5, 2005. EMS Rules 157.37(c)(2)(3)(G).

Cruz, Jesus, Wharton, TX. 12 months probated suspension of EMT certification through January 2, 2003. EMS Rules 157.37(c)(2)(3)(G).

* **Deloza, Javier**, Houston, TX. 12 months probated suspension of LP certification through August 23, 2003, a misdemeanor conviction. EMS Rules 157.37 and/or, 157.36(b) and/or, (c).

Desopo, James A., Waco, TX. 12 months probated suspension of EMT certification through December 4, 2002. EMS Rules 157.37(c)(2)(3)(G).

Dheil, Mark, Longview, TX. Decertification of the EMT-P certification effective June 11, 2002. EMS Rules 157.36(b)(1); 157.36(b)(2); 157.36(b)(15); 157.36(b)(21); 157.36(b)(25); 157.36(b)(26); 157.36(b)(27); 157.36(b)(28); and 157.36(b)(29).

Dillow, Tammy, Bedford, TX. 6 months probated suspension of EMT-P certification through December 2002. EMS Rules 157.36(b)(1); 157.36(b)(2); 157.36(b)(4); 157.36(b)(13); 157.36(b)(26); and 157.36(b)(28).

Eisenmenn, Bradley G., Austin, TX. 24 months probated suspension of EMT certification through May 30, 2003. EMS Rules 157.37(c)(2)(3)(G).

Elliott, Ginger, Omaha, TX. 12 months probated suspension of EMT certification through February 19, 2003, a felony conviction. EMS Rules 157.37 and/or, 157.36(b) and/or, (c).

Evans, David, Arlington, TX. Twelve (12) month probated suspension of EMT certification through July 1, 2003, a misdemeanor conviction. EMS Rules 157.37 and/or, 157.36(b) and/or, (c).

Fairchild, Brian, Sulphur Springs, TX. Twenty-four (24) month probated suspension of EMT certification through July 1, 2004, misdemeanor convictions and a felony-deferred adjudication. EMS Rules 157.37 and/or, 157.36(b) and/or, (c).

Florence, Gertrude, Leaky, TX. Suspension of EMT certification thru September 2004 due to a CE Audit. EMS Rules 157.36(b)(1), (2), (21)(28).

Flores, George, Seguin, TX. 12 months probated suspension of EMT certification through April 29, 2003, a misdemeanor conviction. EMS Rules 157.37 and/or, 157.36(b) and/or, (c).

Flores, Roswitha, San Juan, TX. 12 months suspension of the EMT-I certification through February 2003. EMS Rules 157.36(b)(1); 157.36(b)(2); 157.36(b)(22); 157.36(b)(23); 157.36(b)(25); 157.36(b)(26); 157.36(b)(28); 157.36(b)(29); and 157.37(c)(2)(3)(G).

Foote, Richard, Plano, TX. 12 months probated suspension of EMT certification through May 10, 2003, a misdemeanor conviction. EMS Rules 157.37 and/or, 157.36(b) and/or, (c).

Galvan, Martin, Jr., Rio Grande, TX. 48 months probated suspension of ECA certification through October 12, 2004. EMS Rules 157.37(c)(2)(3)(G).

Garcia, Edward, San Angelo, TX. 24 months probated suspension of EMT certification through July 1, 2004, misdemeanor

convictions and a felony deferred adjudication. EMS Rules 157.37 and/or, 157.36(b) and/or, (c).

Garza, Bart, Edinburg, TX. 42 months probated suspension of EMT-I certification through April 12, 2004. EMS Rules 157.37(c)(2)(3)(G).

Garza, Jess, Jr., Perryton, TX. 24 months probated suspension of EMT certification through November 2, 2002. EMS Rules 157.37(c)(2)(3)(G).

Gladson, Alan E., Fort Worth, TX. 24 months probated suspension of EMT-P certification through December 6, 2002. EMS Rules 157.37(c)(2)(3)(G).

Gonzalez, Rolando, Rio Grande City, TX. 36 months probated suspension of EMT certification through August 22, 2004. EMS Rules 157.37(c)(2)(3)(G).

Gordan, Carl L., Houston, TX. 24 months probated suspension of EMT certification through May 9, 2003. EMS Rules 157.37(c)(2)(3)(G).

Grabs, Teresa, Valley Mills, TX. 108 months probated suspension of licensed paramedic through September 26, 2010. EMS Rules 157.37(c)(2)(3)(G).

* **Grissom, Larry**, Austin, TX. 12 months probated suspension of EMT-P certification through August 29, 2003, a misdemeanor conviction. EMS Rules 157.37 and/or, 157.36(b) and/or, (c).

Hall, Christine S., Alvin, TX. 24 months probated suspension of EMT certification through August 31, 2003. EMS Rules 157.37(c)(2)(3)(G).

Hansen Jr., Richard Allen, El Paso, TX. Suspension of EMT-I certification thru August 2004 due to a CE Audit. EMS Rules 157.36(b)(1), (2), (21), (23).

Harris, Kevin L., McAllen, TX. 4 years probated suspension of EMT certification through July 5, 2004. EMS Rules 157.44(c)(2)(B)(vii).

Harris, Patrick, Houston, TX. 12 months probated suspension of EMT certification through January 25, 2003, for a misdemeanor or deferred adjudication probation. EMS Rules 157.37; 157.36(b), (c).

Hartley, Sherman, Bay City, TX. 56 months probated suspension of EMT certification through July 5, 2006. EMS Rules 157.37(c)(2)(3)(G).

Hines, Carles, Detroit, TX. 12 months

DISCIPLINARY ACTIONS

probated suspension of EMT certification through March 28, 2003, a misdemeanor conviction. EMS Rules 157.37 and/or, 157.36(b) and/or, (c).

Hitchcock, Mike, Blanco, TX. 24 months probated suspension of EMT certification through October 22, 2003. EMS Rules 157.37(c)(2)(3)(G).

Horner, Jason, Houston, TX. 12 months probated suspension of EMT certification through February 19, 2003, a misdemeanor conviction. EMS Rules 157.37 and/or, 157.36(b) and/or, (c).

* **Hughes, Albert**, Houston, TX. 12 months probated suspension of ECA certification through September 4, 2003, a misdemeanor conviction and a felony deferred adjudication violation of EMS Rules 157.37 and/or, 157.36(b) and/or, (c).

Hungerford, Nancy, San Antonio, TX. Twelve (12) month probated suspension of EMT certification through June 27, 2003, misdemeanor convictions EMS Rules 157.37 and/or, 157.36(b) and/or, (c).

Jackson, Michael, Houston, TX. 48 months probated suspension of EMT certification through March 7, 2006, a felony conviction. EMS Rules 157.37 and/or, 157.36(b) and/or, (c).

Jarmon, Sr., Joseph Lloyd, San Antonio, TX. Suspension of EMT certification thru October 2003 due to a CE Audit. EMS Rules 157.36(b)(1), (2), (21)(28).

Jenkins, Eric Tommy, Spring, TX., 12 months probated suspension of EMT-I certification effective August 2002. EMS Rules 157.36(b)(1); 157.36(b)(2); 157.36(b)(4); 157.36(b)(13); 157.36(b)(21); 157.36(b)(26); 157.36(b)(28).

Jimenez, Amanda, Spring, TX. Twenty four (24) month probated suspension of EMT certification through July 8, 2004, a felony conviction. EMS Rules 157.37 and/or, 157.36(b) and/or, (c).

Jones, Duke K., Houston, TX. 24 months probated suspension of EMT-P certification through September 24, 2003. EMS Rules 157.37(c)(2)(3)(G).

Kellar, Shanna, Terrel, TX. 4 years probated suspension of EMT certification through June 30, 2004. EMS Rules 157.44(c)(2)(B)(vii).

Kowalski, Michael, Friendswood, TX. 12 months probated suspension of EMT-

P certification through January 2003. EMS Rules 157.36(b)(2), (3), (26).

Leal, Victor John, San Antonio, TX. 24 months probated suspension of EMT certification effective July 31, 2002. EMS Rules 157.36(b)(1); 157.36(b)(2); 157.36(b)(21); 157.36(b)(28).

Lopez, Jacob R., Corpus Christi, TX. 12 months probated suspension of EMT certification through November 30, 2002. EMS Rules 157.37(c)(2)(3)(G).

Lowery, Jason, Houston, TX. 12 months probated suspension of EMT certification through May 16, 2003, a misdemeanor conviction. EMS Rules 157.37 and/or, 157.36(b) and/or, (c).

Mask, Steven, Abilene, TX. 24 months probated suspension of EMT certification through October 12, 2003. EMS Rules 157.37(c)(2)(3)(G).

Masters, Casey, Rowlett, TX. 24 months probated suspension of EMT certification through November 16, 2003. EMS Rules 157.37(c)(2)(3)(G).

Mata, Joseph, Uvalde, TX. 24 months probated suspension of EMT-I certification through November 2002. EMS Rules 157.36(b)(1), (4), (7), (13), (26) and (28).

Maurer, Garrison, Canyon Lake, TX. 48 months probated suspension of EMT certification through January 3, 2006. EMS Rules 157.37(c)(2)(3)(G).

Mbonu, Bonaventure, Houston, TX. Twelve (12) month probated suspension of EMT-I certification through August 7, 2003, a misdemeanor conviction and a felony deferred adjudication. EMS Rules 157.37 and/or, 157.36(b) and/or, (c).

McCormick, Christopher, Corpus Christi, TX. 12 months probated suspension of EMT certification through April 15, 2003, a misdemeanor conviction and deferred adjudication. EMS Rules 157.37 and/or, 157.36(b) and/or, (c).

McCrary, Ronnie, L., DeKalb, TX. 12 months probated suspension of EMT certification through January 3, 2003. EMS Rules 157.37(c)(2)(3)(G).

McDonald, Debra, Schertz, TX. 24 months probated suspension of EMT-P certification through April 2003. EMS Rules 157.36(b)(1), (6), (26) and (28).

McDonald, Krystal, Spearman, TX. 12 months probated suspension of ECA cer-

tification through June 27, 2003, a misdemeanor conviction. EMS Rules 157.37 and/or, 157.36(b) and/or, (c).

McGee, Thomas R., Kingsville, TX. 24 months probated suspension of EMT certification through January 11, 2003. EMS Rules 157.37(c)(2)(3)(G).

McGrew, Robert, Houston, TX. 24 months probated suspension of EMT certification through June 21, 2003. EMS Rules 157.37(c)(2)(3)(G).

McLeod, James, Burleson, TX. 43 months probated suspension of EMT certification through January 10, 2006, a misdemeanor conviction. EMS Rules 157.37 and/or, 157.36(b) and/or, (c).

Medina, Patricia, Zapata, TX. 12 months probated suspension of EMT certification through July 31, 2003, a misdemeanor conviction. EMS Rules 157.37 and/or, 157.36(b) and/or, (c).

Mettham, Andrew, Amarillo, TX. 24 months probated suspension of EMT certification through May 28, 2004, a felony deferred adjudication. EMS Rules 157.37 and/or, 157.36(b) and/or, (c).

Meyn, Jason, Bayview, TX. 12 months probated suspension of EMT certification through February 19, 2003, a misdemeanor conviction. EMS Rules 157.37 and/or, 157.36(b) and/or, (c).

Miller, Jason, Corpus Christi, TX. 24 months probated suspension of ECA certification through October 22, 2003. EMS Rules 157.37(c)(2)(3)(G).

Mitchell, Marklyn, Stockton, TX. 24 months suspension of EMT-I certification through April 12, 2003. EMS Rules 157.51(b)(16), (23), (24), (25), (28) and 157.44(c)(1)(C).

Mitchell, Zane, Alvarado, TX. 6 months actual suspension followed by 49 months probated suspension of EMT-P certification through September 8, 2006, a misdemeanor/felony or conviction. EMS Rules 157.37 and/or, 157.36(b) and/or, (c).

* **Moncada, Gabriel**, San Antonio, TX. 12 months probated suspension of EMT certification through September 4, 2003, a misdemeanor conviction and a felony deferred adjudication violation of EMS Rules 157.37 and/or, 157.36(b) and/or, (c).

Moreno Jr., Pedro, Harlingen TX. 12 months probated suspension of EMT-P cer-

DISCIPLINARY ACTIONS

tification through March 7, 2003, a misdemeanor conviction. EMS Rules 157.37 and/or, 157.36(b) and/or, (c).

Nelson Jr., Melvin, McGregor, TX. Suspension of ECA certification thru June 2004 due to a CE Audit. EMS Rules 157.36(b)(1), (2), (21)(28).

Nickels, Nicky, Muleshoe, TX. 12 months probated suspension of EMT-P certification through March 4, 2003, a misdemeanor conviction. EMS Rules 157.37 and/or, 157.36(b) and/or, (c).

North Bosque County EMS, Inc., Meridian, TX. 24 months probated suspension through January 31, 2003 and an administrative penalty of \$5000 probated through January 31, 2003. EMS Rules 157.16(b) and (c) and (d)(4), (14), (17) and (19).

North Texas EMS, Fort Worth, TX. 24 months probated suspension and administrative penalty of \$6,000 against provider license through January 10, 2004. EMS Rules 157.16(b); 157.16(c); 157.16(d)(1), (10), (11), (12), (14), (19); 157.11(l)(1), (3), (12), (13) and (e)(6).

* **Northcutt, Gary**, Smyer, TX. 12 months probated suspension of EMT certification through August 29, 2003, a misdemeanor conviction. EMS Rules 157.37 and/or, 157.36(b) and/or, (c).

Nowell, Brian, Red Oak, TX. 24 months probated suspension of EMT certification through August 7, 2004, misdemeanor convictions. EMS Rules 157.37 and/or, 157.36(b) and/or, (c).

Orta, Fermine, Roma, TX. 24 months probated suspension of ECA certification through November 2003. EMS Rules 157.36(b)(1), (2), (17), (18), (21) and (28).

Oujesky, David, Arlington, TX. 12 months probated suspension of EMT-I certification through July 29, 2003, a misdemeanor conviction. EMS Rules 157.37 and/or, 157.36(b) and/or, (c).

* **Owens, Brian**, Smithville, TX. Decertification of the EMT certification effective September 10, 2002. EMS Rules 157.36(b)(1); 157.36(b)(2); 157.36(b)(9); 157.36(b)(26); and 157.36(b)(28).

Parker, Michael, Waco, TX. Suspension of EMT certification thru September 2005. EMS Rules 157.36(b)(1), (2), (10), (21), (28).

Perez, Ariel, Crystal City, TX. 12 months probated suspension of EMT certification

through June 2003. EMS Rules 157.36(b)(1); 157.36(b)(2); 157.36(b)(7); 157.36(b)(14); 157.36(b)(18); 157.36(b)(21); and 157.36(b)(28).

Phillips, Earl, Manchaca, TX. 36 months probated suspension of EMT certification through April 9, 2005, a felony deferred adjudication. EMS Rules 157.37 and/or, 157.36(b) and/or, (c).

Pina, Sonny, East Bernard, TX. Twelve (12) month probated suspension of EMT certification through June 27, 2003, misdemeanor convictions. EMS Rules 157.37 and/or, 157.36(b) and/or, (c).

Pinedo, Marisela, Los Fresnos, NM. Probated suspension of EMT-I certification through June 1, 2006. EMS Rules 157.44, 157.51(b)(16) and (c).

Pippin, Brian, Lipan, TX. 48 months probated suspension of EMT certification through April 9, 2005. EMS Rules 157.37(c)(2)(3)(G).

* **Pounds, James**, Pflugerville, TX. 12 months probated suspension of EMT certification through August 12, 2003, a felony deferred adjudication. EMS Rules 157.37 and/or, 157.36(b) and/or, (c).

Pulido, Gilbert, Laredo, TX. Suspension of EMT certification thru September 2003. EMS Rules 157.36(b)(1), (2), (10), (21), (28).

Rankel, Richard, Spring, TX. 12 months probated suspension of EMT certification through February 11, 2003, a misdemeanor or conviction. EMS Rules 157.37 and/or, 157.36(b) and/or, (c).

Razo, Ramon Jr., Pharr, TX. 12 months probated suspension of EMT-I certification through May 10, 2003, a misdemeanor conviction. EMS Rules 157.37 and/or, 157.36(b) and/or, (c).

Reece, Shawn, Houston, TX. 12 months probated suspension of EMT certification through March 4, 2003, a misdemeanor conviction. EMS Rules 157.37 and/or, 157.36(b) and/or, (c).

Reel, Amanda, Longview, TX. 12 months probated suspension of EMT-P certification through September 2003. EMS Rules 157.51(b)(1), (2), (10) and (25).

Rehonic, Victor, Grande Prairie, TX. 12 months probated suspension of EMT-P certification through February 13, 2003, a misdemeanor conviction. EMS Rules 157.37 and/or, 157.36(b) and/or, (c).

* **Reyes, Richard**, El Paso, TX. 12 months

probated suspension of EMT certification through August 12, 2003, a misdemeanor conviction. EMS Rules 157.37 and/or, 157.36(b) and/or, (c).

Rhodes, Linda, Wimberly, TX. 48 months probated suspension of ECA certification through June 24, 2006, a misdemeanor and felony deferred adjudication. EMS Rules 157.37 and/or, 157.36(b) and/or, (c).

Riley, Stephen, Humble, TX. 47 months probated suspension of EMT certification through December 10, 2005. EMS Rules 157.37(c)(2)(3)(G).

Ripley, Jimmy J., Winters, TX. 24 months probated suspension of EMT certification through February 5, 2003. EMS Rules 157.37(c)(2)(3)(G).

Rocha, Carolina, Carrizo Springs, TX. 6 months suspension followed by 24 months probated suspension of the EMT-I certification through March 2004. EMS Rules 157.51(b)(1), 157.51(b)(2), 157.51(b)(10) and 157.51(b)(25).

Rodriguez, Deinea, Houston, TX. 24 months probated suspension of EMT certification through February 11, 2004, a misdemeanor or conviction. EMS Rules 157.37 and/or, 157.36(b) and/or, (c).

Roquemore, Joseph, Atlanta, TX. 48 months probated suspension of EMT certification through August 9, 2005. EMS Rules 157.37(c)(2)(3)(G).

* **Ruffin, Rodney**, Fort Worth, TX. 24 months probated suspension of EMT certification effective August 2002. EMS Rules 157.36(b)(1); 157.36(b)(2); 157.36(b)(4); 157.36(b)(13); 157.36(b)(26); 157.36(b)(28).

Ruiz, Ramon, Van Horn, TX. 12 months probated suspension of the EMT certification through March 2003. EMS Rules 157.36(b)(1); 157.36(b)(2); 157.36(b)(7); 157.36(b)(26) and 157.36(b)(28).

* **Saenz, Pablo**, McAllen, TX. 12 months probated suspension of EMT certification through August 20, 2003, a misdemeanor conviction. EMS Rules 157.37 and/or, 157.36(b) and/or, (c).

Salinas, Rene, McAllen, TX. 51 months probated suspension of EMT certification through April 25, 2006, for a felony conviction. EMS Rules 157.37; 157.36(b), (c).

Salazar, Eloy, Corpus Christi, TX. 12 months probated suspension of EMT-I certification through March 11, 2003, a

DISCIPLINARY ACTIONS

misdeemeanor conviction/deferred adjudication. EMS Rules 157.37 and/or, 157.36(b) and (c).

* **Seibert, Eric**, Houston, TX. 24 months probated suspension of the EMT-P certification through September 2004. EMS Rules 157.36(b)(1); 157.36(b)(2); 157.36(b)(6); 157.36(b)(9); 157.36(b)(26); and 157.36(b)(28).

Shaver, John, Mauriceville, TX. Denial of application for certification effective March 20, 2002. EMS Rules 157.36(b)(1); 157.36(b)(2); 157.36(b)(4); 157.36(b)(13); 157.36(b)(15); 157.36(b)(18); 157.36(b)(26) and 157.36(b)(28).

Shipp, Patrick L., Laneville, TX. 4 years probated suspension of EMT-I certification through July 28, 2004. EMS Rules 157.44(c)(2)(B)(vii).

Smith, Danny, R., San Antonio, TX. 12 months probated suspension of EMT-P through March 4, 2003, a misdemeanor pre-trial diversion probation. EMS Rules 157.37 and, 157.36(b) and (c).

Smith Jr, Roosevelt, Houston, TX. 48 months probated suspension of EMT certification through November 5, 2005. EMS Rules 157.37(c)(2)(3)(G).

Smith-Green, Tonya Sue, Burleson, TX. 48 months probated suspension of EMT certification through October 15, 2003. EMS Rules 157.44, 157.51(b) and (c), and 157.53, felony/misdemeanor convictions.

Spears, Richard D., Iowa Park, TX. 24 months probated suspension of EMT certification through September 11, 2003. EMS Rules 157.37(c)(2)(3)(G).

Spencer, Shannon Ray, Deer Park, TX. 12 months probated suspension of EMT certification through November 26, 2002. EMS Rules 157.37(c)(2)(3)(G).

Steger, John S., Denton, TX. 24 months probated suspension of EMT certification through May 15, 2003. EMS Rules 157.37(c)(2)(3)(G).

Stillwell, Landon, Dallas, TX. 26 months probated suspension of EMT certification through November 6, 2003. EMS Rules 157.37(c)(2)(3)(G).

Strimpell, Marc, San Antonio, TX. 24

months probated suspension of EMT-P certification through April 4, 2003. EMS Rules 157.37(c)(2)(3)(G).

Sulecki, Christopher, Hockley, TX. 24 months suspension of the EMT certification through February 2004. EMS Rules 157.36(b)(1); 157.36(b)(2); 157.36(b)(7); 157.36(b)(26); and 157.36(b)(28).

Swoboda, Michael, College Station, TX. 12 months probated suspension of EMT certification through August 7, 2003, a misdemeanor conviction. EMS Rules 157.37 and/or, 157.36(b) and/or, (c).

Tadlock, Dorthy, Mart, TX. 12 months probated suspension of ECA certification through June 27, 2003, a misdemeanor conviction. EMS Rules 157.37 and/or, 157.36(b) and/or, (c).

Thornton, Odis C., College Station, TX. 48 months probated suspension of EMT certification through June 18, 2005. EMS Rules 157.37(c)(2)(3)(G).

Trans Care Medical Transport, Fort Worth, TX. 12 months probated suspension of the EMS provider's license and a \$5,000 administrative penalty, which all but \$1,000 is probated for 12 months through February 28, 2003. EMS Rules 157.16(b); 157.16(c); 157.16(d)(1); 157.16(d)(19); 157.11(1)(13); 157.11(i)(1)(E); and 157.11(i)(1)(L).

Trevino, Robert P., Troy, TX. 12 months probated suspension of EMT-I certification through December 15, 2002. EMS Rules 157.37(c)(2)(3)(G).

Turnbow, Brandon L., Lubbock, TX. 24 months probated suspension of EMT certification through March 14, 2003. EMS Rules 157.37(c)(2)(3)(G).

Turner, John, Thorndale, TX. 12 months probated suspension of EMT certification through August 7, 2003, a misdemeanor conviction. EMS Rules 157.37 and/or, 157.36(b) and/or, (c).

Van Meter, Ronald, S., Midland, TX. 36 months probated suspension of EMT certification through December 17, 2004. EMS Rules 157.37(c)(2)(3)(G).

Wann, Carey, Boscoe, TX. Decertification of EMT certification effective May 20,

2002. EMS Rules 157.36(b)(1); 157.36(b)(2); 157.36(b)(4); 157.36(b)(18); 157.36(b)(26); and 157.36(b)(28).

Warren, Andrew, Floresville, TX. 36 months suspension (first 18 months actual suspension, second 18 months probated suspension) of EMT-I certification through December 2004. EMS Rules 157.51(b)(25).

Waters, Christopher, Austin, TX. 12 months probated suspension of EMT certification through March 23, 2003, a misdemeanor conviction. EMS Rules 157.37 and/or, 157.36(b) and/or, (c).

Whinery, Louie, Diboll, TX. Decertification of the EMT certification effective March 20, 2002. EMS Rules 157.36(b)(1), and 157.36(b)(2), and 157.36(b)(6), and 157.36(b)(23), and 157.36(b)(26), and 157.36(b)(28), and 157.36(b)(29).

Williams, David T., Dallas, TX. 24 months probated suspension of EMT certification through November 26, 2003. EMS Rules 157.37(c)(2)(3)(G).

Wood, Andrew, Whitesboro, TX. 12 months probated suspension of EMT certification through July 15, 2003, a misdemeanor conviction and a felony deferred adjudication. EMS Rules 157.37 and/or, 157.36(b) and/or, (c).

* **Wulf, Dawn**, Flatonia, TX. 24 months suspension of the EMT certification through September 2004. EMS Rules 157.36(b)(1); 157.36(b)(2); 157.36(b)(3); 157.36(b)(4); 157.36(b)(7); 157.36(b)(13); 157.36(b)(26); and 157.36(b)(28).

Zachary, Jessie L., Humble, TX. 48 month probated suspension of EMT-I certification through December 5, 2004. EMS Rules 157.37(c)(2)(3)(G).

Zais, John, Mineral Wells, TX. 36 months probated suspension of EMT certification through November 7, 2004. EMS Rules 157.37(c)(2)(3)(G).

Zamora, Diane, Temple, TX. 12 month probated suspension of EMT-I certification through June 3, 2003, a misdemeanor deferred adjudication. EMS Rules 157.37 and/or, 157.36(b) and/or, (c).

The Texas Health and Safety Code can be found at <http://www.capitol.state.tx.us/statutes/hstoc.html>. All of the Texas Administrative Code can be found at <http://lamb.sos.state.tx.us/tac/>. To find EMS-specific information in the Texas Administrative Code, go to www.texas.gov click on Laws and Criminal Justice, click on Laws, Codes and Statutes, click on Texas Administrative Code, click on TAC Viewer, click on Title 25 Health Services, Part I Texas Department of Health, Chapter 157 Emergency Medical Care. TDH Index of EMS/Trauma Systems Policies can be found at <http://www.tdh.state.tx.us/hcqs/ems/spolicy.htm>

Meetings & Notices

Calendar

December 7-8, 2002. **PALS Provider Course.** Nurse/physician contact hours. \$200, text included. Pearland College Center. Registration deadline: November 20. 281/756-3807.

December 7-8, 2002. **PALS Instructor Course.** \$200, text included. Registration deadline: November 20. Pearland College Center. 281/756-3807.

February 21-22, 2003. **EMS State of the Science: A Gathering of Eagles V.** Presented by the National Urban EMS Medical Directors Eagles Coalition. Dallas Renaissance Hotel, Dallas. Preconference class, February 19-21 at U.S. Secret Service Training Center in Irving. Contact Francie at 214/648-3784.

March 8-16, 2003. **Trauma in the Tropics 2003.** Educational cruise hosted by LifeLink Ohio Health, aboard the Carnival Spirit, guest and family welcome. Open to all EMS providers, nurses, physicians and other healthcare professionals. This year's eight day itinerary departs from Miami and stops

in St. Maarten, Barbados and Martinique. CEUs available through the National Registry of EMTs and ONA approved. Contact Rick Dawson 614/871-0304 or rdawson1@columbus.rr.com.

April 18-19, 2003. **First Annual Central Texas Antique Fire Truck Muster.** Hosted by Moffat VFD & Temple Fire/Rescue. Antique fire truck showings, booths, demonstrations and parade. Proceeds go to safety programs and equipment funding. For info contact Chief Hal Pagel 254/986-8388 or Chief Lonzo Wallace 254/298-5682.

Jobs

EMT/Security: Vescom Corporation is currently accepting applications. FT/PT positions. Point Comfort, Corpus Christi area. EMT-certified, 18 or older, high school diploma/GED and no criminal history. Point Comfort area, contact Dillard Schooley at 361/987-6439, pager 361/503-2859. Contact Shane Clark at 361/777-2311. *

EMT-Paramedic: Eastland Memorial Hospital is accepting applications. Benefits package, retirement plan available. Contact HR, Eastland Memorial Hospital, 304 S. Daughtery, Eastland, TX 76448, 254/629-2601 ext. 364, fax 254/629-8929. *

Paramedic: Ruidoso EMS is hospital-based, ALS EMS system covering over 4,200 square miles of Lincoln County and Mescalero Reservation. NREMT or able to obtain NM licensure. Contact Stover 505/430-8500. Mail resumes to Ruidoso EMS, attn: Jim Stover, P.O. Box 8000, Ruidoso, NM 88355, fax 505/257-3617, rlcems@zianet.com *

Part-time opening: To conduct examinations for a natl comp, Portamedic. Examinations include physical examination (medical history, vital signs and physical measurements only), venous blood and urine samples and EKGs. Contact Ray Otley, Tyler, TX 800-545-9703. *

Paramedics: Full-time position. Faith Community Hospital EMS. MICU, primary 9-1-1 provider for Jack Co, TX. Critical care paramedic training pro-

vided. Benefits: 24-hour shifts, competitive wages. Current Texas paramedic certification reqd. Contact J.D. Hailey 940/567-6633, www.faithcommunityhospital.com *

Paramedics/EMT-Is: Assured Ambulance has FT/PT openings for qualified personnel. Competitive salaries, benefits, some uniform items furnished. Contact Lynn Seals or Jacqui Durvernay 281/879-7388. *

Paramedics/EMTs: Scott & White Pre-Hospital Services based in Temple, Texas is seeking applicants. Most hold current unrestricted EMT certification from Texas Department of Health. To send resume or obtain application contact Scott & White Human Resources, 2401 S. 31st Street, Temple, Texas 76508. 254/724-3776 or fax 254/724-1631, careers@swmail.sw.org. +

Medical Communications Controller: Scott & White Pre-Hospital Services based in Temple, TX seeking qualified applicants. Must have one year of EMS dispatching and or field operations experience. Hold current unrestricted EMD and EMT certification, or obtain within one year of employment. Resume or application to Scott & White Human Resources, 2401 S. 31st Street, Temple, Texas 76508. 254/724-3776 or fax 254/724-1631, careers@swmail.sw.org. +

EMS District Manager: Scott & White Pre-Hospital Services based in Temple, TX is seeking qualified applicants. Provides management and supervision to our ambulance and EMS operations in Milam County. Associates degree or equivalent, current unrestricted EMT certification from Texas Department of Health. Six years of full-time EMS experience and two years supervision experience. Send resume or application to Scott & White, Human Resources, 2401 S. 31st St., Temple, TX 76508. 254/724-3776 or fax 254/724-1631, careers@swmail.sw.org. +

Paramedic: Harris County Emergency District-1 now accepting applications for full time, part time and PRN paramedics positions. Must be 21 years of age and currently certified as Texas EMT-Paramedic. To obtain application www.HCESD-1.org or information @HCESD-1.org or call 281/449-3131, fax

Deadlines and information for meetings and advertisements

Deadline: Meetings and notices must be sent in six weeks in advance. Timeline: After the pages of this magazine have completely gone through editorial, design and layout, the magazine goes to the printshop to get printed (a 15-working-day process), then on to our mailing service (a 4-day process), and then to the post office to get mailed out. Please send in your calendar items six weeks in advance to make the next issue.

Cost: Calendar items are run at no charge. Calendar items run in the meeting section until just prior to the meeting or class. Classified ads run for two issues unless we are notified to cancel the ad.

Fax or mail: Calendar items can be faxed to 512/834-6736 or mailed to *Texas EMS Magazine*, Texas Department of Health, 1100 West 49th Street, Austin, TX 78756-3199. Call 512/834-6700 if you have a question about the calendar section.

Meetings & Notices

281/227-3335.+

EMT-B/ EMT/Clerk II: Kinney Co. EMS Brackettville, Texas accepting applications. Full county employee benefit package. Contact Carolyn Rutherford 830/563-9090 or fax resume to 830/563-9949.+

EMTs/Paramedics/Dispatchers: Prime Care ambulance is now hiring part and full time providers in the Houston area. Competitive compensation and health benefits. Contact 713/521-1424 or fax resume 713/521-1496.+

EMS Instructor: Cy-Fair college Houston, TX. Position Ref.# 80081. Teach full range basic, intermediate, and paramedic courses. Associate's degree in EMS technology and current Texas certification. Three years EMS field experience. Go to job.nhmccd.edu. or Call Maria Anderson 281/260-3887.+

Firefighter/EMTs: RTFC a private industrial fire department. Hiring for positions in refinery fire suppression and emergency operations located in Corpus Christi & Houston area. Competitive compensation and benefit package. Contact RTFC's human resources department by phone 361/885-7226 or e-mail mgarbutt@rtfc.org.+

Paramedics: Washington Co. EMS. Full-time/PRN openings. Salary begins at \$33,000. Excellent benefits including retirement, vacations and merit pay raises. Opportunity for advancement. 24/48. Call Kevin Deramus, LP-Clinical Operations Magr. Call or e-mail 979/277-6268 or kevinmv1@hotmail.com

For Sale

For Sale: 4 Type II ambulances, 1 WC van w/ capacity for 3. AEDs new never used. Heartstreams, 3 units. Contact Ruben 956/723-3199.*

For Sale: 1991 Ford E350 Type II ambulance. Runs good, 91000 miles. \$8000. Contact 281/837-8375.*

For Sale: 1997 Ford E350 Type II Ambulance. McCoy Miller mods, runs good, 54000 miles. \$25000. Contact Perry Dobbs or Derek Henry at 281/837-8375 for more information.+*

For Sale: 1994 Marque Type III,

strobes, bull air horns, inverter, Ferno stretcher. Call for pricing: 409/770-4272.*

For Sale: 2001 Braun Express, inverter, bull air horns, full strobes, Stat-Trac w/Excalibur stretcher. Ford and manufacturer's warranty remain. Call for pricing: 409/770-4272. *

For Sale: \$35,00; 1999 F350 diesel, type 1 ambulance excellent condition low mileage. Contact Joe or Dickey 281/459-2807.*

Miscellaneous

CPR manikins, new and used: CPR supplies, airways, manikin face shields, face pieces, parts. Manikin maintenance cleaning and repairs. Rental manikins available. Contact Ron Zaring, Manikin Repair Center, Houston, 281/484-8382, fax 281/922-4429.+

Pharmacy Technician Program: For more information call Alvin Community College. 281/756-3807.*

CE Solutions: EMS CE, accepted in more than 40 states. Internet, software and workbook formats. Click on www.ems-ce.com for 2 free CE hours (first visit), call 888/447-1993.*

Execu Med, Inc: Professional medical management and billing services. Insurance, billing and data entry. Contact 972/780-9770 fax: 972/780-9692 or www.execumedinc.com.*

EmCert.com: Offers online CE—TDH and CECBEMS approved for EMS/Fire professionals. Subscription pricing for individuals or groups. One hour

on-line CE. Call 1-877-367-4376.+

Provider Billing: Electronic claims submission and collections for ambulance services. Handle claims all over Texas. Medicare and Medicaid. Contact 800/506-4665 or fax 800/506-8248.*

Tarrant County College EMS Program: Offers CPR, ACLS, BTLs, PEPP, EMT, EMT-P refresher and EMS instructor classes. Call 817/515-6657 or online @ tccd.net.*

Protech Interaction Communications Inc: Professional development training consultants. 2-day certification course on violent patient management and EMS defensive tactics. Locations TBA. Contact interact@trainingexperts.biz for dates.+

Expert Billing: Specializing in EMS billing. Medicare, Medicaid and other insurances billed electronic by experienced billing representatives. Contact 713/635-6756 or fax 713/631-1404.+

South Texas Billing Specialist: Complete billing services for ambulance services. Call and find out how we may be able to increase your monthly revenue. We specialize in ambulance billing. Contact 956/342-7518.+

Rope Rescue Training: Training for fire, EMS, law enforcement and industry in Technical Rescue, Rope Rescue, Fire Rescue, Cave Rescue, Vehicle Rescue and Wilderness First Aid. John Green 361/938-7080, www.texasroperescue.com.+

+ This listing is new to this issue.

* Last issue to run (If you want your ad to run again please call 512/834-6748.)

Placing an ad? Moving? Renewing your subscription?

Placing an ad? To place an ad or list a meeting date in this section, write the ad (keep the words to a minimum, please) and fax to: *Texas EMS Magazine*, 512/834-6736 or send to *Texas EMS Magazine*, 1100 West 49th, Austin, TX 78756-3199. Ads will run in two issues and then be removed.

Moving? Let us know your new address—the post office may not forward this magazine to your new address. Use the subscription form in this magazine to change your address, just mark the change of address box and mail it to us or fax your new address to 512/834-6736. We don't want you to miss an issue!

Renewing your subscription? Use the subscription form in this magazine to renew your subscription and mark the renewal box.

EMS Profile: *Watauga Department of Public Safety*



Watauga Department of Public Safety personnel include, from left, Steve Caudle, firefighter/EMT; Marty Galchutt, police officer/EMT; David Werchan, firefighter/paramedic; and Melissa McClearn, paramedic.


Number of Personnel: The Watauga Department of Public Safety (WDPS) is divided into patrol and fire/EMS. The patrol division has 17 personnel who are cross-trained as firefighter/EMTs. These cross-trained personnel work four-day, 12-hour shifts. The patrol personnel act as first responders to EMS incidents and as line firefighters at fire emergencies. Each cross-trained officer carries personnel protective clothing and breathing apparatus in the trunk of the other vehicle. Each 12-hour shift, one officer is designated as the EMS officer and carries protective clothing, basic EMS supplies and an AED in the trunk of his or her vehicle. The fire/EMS division is staffed with six firefighter/paramedics and three firefighter/EMTs divided into three 24/48-

hour shifts. The fire/EMS division is supported by an administrative staff of three licensed paramedics and one EMT-I. WDPS provides police, fire, and EMS services to approximately 22,000 citizens within a five square mile area.

Years in service: In June of 1982, WDPS was formed to provide fire personnel to support volunteer firefighters. Police officers received cross-training and became state-certified firefighters. In 1990, the department responded to a growth in population and a reduction in volunteer staffing by requiring all new public safety officers be trained to the EMT level. The responsibility of EMS first response transferred from the volunteer staff to the WDPS. In June of 2000, the city received notification from its private EMS provider that it would no longer offer services after October 1. The department presented a proposal to provide advanced life support treatment and transport and on October 1, 2000, the WDPS began providing ALS response to the citizens of Watauga. Medical control and continuing education is provided by Baylor Hospital at Grapevine under the direction of Dr. John H. Arsohn.

Number of units and capabilities: The department operates two MICU-licensed ambulances supported by four EMT-staffed patrol vehicles and a BLS engine crew. Each ambulance is equipped with LifePak-12 monitor/defibrillators capable of delivering 12-lead EKG, pulse oximetry, noninvasive blood pressure monitoring and external pacing. All MICU personnel are certified firefighters and carry their personal protective clothing with them. The WDPS also provides personnel to support a regional hazardous materials response team and bomb squad.

Number of calls: In 2001, the department answered 1,085 calls; 873 were EMS-related with 616 patients transported.

Current Programs: The department is active in community education and presents multiple programs to area schools throughout the year. An AED has been placed in the Senior Citizens/Community Center and the staff are trained in its use. A wellness check day for seniors at the center is being planned. 

Bureau of Emergency Management
Texas Department of Health
1100 West 49th Street
Austin, Texas 78756-3199

Periodical
Rate Paid
At Austin, Texas