1349 Em 8/ Texas EMS Messenger

FIRE DE

Government Publications Texas State Documents

✓ AUG 2 4 1990

Depository Dallas Public Library

Texas Department of Health

July 1990

Texas Department of Health

Frank Bryant, Jr., M.D., F.A.A.F.P. Chairman, Texas Board of Health

Robert Bernstein, M.D., F.A.C.P. Commissioner of Health



COVER PHOTO: This photo by Linda Gheen, one of nearly a hundred entered in 1990's EMS Photo Contest, captures the emotion of emergency agencies working together to save Trauma victims. See story on page 12.

Texas EMS Messenger

July 1990 Volume 11, Issue 6 Table of Contents

- 3 From This Side Gene Weatherall's regular column.
- 4 Local and Regional EMS News -Laredo, Conroe, Port Arthur, Ireland, Calhoun County, Presidio make the news.
- 6 Changes in EMS Recent takeovers of public services by private providers and a 15-year look at Texas EMS.
- 10 Course Coordinator Survey Almost 67% of the educators surveyed felt very strongly that field personnel and educators should review certification exams.
- 12 **Texas Trauma Systems** Trauma is preventable and we need to educate the public about House Bill 18's Texas Trauma System.

13 Texas EMS Conference - Four-page pullout.

- 17 EMT: Beyond the Lights and Sirens -Reviewed and excerpted.
- 20 TEXEMS Free run record software.
- 24 Crossword Work it, send it in, maybe win a conference registration.
- 25 Recycling with S.A.V.E.S. \$46,000 is the recycling goal of this group of South Texas volunteers.
- 26 Medicaid/Medicare Billing tips for providers.
- 27 EMS Week Awards Send in your nominations before September 1.

Bureau of Emergency Management

Texas EMS Messenger Editorial Board

Gene Weatherall, Bureau Chief

Alana S. Mallard, Editor

Jan Brizendine, Assistant Editor

Members

Tom ArdreyPhil LockwoodTed ChinnGail McNeelyLouis HartleyPam PriceRick HarrisPaul TaborJerry LesterPam WestJim Zukowski

Texas EMS Messenger (ISSN 0148-8235) is published January, February, March/April, May, June, July, August, September/October, November and December by the Texas Department of Health, Bureau of Emergency Management, 1100 West 49th Street, Austin, Texas 78756-3199. Second-class postage paid at Austin, Texas.

Direct correspondence and telephone calls to Alana S. Mallard, Editor, (512) 458-7550.

The Texas EMS Messenger will print articles and photographs submitted by EMS providers, educators, and field personnel.

Letters to the Editor should be typed and no longer than 100 words. Subscriptions are free to provider firms and educational institutions -- \$15 for two years for others. Direct mail to Texas EMS Messenger, Texas Department of Health, 1100 West 49th St., Austin, Texas 78756-3199.

POSTMASTER: SEND ADDRESS CHANGES TO TEXAS EMS MESSENGER, 1100 WEST 49th STREET, AUSTIN, TEXAS 78756.

his month we will see the final adoption of the EMS provider rules that will change our permitting process for ambulances to a license process for EMS providers. As many of you are aware, this will be one of the most dramatic changes in recent EMS history. The professionalism of EMS will improve with the implementation of these new rules. Citizens of our state should be more comfortable with their local EMS firm, knowing that they have met a new set of professional standards. I would project that it will be in the not too distant future that you see EMS firms using their new state license as a marketing tool in their public information efforts. Only time and a lot of statistical effort will determine if these new license standards actually improve patient care.

It is somewhat surprising to realize that in just a few months the legislature will return to Austin for another regular session. My hat is off to TEMSAC under the leadership of Dr. David Prentice for their recently conducted Legislative Forum. This was a first in our EMS history for the state EMS advisory council to conduct such a meeting in which they sought statewide input for their legislative recommendations to the Texas Board of Health. My hat is also off to the many people from around the state that spent the time and effort to provide input into this system for the development of EMS legislation. At the present time it is projected that TEMSAC will discuss their legislative agenda with the Board of Health at their August meeting.

Another Texas EMS Conference is just around the corner. I think you will be pleased with the conference this year especially if you show up hungry. From the plans I have seen, there will be more meals served this year than at anytime in the past. The last count I had was five meals and for those of you who were in attendance last year, we will have tables. There will be an excellent continuing education program presented with some of the state's outstanding educators. Additionally, there will be a couple of extra attractions, such as the introduction of our new EMS mascot. We were very pleased this year to have secured a quarter page advertisment in JEMS magazine for our conference. Marion Garza, one of JEMS feature writers will join us for our conference this year. Look for our ad in the July or

August issue of JEMS.

The story of the recommended increase in training hours from the Education Committee of TEMSAC continues. Recently at a meeting in Lubbock the Education Committee formulated a recommendation to TEMSAC which would slightly increase the number of hours of training required for EMS certification.

We have already received quite a few calls on this issue from around the state, all of which have been opposed to increasing the hours. Possibly this would be a good opportunity to remind everyone of the rule development process. Ideas and recommendations that are developed within the committees of TEMSAC are recommended to TEMSAC. which in turn may approve the suggestions and recommend them to the Texas Board of Health. If the suggestions are approved by the Board of Health, they are published for public comment for a period of 90 days. After the 90 day public comment period the proposed rules are again reviewed by TEMSAC and recommendations made to the Board of Health regarding final adoption. Any proposed rule changes are always published in the Texas EMS Messenger to provide everyone ample opportunity for input. If you have questions regarding the rule development process please let us know and we will print the response in the Texas EMS Messenger.

From This Side



Gene Weatherall Chief Bureau of Emergency Management

Hmmm.....

- Q. Why does the state ask EMS certification applicants to use black ink on their applications?
- A. All applications and correspondence are microfilmed because storage space is not available for the 14,000 applications the EMS Registry receives every year. The microfilm records are more legible when there is high contrast between the paper and the writing on the paper.

This is also one of the reasons we prefer that you obtain applications from the regional office, instead of making copies. Copied applications have a tendency to become muddy or gray, thus making the application more difficult to microfilm.

We appreciate it when the printing on your applications is legible and dark.

Local and Regional EMS News

Laredo trains firefighters as EMTs

The Laredo Fire Department EMS Division recently completed an EMT recertification course. All eleven students passed with an 86 average grade. The twenty-four students in Laredo's firefighter Cadet Academy finished their initial EMT course with an 84 average grade. Both courses were coordinated and taught by new Course Coordinators, Fernando Espinola and Anthony Stahl.

Laredo firefighters must be certified as EMTs or paramedics.

Laredo Fire Department's Rescue Unit 2 and Engine 7 recently responded to a train accident where a patient's left arm and both legs had been amputated. The firefighters and paramedics freed the patient, providing aid for over 45 minutes, and transported him and the amputated extremities to Laredo's Mercy Hospital. The patient was in good condition by early last month.

RADEF Shop personnel honored by federal government

Calhoun County EMS honored

Calhoun County EMS in Port Lavaca was honored recently by Texas Association of EMTs as ALS System of the Year. TAEMT gives several awards at the annual symposium each Spring, and other awards were: Outstanding Achievement, Pat Crutsinger; and the President's Award, David Stone and David Rives.



Mike Rutherford represented the Bureau's Radiological Instrument Maintenance and Calibration Program staff in Emmitsburg, Maryland recently when he received

the "Excellence in Emergency Management" award. Harry Harrison of the Federal Emergency Management Agency presented the award to Rutherford, Tom Payne, Bill Patrick, and David Ramsey for exceptional performance in preparing a radiological instrument stockpile for Texas for use in case of a large scale radiological disaster.

The RADEF Shop stocks and maintains 65,000 radiological instruments all over Texas with civil defense directors, industries, government agencies, EMS and fire organizations, and radiological training instructors.

Conroe paramedic elected TAEMT president

At its annual symposium in San Antonio in May, Texas Association of EMTs elected Conroe's Scott Springfield president of the organization. Springfield, a paramedic with Montgomery County Hospital District EMS, served as vice-president of TAEMT for the past year, and is also active in Texas Society of Search and Rescue.

Donelle Stone is TAEMT's new Executive Secretary. She replaces Pat Crutsinger.

Quantum donates \$37,000 to EMS

EMS organizations in the Port Arthur area were the happy recipients of contributions ranging from \$1,500 to \$15,000 when Quantum Chemical Corporation gave a total of \$37,000 to support emergency medical services in communities where Quantum USI and Suburban Propane Divisions are located. On May 1 representatives from Groves Fire Department, Lumberton EMS, American Heart Association, Diamond EMS, Knowles Ambulance Service, and Lamar University accepted the awards from Bill Galloway, Manager of the USI Division's Port Arthur plant.

Also honored during the May 1 ceremonies were employees of the Port Arthur USI Division plant who volunteer for EMS: Gene Browning, Martin Crouch, Richard Donald, Cecil Frederick, Lisa Hagger, Cletha Hare, Rex Hunter, Gilbert Jones, Larry Mannino, James McDuffie, Jr., and Helen Reeves.

Quantum has donated a total of \$80,000 to Texas EMS since November, 1989.

Attention: Shamrock and Dublin EMS

We have received a request from an Irish "EMT/Ambulanceman" for patches, badges or other items that represent Texas EMS. If you want to swap EMS items write:

Martin Byrne, 15 Rosemount Estate, Dundrum Road, Dundrum, Dublin 14, Ireland. God'll love ya' for it!

Local and Regional EMS News

And while we're on the subject of EMS patches, our EMS patch board here at the Bureau has grown into four boards. Bill Baker has collected over three hundred patches from Texas services, other states, and a few other countries. So, if you have not already sent in a patch from your service for our board, do it soon. The boards will be displayed at the Doubletree Hotel during our Texas EMS Conference in September.

Send your patches to: Bureau of Emergency Management, 1100 West 49th Street, Austin, Texas 78756-3199, attention: Bill Baker.

And we'll love ya' for it!

TEMSAC and TTAC members elected to head associations

Faye Thomas, director of East Texas EMS in Corsicana, has been elected president of Texas Ambulance Association. Thomas represents local government providers on Texas EMS Advisory Council where she is serving her second six-year term.

Jamie Ferrell, the Trauma Technical Advisory Committee member representing nurses, has been elected to head the Texas chapter of the Emergency Nurse Association in 1991. Ferrell is clinical director of the emergency department at Northwest Hospital in Amarillo, Amarillo Medical Services, and the Panhandle Emergency Medical Services System.

Presidio EMS buys vehicle with Meadows Foundation grant



Residents of Presidio city and county pulled together to contribute \$10,000 and sign letters and petitions with 2,000 signatures to convince the Meadows Foundation to give Presidio EMS a grant to purchase a \$75,000 modular ambulance.

Ann Andrus, director of Presidio EMS, and Osvaldo Acosta, president of Presidio EMS, are taking possession of the vehicle in the photo as Andrus presents a \$75,000 check to Joe Lacher of Collins Ambulance. Presidio EMS personnel held a reception at the EMS building so community members could view the vehicle.

Cindy Hibbits wrote the grant request to Meadows Foundation, one of the largest foundations in Texas and among the twenty largest in the nation.

According to a June 7, 1990 Federal Communications Commission (FCC) news release, the secondary use of MED Channels 1 through 8 for the delivery of medical services is being restored. Administrative communications, however, will continue to be prohibited. Additionally, the Commission has restricted new non-eligible private carrier systems in the Special Emergency Radio Service to the one-way, paging-only channels.

It is no longer necessary to file waiver requests involving the use of MED Channels as required by the "ProNet" ruling of June 1988 to be in effect July 1, 1990.

This reversal by FCC demonstrates the significant results of Texas EMS providers, as well as the organizational support of the National Association of State EMS Directors, the Associated Public-Safety Communications Officers, Inc. (APCO), the International Municipal Signal Association, and the International Association of Fire Chiefs, Inc. Henry Nevares, Jr., the Bureau's communications specialist, said that an informal query of the FCC just prior to the commission's decision on June 1, 1990, revealed that 60% of the waiver requests were received from Texas. FCC Special Emergency Rule Changes Modified!

by Tom Ardrey

In the last year interesting changes have taken place

The Changing Face of EMS

In the last year interesting changes in emergency medical services providers have taken place in the northeastern part of our state.

In Wylie, a town of 3,200 in Collin County, the Fire Department EMS was replaced in June, 1989, by Lifeline Christian Care. In Grayson County in October, Life Force Ambulance took over the responsibility for EMS from the city-run Whitesboro service. In Kaufman, just east of Dallas, Presbyterian Hospital used to provide emergency medical services for that community and the southern half of Kaufman County; but in November, A-1 Ambulance based in Dallas began providing temporary emergency medical care for that area.

And most recently, the service in Hunt County has had a change of face. Prior to 1985, the City of Greenville provided EMS through the fire department. When Hunt Memorial Hospital District took over the responsibility for EMS in 1985 the hospital contracted with the Greenville Fire Department to continue providing emergency medical care. This February, EMS was taken over by Central Ambulance Service, a private firm with its main office in Dallas. When the contract was up for bids in the latter months of 1989, Central got the nod.

The owner of Central Ambulance, Darryl Quigley, states that his organization will make every effort to provide quality service to the residents of that county, and Quigley plans to work with the county's first responders in nearby small communities. The Greenville Fire Department, for the first few weeks after the changeover, responded to both cardiac and unconscious patient calls within the Greenville city limits. This Fire Department response has been discontinued according to City Manager, Ed Thatcher. The first responder groups in Hunt County have received excellent training and help with coordination and organization through the efforts of Deputy Fire Chief Robert Wood. "Chief Wood has done an outstanding job of coordinating and providing training for the first responder groups throughout Hunt County. His dedication, expertise, and accomplishments did not go unnoticed," said the Texas Department of Health Region 5 EMS Program Manager, Jimmy Dunn.

Thatcher, a newcomer to Greenville, having assumed the duties of city manager in September of 1989, was more of an observer than a participant in the EMS discussion. He said that the Fire Department received very few complaints and he felt they were doing a good job and were supported by the citizens. "I am surprised at the change in EMS delivery," said Thatcher.

Hunt County covers 840 square miles, has 1,263 miles of highway, and a population of 68,829, according to the 1990-91 Texas Almanac. The largest city in Hunt County by far, Greenville is centrally located and has a population of 27,750. The only other Hunt county city with a population greater than 2,000 is Commerce, which is located about 14 miles northwest of Greenville and has a population of 10,033. The other eight communities are quite small. The county's primary businesses are agribusiness, education, and manufacturing. The population of 68,000 is affected greatly on weekends and holidays by the recreation areas around Lake Tawakoni, which is located in the county's southeastern region.

Plain and simple, money brought about the change in EMS in Greenville. Fire Chief Dorsey Driggers stated that it cost the hospital district 1.3 million a year for the Fire Department contract. This was due in part to

Tom Ardrey is on the staff of the Texas EMS Messenger. the fact that the fire department operates under civil service which affected the pay scale of the firefighters engaged in EMS. The hospital district covered this expense to some extent through collection of payments from insured EMS patients. As the percentage of the population that is uninsured increases, collections become more and more difficult. The new provider, called Central Ambulance/ Hunt County, has a contract which pays \$800,000 per year as well as collections from users. Quigley said his company can and will do a competent job of collecting, because it is a fiscal necessity if his service is to continue. He expects to collect for between 70% and 80% of their responses.

According to the contract, Central Ambulance/Hunt County's average charge must not exceed \$360.00, and the service must be on the scene within 8 minutes from the time the call is received. At this time they are averaging 7 minutes on 90% of their runs, according to Quigley.

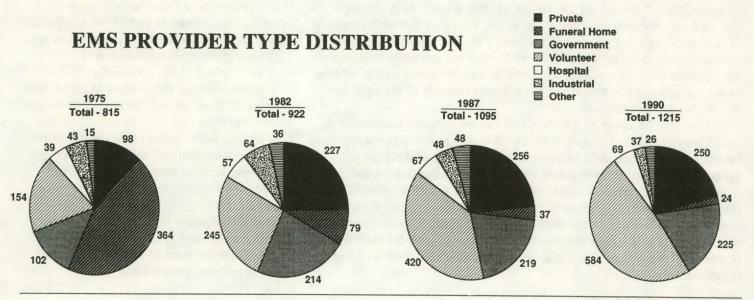
Central Ambulance has operated in Dallas since 1980, according to health department records, providing emergency service for a portion of unincorporated areas of Dallas county. "This new venture for Central is certainly a major undertaking," said Quigley. "New equipment acquisition alone has run considerably over a half million dollars and includes four new MICU ambulances." In addition to the equipment, Central/Hunt County hired 2 additional paramedics, for a total of 12 EMTs and 12 paramedics for Hunt County. Paramedics earn just under \$20,000.00 and EMTs just under \$17,000.00 yearly. Quigley points proudly to these salaries, and says he wants good people and

wants to pay them accordingly.

Central Ambulance/Hunt County is dispatched from Central Ambulance's main office in Dallas. Five different companies provide phone service to Hunt County causing a communications problem which Central was able to overcome by two 1-800 numbers and two additional phone lines that ring directly into Central's Communications Center from Hunt County. "The emergency vehicles are placed according to the frequency of need, geographically," says Quigley. "And all vehicles are tracked by a computerized system, similar to those used by many of the state's most sophisticated emergency services."

When Greenville Fire Department stopped providing prehospital emergency medical care twelve men were released from employment and four MICUs and three other vehicles had to be disposed of. Many people in the Greenville area and on the city council were left scratching their heads, wondering what was happening, according to Thatcher.

Those who watch for trends in EMS in Texas are also scratching their heads over this one wondering whether the trend in Texas is swinging back to private ownership. "It's something we'll be watching over time. Major metropolitan areas across the country have private EMS providers, such as Las Vegas and Tulsa and, here in Texas, Fort Worth's MedStar is a privately-owned service," said Gene Weatherall, Chief of the Bureau of Emergency Management. "But most of the cities in Texas with private contracts never had publicly provided EMS. Private EMS in places where it used to be a city or a county service is a new phenomenon in Texas."



Texas EMS Messenger July 1990

by Richard W. Harris, B.S. and Gene R. Willard, M.A.

Public or Private EMS: Is One Better than the Other?

For the past 15 years there has been much debate centering on the question, "Which is better, a privately supported emergency medical service or a publicly or government supported EMS?" Some of the articles written on this subject speak in broad terms regarding the pros and cons of running a particular type of service a certain way. Other writings describe specific EMS system models and the strengths and weaknesses of each model. Still others offer helpful hints designed to tell the reader how to operate one's service more efficiently.

Although the past has been informative and instructive regarding the do's and don'ts of private and public systems, precious little objective or scientific data report the effectiveness of private EMS operations over public ones or vice versa. To beg the question, "Which firm-type is better?" shows the desire for a simplistic answer to a tremendously complex question. To bring understanding out of confusion, the word "better" should be defined so that its meaning is more specific. It could be replaced by the terms prompt, efficient, and adequate, to list a few. This modifies the original question to read:

"Which is more prompt, private or public EMS?" or

"Which is more efficient in monetary terms, private or public EMS?" or "Which is more adequate in terms of reducing morbidity or mortality, private or public EMS?"

Using more specific terms brings clear focus to several ways to begin objectifying or measuring the performance of any EMS firm type whether it be public, private, funeral home, hospital, volunteer, or fire department.

Many of the indicators routinely used to measure EMS performance do so in a gross way by showing how well several components are working in tandem to achieve the desired result. One example is the measure of "True Response Time," defined as the amount of time elapsed from receipt of the call until the ambulance arrives at the scene. This time indicator measures: 1) how well <u>communications</u> are functioning (access to EMS, dispatch procedures and radio equipment), 2) whether or not <u>personnel</u> requirements are adequate (enough well-trained people to meet demand), and 3) whether or not <u>transportation</u> requirements are adequate (enough of the right kind of vehicles to meet demand).

There are hundreds of variables that can be collected to describe an EMS' activity. After collecting data, the next step in the evaluation process involves analyzing the data and comparing the results of the analysis against some agreed upon standard or norm. The comparison should show if the firm's performance exceeds or falls short of the mark. Many EMS firms do this, some in order to measure standards forced upon them by some external factor, e.g., the EMS firm that analyzes response times in order to see if it is within the five minute limit mandated by local statute. (Other EMS firms collect and analyze data on their own, without being mandated to do so.)

It is important to realize, however, that there is very little agreement on what objective criteria constitute effective EMS evaluation. The EMS Sensitivity Index, developed by National Highway Traffic Safety Administration and the National Association of State EMS Directors and being tested nationally is one of the first widely accepted sets of criteria used for EMS evaluation. However, there do not appear to be any scales or norms against which to rank the measures the Sensitivity Index attempts to objectify. A meeting was held in Cincinnati to try to develop EMS performance standards. Those in attendance concluded that the myriad of contrasting approaches to the issue made their task almost impossible.

With neither agreement on the evaluation criteria themselves nor how they should be measured, comparing private to public EMS becomes quite difficult from the onset. If a set of criteria and its measurement were ever identified, two identical EMS operations, one private, one public, would have to agree to participate in the study. Since no two EMS systems are identical, it becomes necessary to find as close a fit as possible for each of these unknown and unmeasured variables. Some of the criteria to include in seeking a close fit for the private and public firms are:

. demographics of the community

. geographics of the community

. EMS firm type information (ALS vs. BLS vs. MICU vs. ground service vs. helicopter service, etc.)

. EMS resource information (relates to firm type information and includes number and training level of personnel, number and types of vehicles, types and quantities of equipment)

. EMS budgeting information

. inventory and evaluation of the communities' medical resources and their predisposition toward EMS

. a study of the dynamics (demographic information) of each community during the study period

. the existence of morbidity/mortality data Such a study, though possible, would be difficult to conduct particularly with limited resources and without worthwhile goals and objectives stated from the onset. Even with well-defined goals and objectives, however, the results obtained by the micro-analysis of two types of EMS systems are apt to be cloudy. The results would also be subject to varied interpretation and criticism by the scientific community.

A Proposed Solution

One way to begin to evaluate EMS performance is to define a list of variables which credibly describes

- how long it takes EMS to respond
- how much it costs when it does respond
- how the patient fares after treatment.

Stated another way, EMS performance can be measured in terms of the purpose statement of Texas' Emergency Medical Services' Act: "The purpose of this Act is to provide for the <u>prompt</u> and <u>efficient</u> transportation of sick and injured patients, after necessary stabilization, and to encourage public access to such transportation in all areas of the state." If the notion of adequacy (adequacy being defined as patient outcome) is incorporated into the evaluative process, the result becomes a group of variables, which when collected and analyzed, serves as the backbone or core data set for describing and evaluating EMS.

Outcome, The "Final Word" Describing EMS Performance

The purpose of any EMS is to reduce death and disability. The "bottom line" measure of EMS' adequacy is patient outcome. Patient outcome can be quantified by using a tool called severity scoring. Severity scoring is a method whereby trained ambulance personnel assign points to various aspects of a patient's physiologic status. Glascow Coma Scale and Trauma Score are two widely used severity scoring tools. A patient's point total correlates to a theoretical percentage of survival. This theoretical survival percentage is then compared with the actual survival percentage to see how well an EMS is providing care.

For example a patient with a Trauma Score of 16 has a theoretical per- centage of survival of 99% - which is quite excellent. If ABC Ambulance Service treats 100 patients with a Trauma Score of 16, theoretically, 99 of the patients should live. However, if only 90 live, the large discrepancy between the theoretical survival rate and actual survival rate should alert EMS managers that their firm may be providing less than optimum care. Other measures of patient outcome include:

- percentage of cardiac arrests that are converted
- patient survival through hospital discharge, a mortality measure
- bed disability days, home confinement, work loss, and restrictions.

Conclusions

Quality assurance should include the use of objective measures. This equates to developing a list of evaluative criteria which, when analyzed, can be compared with a stated or accepted standard.

To change the wording of a study from, "Is private EMS better than public EMS?" to "Is private EMS more prompt in arriving at the scene than public EMS?" brings the study into clearer focus. The next step in comparing the two types of EMS is to select those data items which, when analyzed, would help to answer the specific questions about the performance of each firm type. However, the project's complexity rises exponentially when one realizes that these measures should be tested under near-identical conditions for the study results to be valid.

Each EMS firm should develop its own indicators for measuring promptness and efficiency. Over time the firm can compare these indicators to each other or against a statewide norm or benchmark. It can then modify its operations if necessary in an effort to improve existing performance. The EMS manager should then review the indicators several months after the modifications are made to see if the firm improved.

The proposed promptness, efficiency and eventual adequacy measures could be weighted in an effort to give emphasis to the most important measures. Adequacy or outcome measures would undoubtedly be the highest weighted measures. Promptness measures would probably be the next highest weighted measures, followed by statistics relating to efficiency. However, the weighting of each type of measure is not nearly as important as the overall picture the firm manager sees. That overall picture can influence the very future of the firm itself, but more importantly, the lives of the patients it serves. Gene Willard is Program Administrator of the EMS Division's EMS/Trauma Registry, and Richard Harris is a Program Specialist for the EMS Education Program.

NOTES

(1) C. Wright Mills. People, Politics, and Power. New York: Oxford University Press, p.554. (2) Ibid.

(3) Emergency Medical Services Act (article 44470, Vernon's Texas Civil Statutes), p. 1.

(4) U. S. Department of Health, Education, and Welfare. Evaluation Workbook For EMS. [DHEW Publication No. (HSA) 76-2021], section 1.1.

Education Program Surveys Course Coordinators by Richard Harris

In February, the EMS Education Program mailed this Certification Exam Survey to approximately one-third of the State's six hundred sixty Course Coordinators. Coordinators were selected at random, and of the two hundred twenty Coordinators polled, fiftyseven responded, approximately twenty-five percent.

An explanation of the survey instrument is important. On the left side of the survey are ten statements we asked the Coordinators to rank from one to five, using a Likert-type scale to quantify the level of agreement or disagreement with each statement. The results of the poll are tabulated and appear beneath the numbers one through five. The row of figures to the right of the number (NO.) indicates how many coordinators voiced their opinion in each category. The row of figures to the right of the percent sign (%) indicates the percentage of the total number of coordinators voting within each numerical category. Question ten asked for written comments regarding EMS certification exams. Some comments were positive, some negative, and some neutral.

EMS Certification Exam Survey

The Education Program 1. At the present time, the EMS certification will direct its resources examinations are effective. toward the positive objectives stated by the co-2. At the present time, the EMS certification ordinators in an effort to examinations measure a candidate's ability improve the quality of to perform at an entry level job. EMS certification exams in Texas. If you have 3. The technical content of the EMS certifiquestions regarding the cation examination is currently valid and survey or suggestions, reliable. please write or call us at (512)458-7550. 4. The passing score on the EMS certifica-The Education Program tion examinations should be changed from staff includes Debbie the current passing score of 70 to a Bradford, Program Adcriterion-referenced cut score based on ministrator: Rick Harris minimally-acceptable job performance. and Saleem Zidani, Program Specialists; and 5. In the past, the central office EMS staff Kaylene Farthing, Adhas been effective in developing certificaministrative Assistant. tion examinations.

			Iveutrai		Agree			
	1	2	3	4	5	Total	Mean	
	No. 3	13	11	27	3	57	3.2	
	% 5.3							
	No. 4	20	8	24	1	57	3.0	
у	% 7.0	35.1	14.0	42.1	1.8	100%	6	
	No. 2							
	%. 3.5	19.3	36.8	33.3	7.0	100%	6	
	No. 18	14	13	10	2	57	2.6	
n	% 31.6							
	No. 4							
-	% 7.0	29.8	35.1	28.1	0.0	1009	6	

- 6. The EMS central office should utilize field personnel paramedics, and educators for test question validation and examination review.
- 7. The EMS central office should prioritize the examination content (DOT Knowledge Objectives) based on occupational relevance, importance, and criticality.
- 8. Immediate improvements need to be made in the EMS certification examinations.
- EMS examinations need to be given a higher priority within the Texas Department of Health.

Items 6 and 7 are particularly noteworthy because they deal with two specific areas in which the Education Program has tried to respond to Coordinators' needs. Item 6 poses the need for people outside the health department to assist in the development and validation of certification examinations. A large percentage of the coordinators polled said that they felt strongly that the Education Program should use such sources.

Two committees currently validate test questions and review State Certification Examinations: The Certification Review Committee and the Exam Review Committee. The Certification Review Committee is composed of five medical directors (one from a rural community) and three EMS educators (two from rural communities). The Exam Review Committee reviews State Certification Exams prior to their publication. The Exam Review Committee is composed of three paramedic educators, two Public Health Region staff members, and one physician. Four of these committee members will rotate and be replaced with new members. This rotation will provide new input from both rural and urban areas.

Item number 7 deals with the Education Program setting priorities on Department of Transportation Knowledge Objectives (DOT KO) based on occupational relevance. At the end of March, the Education Program mailed its DOT KO survey to fifty EMS educators and medical directors throughout Texas. This survey is designed to rank the importance of each knowledge objective using the Likerttype scale of one to five.

No. 1	1	2	15	38	57	4.5
% 1.8						
	*					
No. 1	5	8	21	22	57	4.0
% 1.8						
No. 2	8	22	16	9	57	3.4
% 3.5						
No. 1	6	21	20	9	57	35
% 1.8						

Suggestions for Overcoming Fear of Speaking before a Group

- 1. Know the material well (be an expert).
- 2. Practice your presentation (pilot-test, and possibly videotape yourself).
- 3. Use involvement techniques (participation).
- 4. Learn participants' names and use them.
- 5. Establish your credibility early.
- 6. Use eye contact to establish rapport.
- 7. Take a course in public speaking.
- 8. Exhibit your advance preparation (via handouts, etc.).
- 9. Anticipate potential problems (and prepare probable responses).
- 10. Check out the facilities and AV equipment in advance.
- 11. Obtain information about the group in advance (through observation or questionnaire).
- 12. Convince yourself to relax (breathe deeply, meditate, talk to yourself).
- 13. Prepare an outline and follow it.
- 14. Manage your appearance (dress comfortably and appropriately).
- 15. Rest up so that you are physically and psychologically alert.
- 16. Use your own style (don't imitate someone else).
- 17. Use your own words (don't read).
- 18. Put yourself in your audience's shoes (they're asking, "What's in it for me?").
- 19. Assume they are on your side (they aren't necessarily antagonistic or hostile).
- 20. Provide an overview of the presentation (state the objectives).
- 21. Accept some fears as being good (energizing stress vs. destructive stress).
- 22. Introduce yourself to the group in advance (via a social context).
- 23. Identify your fears, categorize them as controllable or uncontrollable, and confront them.
- 24. Give special emphasis to the first five minutes (super-preparation).
- 25. Image yourself as a good speaker (self-fulfilling prophecy).
- 26. Practice responses to tough questions or situations.
- 27. Create an informal setting (sit on a table).
- 28. Remember: The individuals you are speaking to are in many ways like yourself. They have similar weaknesses and strengths.

A Trauma System yours could be one of them in Texas can save lives

Every day, thirty people in Texas die because of trauma, and hundreds more suffer serious injuries requiring emergency medical care. Trauma - injuries from highway crashes, falls, burns, poisonings, suicides, assaults, all kinds of intentional and non-intentional injuries - is the leading killer of people under 44. It is also the most preventable disease we suffer.

A drive to see the bluebonnets shouldn't be fatal. A Texas Trauma System can make the difference.

For more information on Trauma Systems contact the Texas Department of Health, Bureau of Emergency Management, 1100 West 49th, Austin,Texas 78756-3199, (512) 458-7550. Who does serious trauma strike? The average seriously injured patient is a 20 to 22 year old male who has about an 80 percent chance of surviving and returning to normal activities if he receives expert medical care in time. Nearly 70,000 Texans will be seriously injured in 1990. Some of the injuries happen when you least expect them, such as during a family drive in the country.

What is the purpose of a trauma system? Simple - to get the right patient to the right hospital in the right time. In most severe cases of trauma, your life depends on getting proper medical treatment within one hour of the accident. Systems of trauma care save money by making cost effective use of expensive equipment and facilities and of highly-trained and specialized medical experts.

- What is the Texas Trauma System? The Texas Trauma System will identify the capabilities of hospitals to give emergency treatment to injury victims and will rank those hospitals according to nationally-accepted designation standards. Regional systems will be developed to ensure that a seriously injured patient gets EMS treatment immediately and is transported to a hospital equipped to give the lifesaving care needed. In some cases, that may not be the nearest hospital, but it will be the appropriate hospital.
- What will the Texas Trauma System do for Texas? Studies in other states show that trauma systems can reduce the preventable death rate by 50 percent. The Texas Trauma System will reduce deaths and decrease long-term disabilities by identi-

fying medical capabilities and resources and upgrading life support techniques in some cases. An important goal of the system is to teach the public what to do in an emergency and how to prevent injuries.

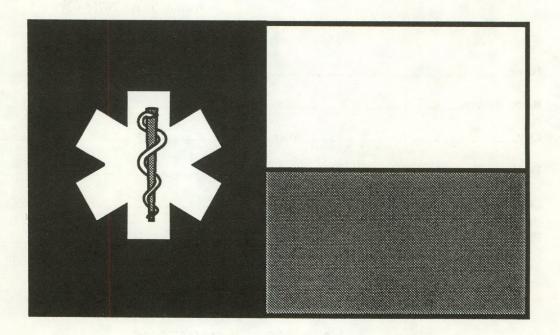
Is a trauma system expensive? Yes, but not having a trauma system can be more expensive. Injuries cost Texans \$10.8 billion in 1985. In 1987, 176,237 years of potential life were lost because of premature death caused by injuries. Trauma causes more loss of potential life years than any illness or disease because trauma kills our young people.

Emergency departments in hospitals across Texas are struggling to continue providing trauma care because so many trauma patients are uninsured. Some urban hospitals collect as little as half of the expenses of treating victims of car crashes, while stabbing and shooting victims often pay as little as five percent of their hospital costs. Because trauma so often affects the young, its victims are more often uninsured or unemployed. A goal of the Texas Trauma System is to provide funding for this unpaid trauma care in order to keep our hospital emergency departments open.

Ridding Texas of the killer trauma is a job for all of us. Preventing injuries, knowing what to do in an emergency, having the right kind of care available these are the things we need to do in Texas. The Texas Trauma System can make a drive to see the bluebonnets just what it ought to be - a safe drive to see the bluebonnets.

Texas EMS Conference '90

September 13, 14, and 15 DoubleTree Hotel Austin, Texas



Pre-Conference Registration	Regist	ration Forn	n		
HazMat Water Rescue	\$ 20 \$ 20	-	-8		
(choose only one)				7	
Conference Registration					
Before 9/1/90	\$50	-			
After 9/1/90	\$75	-			
Golf Tournament	\$35			LENCE I	
Volleyball Tournament Team Name:	\$10		SEPT	EMS CONFERE EMBER 13-15, AUSTIN, TEXA:	1990
Valsalva Bowl	- \$10	Item ordered	Size Quantity	Price Each	Total
Team Name:	φ10 <u> </u>	- T-Shirt		\$ 10.00	
	_	Mug (o	ne size only)	\$ 5.00	
T-Shirt - great looking!		Cap (o	ne size only)	S 6.00	
Mug - add to your collection Cap - new item! (Total from box		T- shirt size	s: S M L XL XXL	Total	\$
Grand Total		1			L
Make out your check to: Texas Health Foundation		Mail th	is registration form Texas EMS Con P. O. Box 26399 Austin, Texas 78	ference '90	
Texas Health Foundation			Texas EMS Con P. O. Box 26399	ference '90	
Texas Health Foundation			Texas EMS Con P. O. Box 26399	ference '90	
Texas Health Foundation			Texas EMS Con P. O. Box 26399 Austin, Texas 78	ference '90 755-0399	
Texas Health Foundation Please print or type Name			Texas EMS Con P. O. Box 26399 Austin, Texas 78	ference '90 755-0399	
Texas Health Foundation Tease print or type Name Home Address		_ State	Texas EMS Con P. O. Box 26399 Austin, Texas 78	ference '90 755-0399	
Texas Health Foundation Please print or type Name Home Address City		_ State	Texas EMS Con P. O. Box 26399 Austin, Texas 78	ference '90	
Texas Health Foundation Please print or type Name Home Address City Employer Name	or Licensure	_ State	Texas EMS Con P. O. Box 26399 Austin, Texas 78	ference '90	
Please print or type Name Home Address City Employer Name Level of Certification Phone: Home	or Licensure/	_ State erence Sponsors	Texas EMS Con P. O. Box 26399 Austin, Texas 78	ference '90 7755-0399	

Texas EMS Conference '90 Highlights

Pre-Conference Events

Wednesday, September 12, 1990 Early Registration begins at 8am Hazardous Materials Workshop, 9am - 5pm Water Rescue Workshop, 9am - 5pm Golf Tournament, 12:30pm - registration form on page 16

Conference Events

Thursday, September 13, 1990

Registration begins at 8am Exhibits Open, 8am - 5pm Opening Luncheon and Welcome, Noon Panel, - "EMTs in the ER/RNs in the Ambulance" General Session with Doug Key Faculty Rappel, Social Hour in the Courtyard TDH/SDH&PT Chili Cookoff

Friday, September 14, 1990

Valsalva Bowl Preliminaries Continental Breakfast in the Exhibit Area 20 Workshops - attend 4 EMS Week Awards Luncheon Valsalva Bowl Semifinals Dinner, Valsalva Bowl Finals and Dancing

Saturday, September 15, 1990

Continental Breakfast in the Exhibit Area 12 Workshops - attend 2 Closing Session with Lt. Mark Warren Drawing for Exhibitor Prizes and Teddy Bear Adjourn at 1:00 pm, pick up CE certificates

Location

Doubletree Hotel 6505 N IH 35 Austin, Texas 78752 (Room reservation form on page 16)

Continuing Education Credits

8 hours TDH EMS CE for pre-conference workshop 16 hours TDH EMS CE for conference National Registry CE applied for

EMS Week Awards

Send in your nominations by September 1

Valsalva Bowl

Submit test questions, get CE

Workshops

Clinical Programs

Care and Feeding of Your Medical Director Management of Maxillofacial Trauma Recent Concepts in Hemorrhagic Management Sports Injuries Home Meds Trauma in Pregnancy Patient Assessment Lifting and Moving - Protect Yourself Street Drug Emergencies

Rescue Programs

Civilian Rescue of Military Aviators High Angle Rescue Considerations High Angle Rescue Solutions Trench Rescue Incident Command Street Sense

Administrative Programs

Ethical Management National Accreditation for Paramedic Programs TEXEMS Recordkeeping Program Medicare Issues The Budget Process Whys and Hows of Documenting Runs Mandatory Drug Testing New Concepts in Communications Systems Provider Licensing Update

General Programs

Top Guns in EMS DWI Awareness for EMS Developing a Local DWI Awareness Program Body Business Aerobics (workout clothes a must) Traffic Safety Programs for the Public

and the second	World Championship
	EMS Golf Tournament
	September 12, 1990 - 12:30 pm
	Medic Systems of Houston is this year's tourney sponsor and will be offering great prizes and a sumptuous meal at the 19th hole. Sign up now! (Exact course to be determined later)
	Name
111	Address
	CityStateZip
	Phone (H) AC (W) AC
	On my EMS Certification, I swear my average score is
	Make your check for \$35 to: <u>Texas Health Foundation</u> , Mail to: P.O. Box 26399, Austin TX 78755-0399
Mail to Hotel: DoubleTree Hotel 5505 N IH 35 Austin, TX 78756	ORGANIZATION: Texas EMS Conference 1990 Date of function: Sept. 13–15 ALL REQUESTS FOR THE ABOVE GROUP MUST BE RECEIVED BY AUgust 22, 1990 Print or Type Please reserve accommodations for: Print or Type NAME COMPANY LAST FIRST ADDRESS CITY STATE ZIP SHARING ROOM WITH NO. OF PERSONS SIGNATURE CHECK IN TIME 3:00 PM
	MONTH DAY YEAR ARRIVAL TIME MONTH DAY YEAR CHECK OUT TIME NOON
	PLEASE CHECK PREFERRED ACCOMMODATIONS
	BED TYPE ONE PERSON \$55.00 KING BED TWO PERSONS \$65.00 TWO DOUBLE BEDS (Suites available upon request.) If tax exempt, please present exemption form at time of check-in. IF RATE REQUESTED IS NOT AVAILABLE, NEAREST AVAILABLE RATE WILL BE ASSIGNED. THERE IS AN ADDITIONAL \$10.00 CHARGE FOR THE THIRD AND FOURTH OCCUPANT IN EACH ROOM. RATES ARE SUBJECT TO APPLICABLE 13%
	TAXES. NO CHARGE FOR CHILDREN UNDER 18 OCCUPYING THE SAME ROOM AS PARENTS. ACCOMMODATIONS WILL NOT BE CONFIRMED WITHOUT A CHECK FOR THE 1st NIGHT'S DEPOSIT OR USE YOUR CREDIT CARD # TO GUARANTEE YOUR RESERVATION. YOU WILL BE CHARGED FOR THE 1st NIGHT IF RESERVATIONS ARE NOT CANCELLED 24 HOURS PRIOR TO ARRIVAL.
	CREDIT CARD # EXPIRATION DATE
and the second se	AMEX DINERS CLUB VISA MC CARTE BLANCHE

EMT: by Pat Ivey published by Diamond Books Beyond the Lights and Sirens

A new book lay on my desk. I looked at its title and thought, "probably just another book of 'war stories'." But I opened it and started to read. There they were, my friends. Not people I recognized by sight, but those recognized by spirit. People with character, dedication, doubts, determination, sorrows, and caring hearts. The people that make up EMS! It is an autobiography in some ways. It is the story of the author, Pat Ivey and her transition from a full-time wife and mother, involved in scouting, sailing, driving kids to and from school, and homemaking to someone who does all of those things and still finds time to become a member of the volunteer group called "Lake of the Woods Rescue Squad."

Ivey, who had recently moved, along with her husband, David and their three children, Dave, Matt, and Jennifer, from the city of Alexandria, Virginia out to the suburban area surrounding Lake of the Woods, about an hour's drive from the city, had never done anything like rescue squad work before in her life. She admits to having said, "I could never work on a rescue squad." She was a schoolteacher by profession and education. She was confident in this rescue squad denial until her own two boys wandered off and became lost in the woods of Virginia late one evening and the local rescue squad was called. She says, "We had called for help and these people had responded. They came and they calmed our fears with their knowledge and assurance. They gave us hope with a touch, a look, with simply being there. They had come with lights and sirens and had been faceless strangers to me until I left my pocket of darkness and walked into the light where they stood."

New found friends, there in Virginia, began telling Pat that she was so "good with people" and that "everyone feels comfortable with you". The local rescue squad needed volunteers and the members wanted Pat. While both reluctant and unsure, she was giving it thought. After picking up the daughter Jennifer, one day at school following the last class, they encountered a crash at a nearby intersection. Lake of the Woods Rescue Squad was there and Pat saw several of her friends assisting the injured. "Jennifer," says Pat, "I want to do that," and Jennifer thought that would be "neat." From then on the reader becomes a quiet observer in the life of Pat Ivey, the rescue squad volunteer who "just couldn't do that."

The reader hears the tones and the messages from the dispatchers over Pat's beeper and boards the ambulance. You see the crashes and the injured. And you see the acutely ill, the chronically ill, the alcoholics and the druggies. You witness the successes and the tragic and useless losses such as little "Jessie," who is killed in a car rollover caused by his puppy getting under the feet of the driver. The driver reaches for the puppy, loses control of the car and the result is the rollover and Jessie's subsequent death. And there is the wonderful Bea Oertel, a resident in the community, who has time to do for everybody. She had worked for Vice-President Hubert Humphrey during the Johnson era. She is on the Board of Directors for Lake of the Woods. She and her husband, Joe, are childless and the Ivey family helps to fill that void in her life. She always had a "cause" and everyone was the benefactor of her love and generosity, finding cakes and homemade breads on their doorsteps. Bea always had a quilt to donate for fundraisers. Pat Ivey and her group were on duty when the call came in for the Oertel home. And the wonderful loving heart of Bea Oertel gave out.

Pat Ivey is able to weave the thread of love and compassion into emergency medical caring throughout her book. There is always the closeness of the squad members. There is always the feeling that they can rely on one (continued on next page) Reviewed by Tom Ardrey

Contact Tom Ardrey at (512) 458-7550 if you have recently read a book you think our readers should know about. another, which is essential if an EMS team is to truly give their best so that others might live. Pat became a Cardiac Technician and is now, in addition to that responsibility, using her professional training as a teacher, to teach the courses for the Emergency Medical Technician classes in her area of Virginia. I was mistaken. This was not just "another book!" This was a book that I sneaked time to read and had trouble putting down.

EMT: Beyond the Lights and Sirens can be ordered from Eakin Publications, Inc., P.O. Box 90159, Austin Texas, for \$15.50.

Following is a brief section taken from EMT: Beyond the Lights and Sirens.

It was on a Monday night two weeks later that David and I sat together in the living room watching the Country Music Awards. He was a Statler Brothers fan. I was rooting for Alabama. I fixed a bowl of popcorn and had just refilled our glasses of Coke when the tones went off. I was not on duty until the next day but I stopped to listen.

It was a 10-50.

I heard the location "...near the intersection of Lakeview and Liberty."

"David."

"What?"

"This wreck is right down the street," I told him.

"If you feel like you need to go," he said, "go. Could you hand me my Coke first?"

I handed it to him then ran into the bedroom and switched from my robe to my jumpsuit. I gave him a quick good-bye kiss.

"Cheer for Alabama a little, will you?" I asked him as I started for the door.

"They don't need it," he called back. I turned off our street, Yorktown, onto Liberty, then took a quick left onto Lakeview. I saw Bob and Joyce's car and the patrol car, with our patrolman, Don Childs, just getting out. I didn't see any wreck.

I approached the patrol car. "Hey, Don," I said. "Where is it?"

He pointed into the darkness, into the trees, then turned his flashlight on the area. I looked but could only see shadowy silhouettes.

I walked through the underbrush. I saw movement, a light, and Bob and Joyce. Joyce was leaning in the car, her arms through the right window, supporting the head of the woman in the front seat. Bob focused his flashlight on her. I looked down into the car. The woman was wearing a rescue squad jacket.

"It's Ellen," Joyce said. "What happened?" I asked. "She was unconscious when we got here," Joyce told me. "She came to just a moment ago. Said something about somebody running her off the road."

She was holding Ellen's head, applying pressure with her hand to a deep laceration. Blood covered her fingers.

"Pat", she said, "hold her head. Bob and I will get the door open so we can get closer to her."

I eased my hands under Joyce's to continue the traction. I could feel the warm sticky dampness of the blood. Maintaining the traction on Ellen's head while Bob and Joyce worked around me to open the door was awkward, but finally I could kneel beside the car to get a better hold. I felt shards of glass press into my knees.

I heard the sound of sirens. Within moments the ambulance, fire truck, and crash truck were on the scene.

Bob tried to open the driver's side of the car but the impact forced the hood back, jamming the left front door, sealing it shut.

"We're gonna have to cut it off," he called to the firemen. They removed the Hurst tool and generator from the crash truck.

Spotlights illuminated the scene.

Ellen was stretched across the front seat. We could clearly see now that her left foot was pinned beneath the brake petal. Her left leg was broken. She moaned as I said her name.

"Talk to me, Ellen," I told her. "Talk to me." I continued speaking to her, hoping to prevent her from sinking back into unconsciousness.

The generator was fired, a sudden explosion of sound, grinding, persistent. We spread a tarp over Ellen's body and face to protect her from broken glass that could spray across the interior of the car as the firemen cut away the door with the Hurst tool.

"Ellen," I said to her, "talk to me." "Pat," was all she said, but it was enough.

The door snapped and fell away. The generator was turned off. The silence was

I eased my hands under Joyce's to continue the traction. I could feel the warm sticky dampness of the blood.

Finally I could kneel beside the car to get a better hold. I felt shards of glass press into my knees.

18

equally oppressive.

Bob knelt down to get to the brake pedal, reached to take the crowbar from Howie, and pried the pedal loose from the floor.

Now free, Ellen's foot moved. She screamed.

Her scream was as sudden and explosive as the generator's firing. A chill swept over me, but I didn't move. I held on to her as before, talking quietly to her. I watched the others, watched them move, listened to them talk. I was immobilized by my responsibility, but I could watch their actions: careful, thoughtful, and deliberate. I was proud of them and of me. We were in this together.

I was part of a team.

Ellen's head was bandaged. A cervical collar was fitted to her neck. Her leg and foot were splinted. We slid her carefully onto the backboard, then carried her to the gurney.

My work was over.

When I stood back, my back ached. My knees hurt from the glass. My hands and fingers were stiff and bloodied. I watched the duty crew load the gurney into the ambulance. They climbed aboard and the doors closed. Moments later it pulled away.

The crowd began to disperse. The wrecker approached and I stepped aside for

it. Away from the car and with the scene now well lit, I cringed at the sight of it, astonished that Ellen's injuries were not more serious.

I turned and saw Al Potter walking toward me.

"I just heard about Ellen," he said. "How is she?"

"Her left leg and ankle are broken," I told him. "And she has a bad head laceration. Beyond that it's hard to tell.

"Her car's a mess," he said, watching the wrecker pulling Ellen's car away from the tree.

"Yes," I agreed. "She was lucky she wasn't hurt even worse."

He stood quietly for a moment, then turned back to me. "Was this your first 10-50?"

"No," I said, then thought about it. "Well, I guess it's my first real one." "How'd you do?"

"Okay," I nodded. "I did okay."

He smiled at me. "I knew you would."

He patted my shoulder and walked away.

The confidence was beginning to rub off on me.

The crisp and cool early October night air felt good on my face. I breathed it deeply, turned away and crossed the street to my car. Her scream was as sudden and explosive as the generator's firing. A chill swept over me, but I didn't move. I held on to her as before, talking quietly to her.

		F	cription Form
Texa	5 EMS	Mess	enger
Technical Artic	\$15 for a cles — Rules — Laws —		- Conferences
ADDRESS			
CITY	STATE		ZIP
RETURN FORM AND \$15 TO:	Texas Dept. of Health 1100 W. 49th Street Austin, Texas 78756-3199	AMOUNT ENCLOSED check money order	2A284 — Fund 160

Texas EMS Messenger July 1990

EMS /TraumaRegistry

by Sharon King

Run report software available to providers

Sharon King is a statistician with the Bureau's EMS/Trauma Registry Program. TEXEMS, a new piece of EMS software, is now available at no cost. The Bureau of Emergency Management's EMS/Trauma Registry will distribute the software and its documentation to Texas' private and public EMS firms, giving them a unique tool for the collection and analysis of run report data.

The TEXEMS record-keeping and reportgenerating software was created as a joint project of the Texas Department of Health, the Texas Department of Highways and Public Transportation, and the University of Texas LBJ School of Public Affairs. TEX-EMS lets you collect and enter data on all your calls, then print out copies of run forms, or simple listings of calls, or more complex reports and graphs right there at your own location whenever you want. After several years of planning and testing, the program is now ready for use in the field.

Since Hamlin EMS, the project's first participant, began to use TEXEMS, several other firms have received the free software; others are either busy deciding how they want their software customized or, having decided, are waiting for their personal copy of TEX-EMS to arrive in the mail. The firms which were already participating in the EMIS (now called the EMS/Trauma Registry) run report data collection project were recently given the opportunity to make the transition to TEX-EMS. Requests to participate in TEXEMS will be handled on a first-come, first-serve basis with approximately twenty EMS providers receiving their customized software each month.

What TEXEMS Will Do for You

TEXEMS lets you keep organized records and data at your own location, collect additional items of special interest to your firm, generate statistical tables and lists, produce bar and pie charts, create facsimiles of run reports, export your data into other programs like Dbase and Lotus, and also send an abbreviated electronic version of the run report to the state via a 1-800 phone line. In addition, TEXEMS helps with billing and may save you money on run forms.

Run forms: The first TEXEMS users will receive free state run forms. Later, bulk supplies of TEXEMS forms will be ordered to reduce the cost, and participating EMS providers will pay only state costs for the forms.

On site data: TEXEMS provides free, easy-to-use software at your central office or stations, letting you keep your own database of run report information at your location. Unlike the earlier EMIS prehospital reporting system, TEXEMS is decentralized. You control your data and you decide when and how often you want to produce your reports. TEXEMS software comes with a comprehensive and clear user manual plus other documentation (including an Introduction and Guide from the EMS/Trauma Registry on how to fill out the state run form). In addition, TDH and the LBJ School will offer user support over the phone.

Custom data sets: The Urban Laboratory at the LBJ School provides the systems analysis and programming for TEXEMS, and because the lab has extensive experience in EMS systems development, TEXEMS is programmed to be flexible and responsive to the needs of diverse EMS providers. The state items you will sent to the Texas Department of Health make up a minimum data set encompassing most of the items on the TEXEMS run form (some items are on the form purely for user convenience). TEXEMS' flexibility is apparent at the outset: new users will find that they can choose their own set of extra data items--one item or many-and have their software customized especially for them by TDH.

Flexibility: Furthermore, you do not have to make a once-and-for-all decision on your optional items right at the start. TEXEMS accommodates changes in customized data sets by EMS users. Although the EMS/Trauma Registry cannot promise instant and frequent alterations of your customized software, each copy of TEXEMS can be recustomized. Once special items have been altered, TEXEMS still allows use of the data collected under the previous TEXEMS format.

Billing: TEXEMS aids billing by offering a data collection instrument to automate and store the billing items you need. It can export billing items into other billing programs.

Run report facsimiles: Another useful feature of TEXEMS is its capacity to

print out all the information on a run report. Once you enter the run report information into your database, you can print the record on either plain paper or on the state run form.

Statistical reports and graphics: TEX-EMS makes it possible for you to sit down at a moment's notice and generate lists and tables based on your data. The analysis and report feature of TEXEMS gives you a great deal of latitude in choosing the kind of report you want. You can, for example, choose to get a listing of all calls, all emergency calls, all calls between two dates, all calls with a response time greater than a certain time period, and so on. A listing does not add things up; it

just gives you a list of

Dear Sharon King,

I want to take this opportunity to say Thank You to you, Richard Harris, Alex Nghiem and everyone who worked so hard on TEXEMS. We are finally on line and I am extremely excited about the future of this new program with it's endless possibilities. I want to say that anyone who might have any questions about this service may contwant to say that anyone who might have any questions about this service may con-tact me in Hamlin at: 1-915-576-3646 - ext. #46 and I will be more than happy to answer

any questions. I feel that this is something that is long overdue for EMS in Texas. EMS can now make giant leaps and bounds in the high tech world. Just being able to generate reports at any given time is probably one of the most important features of TEXEMS. There are so many other features that I could go on for days.

The future of some systems hinges on data, and TEXEMS provides the perfect system for data collection. Whatever you do, don't let TEXEMS falter. I am no computer whiz by any means and I am extremely pleased with the performance of TEXEMS. Anyone who might be considering TEXEMS should contact TDH EMS/Trauma

or LEXEMS. Anyone who might be considering LEXEMS should contact I DH EMS/ Trauma Registry Program and ask questions about the program. TEXEMS has lived up to all my expectations and then some. It does things in minutes that used to take me days to compile. I can't say enough about this program. I am completely sold on TEXEMS. The ease of operation is super and the entire program is very user friendly. Anyone should be able to utilize this program. The cost factor is also very nominal for every EMS should be able to utilize this program. The cost factor is also very nominal for every END system in Texas. If you have an IBM compatible computer, you have it made. The new

BLS forms are a definite improvement over the old form. This makes the program that much more enticing for different services to consider. With the ever growing age of high tech, this new system seems to be in the right place at the right time.

To those Texas EMS systems who may be undecided about participating in TEXEMS, I say look to the future and "go for it," TEXEMS can benefit every EMS system in Texas.

Bobby F. Lee, EMT-P Director, Hamlin EMS P.O. Box 387 Hamlin, Texas 79520 (915) 576-3646 Ext. 46

certain calls. So, you can choose to get summary tables where, as one example, all calls between certain dates are summed according to the cause of injury. This kind of report might show that between January 1, 1990 and March 31, 1990 you answered calls related to 15 motor vehicle accidents, 9 falls, 3 assaults, 7 stabbings, 4 accidental poisonings, and 2 shootings. Or, you might choose to tabulate the number of calls going to a certain destination, or the number of calls answered from different Zip Codes. TEXEMS has a wide range of selections in its analysis and reporting feature, and the most recent version of TEXEMS also produces bar graphs and pie charts.

Export data: TEXEMS aims to serve a wide variety of EMS providers in Texas. Since all the needs of the various firms could never be anticipated in the report feature of the program, the programmers wrote basic reports identified by a survey of firms as the most fundamental. To compensate for the relatively small number of basic reports, TEXEMS' data export feature allows the user to output data into other commercial software such as Dbase or Lotus to increase the possibilities for data analysis.

Send data to TDH: The TEXEMS software has a built-in communications program which allows you to send a set of data to the EMS/Trauma Registry file server. The data that you send will be put to good use. Prehospital data items are integral components of the new EMS/Trauma Registry. The Trauma Registry will use the information as part of the developing Texas Trauma System. It is expected that mortality due to trauma will be reduced greatly in Texas once the trauma system is in place. The modem communication to TDH will have other benefits as well: if you are a part of the system, eventually the EMS/Trauma Registry can send you statewide reports over the phone lines. Furthermore, sending data through TEXEMS fulfills proposed requirements for reporting to TDH. If the proposed rule is adopted, all firms will have to provide an end-of-year paper report to the state; those who elect to participate in TEXEMS by sending data electronically will be considered to have already met the reporting requirements and will not have to submit a paper report.

What You Have to Have to Use TEXEMS

- --An IBM-compatible PC with MS DOS, a Macintosh, or a UNIX System
- --512K RAM (Random Access Memory) --2 floppy drives or a hard drive and 1
- floppy drive and
- --A Hayes-compatible modem with at least a 1200 baud transmission rate and a serial port on your computer. --A phone line
- -A phone line

If you are interested in joining TEXEMS fill out the form below and send it to the Bureau of Emergency Management. You will be put on a priority list on a first-come firstserved basis. The EMS/Trauma Registry will send you a technical survey to identify your equipment, an optional item list, and a copy of the new TEXEMS run form so you can identify which special customized data items you want. You will fill out these two forms

Name	
EMS Firm Name	
Address	
City/State/Zip	Phone AC
Send completed form to:	

and send them back along with 2 floppy disks formatted on your machine. The **EMS/Trauma** Registry will send your floppies back with TEXEMS customized onto the disks. You will also receive the TEX-EMS user manual. a new Introduction and Guide for filling out the TEX-EMS run form, and your initial supply of forms.

by Tom Ardrey

Did You Read...?

... in the April 1990 issue of Emergency Medical Services, in the article titled "The Politics of Trauma," that at this time we have 37,000,000 Americans with no health insurance? The article stated that "The average cost incurred by a hospital for an uninsured, severely traumatized patient is estimated at \$30,000."

... in the same publication in the article titled, "The Intoxicated Patient" by Dr. Eric Alcouloumre, FACEP, that more than 3,000,000 teenagers between the ages of 14 and 17 have a serious drinking problem? We have 12,000,000 known alcoholics in this country, and 25% of the known are teenagers. Alcohol takes the lives of more than 100,000 people each year.

... in the January/February 1990 issue of NAEMT News, that the University of Pittsburgh Graduate School of Public Health, the Center for Emergency Medicine of Western Pennsylvania and the Alzheimer's Disease Research Center are banding together to develop a series of audio or visual materials which will address the problems of assessing and caring for the geriatric patient? Six short format videos are planned and should be ready in late 1990. For information, write Bob Porter, The Center for Emergency Medicine, #230 McKee Place, Suite #500, Pittsburgh, PA 15213.

... in the May 1990 issue of State Government News, published by the Council of State Governments, that this country spends \$660,000,000,000.00. (that's right, 660 billion dollars) on health care each year? That figures out to be about \$3000.00 per person. Yet life expectancy in this country ranks 10th among western nations. Our infant mortality ranks 14th among all nations. It would seem that money alone can't buy good health. Do you suppose that the people who tell us to quit smoking, watch our weight and what we eat, and to exercise regularly, have been reading this same information?

... in the manual recently published by Handgun Control, Inc., 1225 Eye Street, N.W., Suite # 1100, Washington, D.C. 20005, the following facts? In 1985, the latest year for which statistics are available, handguns were used to murder:

- 46 people in Japan
- 8 in Great Britain
- 31 in Switzerland
- 5 in Canada
- 18 in Israel
- 5 in Australia
- 8.095 in the United States.

... in the March 1990 issue of Lifelines. published by the Alaska Department of Health, about the five motivators to help retain volunteers? These suggestions came from the Harvard Business Review. The motivators are: Recognition, Responsibility, Achievement, Satisfaction for the work itself, and Advancement. LifeLine went on to suggest special uniforms, short thank you notes for specific jobs well done, and yearly awards ceremonies.

... in the EMS Information Digest from the Nebraska Department of Health that Nebraska is becoming very concerned about the health care costs of smoking tobacco? The publication quotes a recent report issued by the U.S. Department of Health and Human Services, that showed smoking cost Nebraskans \$307,000,000.00 annually. The city of Fremont, Nebraska has banned smoking on city-owned property.

... in the October, 1989 issue of JEMS, the article, "Save Your Back?" The authors, Casey Terribilini, D.C., and Kate Dernocoeur, EMT-P, commented, when speaking of EMS work-related back injuries, "Consider the professional football players, who take tackle after tackle and still go back for more. How can they do it? Because they train for the job, a job they like. Prehospital workers have the same drive. The part of their training that is commonly lacking, however, is the physical conditioning."

... in the May 1990 issue of JEMS, "Officials at the Centers for Disease Control say there has never been a case reported of AIDS transmitted by rescue breathing. According to the CDC, even training mannequins have a clean track record."

"The average cost incurred by a hospital for an uninsured, severely traumatized patient is estimated at \$30,000."

3,000,000 teenagers between the ages of 14 and 17 have a serious drinking problem.

Alcohol takes the lives of more than 100,000 people each year.

Crossword Puzzle Contest

Win a free registration to the **Texas EMS** Conference September 13-15.

Across

- 1. Damages nerves
- 6. Out of joint problem
- 7. Flat
- 8. Sweat
- 9. Flame
- 11. Reptiles
- 12. Sandy shore
- 15. Cerebrovascular accident
- 18. Junk
- 19. Hypothermia condition
- 20. Reddened skin
- 24. Liquid intoxicant 26. Bodies of water
- 27. Causes vomiting
- 30. It protects the skin

Down

- 2. High ____; low
- 3. Air conditioning
- 4. Cowboy sports

5. Back of the hand

- 8. Lack of body fluid
- 10. Days off
- 13. Swimming spasms
- 14. _____ of July
- 15. Reptile attack
- 16. Suffocate in the water
- 17. bats 21. Cervical area
- 22. Grande
- 23. Turn back
- 25. Dried grass
- 27. Emergency
- **Medical Services** 28. Small hand grip
- 29. It's all right

F-I =

SIL-

Summer Heat

by

Tom Ardrey

Fill out the form below and send it in with your completed puzzle to qualify for a drawing held August 15. Two puzzlers will win complimentary registrations to the Texas EMS Conference in September. We'll call you August 16 if you're a winner!

Rules:

The puzzle must have the correct answers.

Name Address ____

City/State/Zip

Telephone AC

Mail to:

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

Texas EMS Messenger July 1990

24

Rothy Moseley Recycling with S.A.V.E.S.

Having trouble trying to think of new ways to raise money? S.A.V.E.S. EMS in Sinton still uses the food booths, the craft fairs, the raffles, and other old stand-by fundraisers, but something new has been added as well. In January, 1990 S.A.V.E.S. began a Recycling Project under the direction of Barbara Finley, Board Fundraising Officer and EMT. Capital items, such as ambulances, are purchased by the Board of Directors in this community, while the volunteer group staffs the ambulances and does smaller scale purchasing, and the cities and county provide subsidies.

The first major goal of this Recycling Project is to raise \$46,000 for a new ambulance. A long term project was needed to do this, and a project which could also be seen as a community service would generate community support for a longer period than the usual fundraisers. The idea of a recycling center came about when some of their personnel began collecting cans for money to replace some items in the kitchen. When Bill Stover, EMS Director, saw compartmented trucks being used in Austin to collect recyclable items before the garbage was picked up, he realized the possibilities of full scale recycling. Barbara Finley then ran with the idea, and actually got the project started.

Working with BFI Waste Systems to provide transport for loads of paper, S.A.V.E.S. saw the first income from the project on March 28 when the first load of newsprint was sent to Corpus Christi. Seven tons of newsprint brought more than \$ 70 - and also saved 122 trees. At \$10 per ton, newsprint is one of the lowest priced items being recycled. Cardboard brings \$.02 per pound, glass, \$.03 per pound, and aluminum cans, at the time of this writing were down to \$.38 per pound. It takes 27 aluminum cans to make a pound. Some volunteers figured out that they could drink about 600 beers a day and they'd have that new ambulance in no time!

What kind of items does the recycling project take? Newspaper (should be dry and separated from other papers) is the bulkiest kind collected. Cardboard boxes should be flattened, and glass has to be sorted by color. Both glass and plastic should be rinsed or



washed. The best plastics are milk containers and soda bottles, while styrofoam is not accepted. All kinds of aluminum are acceptable, but should be separated from other metals. If a magnet sticks, it's not aluminum.

Who does all the sorting and loading and collecting? In Sinton, Odem and Taft the work is done by volunteers under the direction of Barbara Finley. Some of the heavier work such as breaking up the glass into pieces and loading the trucks is also being done by youths from the restitution center or adult probationers who need to perform community service hours. Russell Finley, EMT, and other S.A.V.E.S staff and volunteers also help out, and pick up loads of recyclable trash from citizens who cannot deliver it, on cccasion.

Why recycle anyway? Americans use over 60 million tons of paper a year. This is equi- valent to 960 million trees. Recycling one ton of newspaper saves 17 trees and uses 60% less water. Recycling one aluminum can saves as much electricity as it takes to run your TV set for four hours. You can even take statistics to your city at subsidy justification time: the 7 tons of newspaper S.A.V.E.S. sold saved 20 cubic yards of landfill space, which would normally cost their city about \$60. So not only are they earning money: they are actually saving the city money on landfill fees they would normally have to pay. With new federal regulations concerning landfills, many landfills have closed, or will be closing, and alternative means of disposing of trash will need to be found.

Clockwise from top are Glen Sykora, Bili Stover, Russell Finley, Barbara Finley, and Norma Gonzales collecting S.A.V.E.S.' first load of recyclables.

For more information about S.A.V.E.S. Recycling Project contact Barbara Finley at (512) 364-4332. For more information about recycling in general, contact your local landfill, BFT Waste Systems, or whoever collects your trash.

Rothy Moseley is with Public Health Region 8 in Corpus Christi.

EMS and The Texas Medicaid Program

by Steven Hosford

Steven W. Hosford is an EMS program specialist with the Bureau's EMS/Trauma Development Program. Contact him on financing and billing matters at (512) 458-7550. The Texas Medicaid Program, also known as the Texas Medical Assistance Program, became effective on September 1, 1967 under the provisions of Title XIX of the Federal Social Security Act and the Texas Human Resources Code to provide medical services to low income people. Funding comes from both state and federal monies. Texas Department of Human Services administers the program which determines the eligibility of recipients and issues medical care identification cards. National Heritage Insurance Company holds the health insurance contract with DHS.

Medicaid reimburses all ambulance providers according to the reasonable charge concept used by Medicare. Reimbursement rates are determined by charges submitted by the provider and other providers within the same locality. Charge information is collected and used to determine the submitted charge, the customary charge, and the prevailing charge. The allowed rate is the lowest of the three. Medicaid rates are updated annually based on charges submitted between July 1 and June 30 of the previous year.

How to Enroll

To submit claims and receive reimbursement from Medicaid, the provider must enroll in the Medicaid program. Certification as a Medicare provider is a prerequisite to enrolling in the Medicaid program.

To obtain an enrollment application packet contact: National Heritage Insurance Company, Attention: Provider Enrollment, 11044 Research Boulevard, Building C, Austin, Texas 78759-5239.

When the application is processed, the provider will be issued a unique provider number to use when filing claims.

Effective September 1, 1990 Medicare will require providers to submit all claims directly to Medicare on behalf of the patient. This includes

Medicare Update

both assigned and non-assigned claims. (Medicare Part B Newsletter, February 28, 1990, Supplier Medicare Part B Newsletter No. 164)

Providers will prepare the claim, obtain the patient's signature, and submit the claim to Medicare. There can be no fee associated with filing claims.

How to File Claims

By law, Medicaid pays claims for services only after all other third party resources have been exhausted, including Medicare and private insurance. Providers should pay close attention to a patient's medical care identification card not only for Medicaid eligibility but also to determine whether the patient has third party insurance. This information is found in the column marked "TPR" for third party resource. A "P" indicates that the patient has private insurance, an "M" indicates that the patient has Medicare, and a "P" and "M" indicate that the patient has both. The private insurance should be billed first, then Medicare, and then Medicaid.

Ambulance providers must use the HCFA-1500 claim form in filing claims for reimbursement. The claims must be filed within 90 days of the date of service or within 90 days of the date of disposition by another resource. If the other resource has not responded within 110 days, the claim can be filed with Medicaid anytime after that date up to twelve months from the date of service.

Medicaid recognizes only basic life support for emergency transports and nonemergency transfers for the severely disabled. Facility-to-facility transfers may be approved as emergencies if the patient requires emergency treatment which is not available at the first facility. A physician authorization form is not required if the reason for the emergency transfer is clearly documented on the claim.

For non-emergency transfers, a physician's authorization for non-emergency ambulance transfer form is required with the claim.

Providers may obtain the patient's signature on the run report if it has the following information: I authorize the release of any medical information necessary to process any benefits payable for this service. I also request payment of government benefits either to myself or to

_(the party who accepts assignment).

If this process is followed, all that is necessary on the signature line of the claim form is "patient's signature on file."

For more information on this update contact Steve Hosford.

1990 EMS Week Awards

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

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

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

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

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

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

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

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

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

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

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

Deadline for nominations is September 1, 1990. An EMS organization may nominate itself. You must submit 5 copies of your nomination.

Mail nomination to:

1990 EMS Week Awards Bureau of Emergency Management Texas Department of Health 1100 West 49th Street Austin, Texas 78756-3199

If you have any questions, call Steve Hosford at (512) 458-7550. Winners will be announced at the Texas EMS Conference '90 during the Awards Luncheon on September 14, 1990.

Deadline for nominations is September 1, 1990.

Each year during EMS Week the Texas Department of Health recognizes outstanding achievement in the EMS field.

If you have questions about the conference and its activities, contact these individuals at (512) 458-7550:

Agenda and Program - Alana Mallard **Exhibits** - Tom Ardrey Registration - Jan Brizendine **EMS Week Awards** - Steve Hosford Hall of Fame - Gene Weatherall Valsalva Bowl - Debbie Bradford **Golf Tournament** - Louis Hartley **Volleyball Tournament** - Bobbie Broadbent **Patch Board Collection** - Bill Baker T-shirts, Caps, Mugs - Debby Hollan **Photo Contest** - Pam Price

Around The State

July 29 - August 3, 1990, 28th Annual Industrial Texas Firemen's Training School, College Station, Texas. 409/845-7641.

August 2 - 4, 1990, Sixth Annual Colorado Trauma Symposium, Beaver Run Resort, Breck-enridge, CO. Linda Metcalf, 777 Bannock St 3rd Floor W, Denver, CO 80204, 303/893-6266.

August 8, 9 & 10, 1990, Oklahoma Public Fire Education Conference, Tulsa, OK. Contact Cindy, Jenny or Wanda 405/744-5727.

August 9 - 10, Southwest Regional Trauma Conference, Tucson, AZ. The Westin La Paloma, 3800 East Sunrise, Tuscon AZ 85718.

August 24 - 26, 1990, Idaho Emergency Medical Conference, Boise, Idaho. Linda Ady 208/334-5994.

August 25, 1990, Incident Command Conference, Coastal Bend Society of EMS Educators, Corpus Christi, TX. Rothy Moseley 512/888-7762; Fern Coker or Craig White (512) 526-2321.

August 29-31, EMS Symposium, Jekyll Island, GA. (404) 894-6505.

September 7, 1990, **5th Annual Air Rescue Seminar**, Beaumont, TX, Air Rescue, Baptist Healthcare System, P.O. Drawer 1591, Beaumont, TX 77704, 409/ 839-5620.

September 13 - 15, 1990, Texas EMS Conference '90, DoubleTree Hotel, Austin. Call the Bureau of Emergency Management at 512/458-7550.

September 16 - 22, 1990, EMS Week.

October 9 - 11, 1990, Second Annual Industrial Rescue Competition, Sweeny, TX. Kay Roop, Baton Rouge, LA 1-800-647-7626. October 12 - 14, 1990, 20th Scientific Assembly, Chicago, IL. Emergency Nurses Association, 230 E. Ohio, Suite 600, Chicago, IL 60611; 312/649-0297.

November 15 - 17, 1990, 10th Annual Trauma Symposium, Marriott Hotel, El Paso, TX. Wendy Younger, 217 Vista Rio Circle, El Paso 79912-2125.

EMT-I, EMT-Ps needed offshore. \$795/week + overtime. Texas or Nat'l Certification. Resume: OPI, Health Services, 96 W. Front St, Orange, TX 77630.

EMT-I/Paramedic: TX Dept. of Corrections, excellent benefits, \$1622/mo. Texas certification as EMT-I/Paramedic. TDC, P.O. Box 99, Personnel Annex, Huntsville, TX 77342 409/294-2755.

Paramedic: Firefighter trainee, EMT-P. Resumes: Houston Fire Dept, Personnel Dept., Selection Services Div., 500 Jefferson, Houston 77002.

Paramedics: MedStar, Fort Worth, EMT-Ps with ACLS, National Registry and PHTLS. Competitive salaries and benefits. 817/927-4455.

Paramedic Dir.: Refugio Co. Memorial Hosp. Dist. Resume: Refugio Co. Hosp. Dist, 107 Swift St, Refugio, TX 78377 Haskell Silkwood 512/526-2321.

Assoc. Medical Director: Coordinate ALS training/ CE for EMTs. Paramedic, RN. ACLS cert. Exp. in paramedic educ. & EMS operations. Dept of Surgery, Texas Tech Univ, RAHC, 4800 Alberta Ave., El Paso, TX 79905. Sandra Mendez 915/545-6860.

Flt. Nurse/Paramedic: Exp. ACLS nurses parttime: Austin, Dallas & Houston. Flt. time available on Worldwide flights. Top Pay! Resume & picture to Ted Edwards, M.D., Med. Dir., Air Ambulance America, P.O. Box 4051, Austin, TX 78765-4051.

EMTs: EMTs, EMT-Is, & EMT-Ps West Texas

Resume: Ann Andrus, Presidio EMS, P.O. Box 827, Presidio, TX 79845, 915/229-3064.

Paramedics: Offshore oil production. Texas or National Registry. ACLS, BTLS. Resume: Medic Systems, P.O. Box 690928, Houston, TX 77269-0928.

EMT, EMT-I & Paramedic: Tech-Star EMS. Ground and fixed wing services. Competitive salaries, benefits. Personnel 915/773-5691.

LifePac5 monitor, defibrillator, battery charger/accessories, 512/449-1902; 449-2500.

Resusci Anne supplies, disposable lungs & parts, Manikin & suction unit repairs. Devin Zaring 713/ 484-8382. Manikin Repair Cntr., 11504 Hughes Rd #107, Houston 77089.

Horton 501X type III Modular Ambulance, 1985 Ford E350 Chassis. OtherEMS equipment available. 814/ 226-7276.

3 Motorola Mx-340 Portable Radios, \$500 ea. Std. Hx 300 Portable Radio w/charger, \$300. Bobby Motes (512)729-2112, P.O. Box 821, Rockport 78382-0821.

1988 Collins Type I Modular Ambulance, \$30,000, Floyd Clark 512/776-0025.

Thumper, Cardiopulmonary Resuscitator, soft pack w/case. Almost new. \$3000. Susan Shirley, Jersey Village Fire Dept., 16501 Jersey Dr., Houston 77040 713/466-6159.

Liteguard 6-B, defib./monitor, battery charger/2 sets batteries, carrying case, 2 sets patient cables. \$2500. Mike Barton, Tarrant Co., 817/236-8044.

Two Laerdal defibrillators. Simulator, battery chargers & batteries. Good price. C.E. Haney, P.O. Box 750878, Houston, TX 77275-0878, 713/922-1108.

Bureau of Emergency Management Texas Department of Health Austin, Texas 78756-3199 Second Class Rate Paid At Austin, Texas