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Rescue workers search for bodies in the mangled train wreckage.

Rescuers Respond to Train Wreck

Amtrak's passenger train "Colonial," carrying 610 persons on the Newport News to Boston run, collided with a Conrail multi-engine train in Chase, Maryland, on Sunday afternoon January 4, 1987. The first Baltimore County fire and emergency medical personnel arrived on the scene and initiated (within minutes) the fire department's disaster plan for additional medical and transporting units to handle an estimated 200 patients. MIEMSS was notified and activated an areawide 20-hospital alert to prepare for mass casualties. This article will give a brief overview of what took place on the scene; an upcoming issue of the *Maryland EMS News* will focus entirely on the handling of the incident.

Passengers most seriously injured were occupants of the three front passenger cars of the 12-car train that jackknifed atop each other in a mass of twisted metal. Rescue workers were climbing into upended cars by ladders and snaking their way into demolished cars to extricate victims who were pinned under debris. Fifteen persons were dead at the scene and one died later at the Shock Trauma Center. There were 175 passengers who required hospital treatment, and 419 were taken to emergency centers for treatment of minor injuries.

Psychological debriefings were held at the Martin Airport Air National Guard facility, conducted by the Baltimore County Police Department Psychological Services personnel and the MIEMSS Critical Incident Stress Debriefing team (CISD). Members of the CISD team also conducted "defusings" for emergency personnel at Station 54 in Chase.

The mutual aid system was utilized to provide assistance at the Amtrak scene or to fill in at Baltimore County career and volunteer fire stations. Aid was received from Baltimore City, Anne Arundel, Carroll, Harford, and Howard counties, and York County in Pennsylvania. Fire suppression equipment included 23 engine companies, 6 ladder truck companies, 7 heavy-duty rescue squads, 2 floodlight units, 3 air units, 1 special unit, 17 utility trucks, and 2 brush units. There were 287 fire suppression personnel.

Emergency medical service units included 35 medic units; 10 helicopters (4 from the Air National Guard and 6 from the Maryland State Police); 8 buses from the Board of Education, which opened schools for triage centers and comfort stations; and 16 private ambulances. Serving in these were 2 fire surgeons, 3 MIEMSS "Go" teams, and 140 other EMS personnel.

Support equipment included an audio-visual van, two transporters (supply), three fuel wagons, four coffee wagons, and three Red Cross vehicles.

There were 50 Baltimore County Police and 30 Maryland State Police troopers at the scene for each shift. Both agencies were able to reduce the number of police personnel assigned by 50 percent on Monday evening. There were also on-scene helpers from the Baltimore City Police Department, the Harford County Sheriff's Office, auxiliary police, and many private citizens.

Chaplains from the Baltimore County Police and Fire Departments talked to victims and comforted them. The Air National Guard supplied tents for temporary morgues.

This tragic disaster might have had many more victims if not for the caring and cooperation of all the rescuers, both career and volunteer, on the scene and behind the scenes. The Baltimore County Fire Department is especially commended for their outstanding response and command of the scene. Full details will follow in an upcoming issue of the newsletter.

Critical Incident Stress Debriefing...

EMS providers are continuously confronted with life and death situations. Even when they are not in the midst of a crisis, they are preparing for the next call. It is stressful work and, with the additional pressures of everyday life, it is normal to feel the effects of these stressors. Sometimes, an incident will cause a severe stress reaction in one EMS provider or a group of them. Professional help is needed.

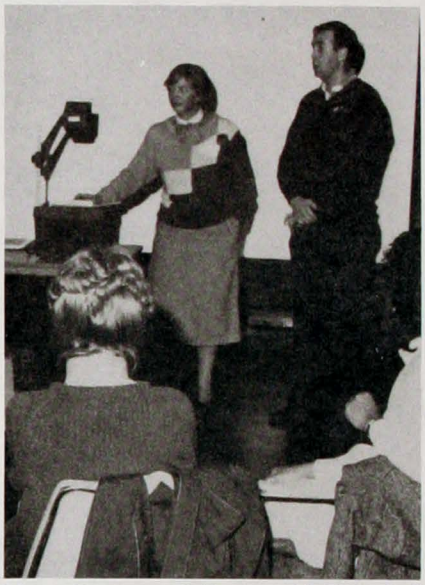
Recognizing this need, MIEMSS field operations program has established an EMS critical incident stress debriefing (CISD) program to assist Maryland EMS personnel, fire fighters, police officers, and others who work under conditions of extreme stress. The director of the program is Marge Epperson-SeBour, MSW, who is the director of psychosocial services within MIEMSS. The goals of the CISD program are to minimize the impact of job-related stress on employees' personal and professional lives, to provide education about stress and its manifestations, and to accelerate the recovery of people with symptoms of posttraumatic stress. (Before the formal announcement of the creation of this program, CISD teams were called into action during the response to the January 4th train wreck in Baltimore County. Their involvement, as well as that of other EMS personnel, will be described in an upcoming issue of the *Maryland EMS News*.)

Stress reactions to scenes of devastation, traumatic injury, and death are normal and varied. It is important for EMS personnel to be able to recognize the symptoms of acute and delayed stress (see lists) and to know when help in coping with the reaction is needed.

The event that causes critical incident stress may not be the largest or most destructive one to which the affected personnel have responded. Incidents that involve the death of a child or another EMS worker seem to evoke the strongest responses among emergency care providers. An EMS provider might experience an intense emotional reaction to an object such as a baby's sock lying on the ground or to the resemblance of a victim of the disaster to someone in the responder's family: the reaction is intensified by the transfer of concern for the victim to fear of the potential harm that could befall someone who is close to the responder. An accident, fire, or car crash that comes at the end of a long series of emergency calls may be the one that triggers the stress response — the responders have reached their "breaking point."

In the new MIEMSS program, peer support persons (PSPs) are identified in each of the five EMS regions in the state. These people are fire fighters, prehospital care providers, emergency room staff members, first responders, or similar EMS persons in the region, so they are aware of emergencies that have occurred in the area. After a major incident, a regional PSP will contact the responding agency (or the EMS personnel may call the PSP) to assess the reaction of the EMS personnel and to ascertain if a CISD might be needed. If it appears that intervention would be appropriate, the PSP will inform the regional EMS administrator of the potential need. The administrator or a PSP designee will then, through SYSCOM, contact the CISD program for further discussion and to make the necessary arrangements.

The format for the debriefings has been developed by Jeffrey Mitchell, PhD, an internationally recognized expert in critical incident stress management and an assistant professor in the emergency health services department at UMBC.



Marge Epperson-SeBour and Jeff Mitchell conduct a CISD training class.

The process began in 1974, when members of the Baltimore County Fire Department identified the need for intervention by mental health professionals. Then the debriefings consisted of weekend stress reduction retreats and one-on-one counseling sessions; they have developed over the years into the currently used group process.

Areas of six other states (Arizona, California, Colorado, Texas, Wisconsin, and Virginia) have established debriefing programs. The statewide coverage of Maryland's CISD program mirrors our statewide EMS system: a centralized team of clinical personnel with experience in EMS serves all parts of the state.

The volunteer mental health professionals in Maryland's CISD program, working in two-member teams, are experienced in group dynamics and stress management and have knowledge of EMS procedures. They are employees of hospital social services departments,

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SYMPTOMS OF STRESS

During a crisis — acute stress reactions

Physical	*Emotional*	*Cognitive*
Fatigue	Anxiety	Memory loss
Muscle tremors	Fear	Anomia (difficulty in naming objects)
Nausea	Grief	
Profuse sweating	Depression	Difficulty in making decisions
Glassy eyes	Hopelessness	Difficulty in problem solving
Chills	Irritability	Confusing trivial and major issues
Dizziness	Anger	Loss of attention span
Difficulty in breathing	Feeling overwhelmed	

After a crisis — delayed stress reactions

Physical and emotional reactions (listed above)	Intrusive images
Macabre humor (joking inappropriately)	Obsession with incident
Excessive use of sick leave	Withdrawal from others
Reluctance to answer emergency calls	Suicidal thoughts
Inordinate interest in reviewing protocols	Feelings of inadequacy

...Helps Rescuers Cope with Stress

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community psychologists, social workers, social psychologists, psychiatric nurses, and similar professionals. Applicants are screened by MIEMSS personnel to ensure that the highest quality of service can be offered to EMS providers in the state.

The PSPs are veteran EMS care providers. They are people who are trusted and respected by their peers and have demonstrated their sensitivity to the stresses associated with EMS work. These volunteer first-line workers also are screened and selected by the MIEMSS CISD program personnel.

Confidentiality is one of the key components of the debriefing process. Participants are given the opportunity to talk freely about their experiences and feelings related to the traumatic incident. No notes or recordings are made during the sessions. A debriefing is a healing process, not a critique of people or their performance during or after the emergency.

A CISD is usually held 24 to 72 hours after an incident. A session lasts two or three hours. To facilitate discussion and interaction among the participants, a circular seating arrangement is used, rather than classroom style. Rank and politics have no bearing in the room; everyone is there as part of the group, with the goal of diffusing the stress caused by a situation that has affected all of them. People are free to participate as they wish; no one is forced into an uncomfortable situation. The professional team leaders from the CISD program provide a framework for the discussion; they begin by asking people to introduce themselves and state their role during the incident. The discussion then follows a course that is most appropriate for the group, covering the aspects of the situation that are of concern.

The PSP facilitators are often of assistance by verbalizing feelings that the EMS responders may have but have not been able to put into words. The entire process is also beneficial in demonstrating that people are not alone in their feelings and that their reactions to the traumatic incident are normal human behavior. Some people harbor the myths that they are the only ones who are having nightmares or flashbacks and that they are abnormal or inadequate in some way. Through the group process of CISD, they become aware that they are not alone and that there are actions they can take to begin to heal.

If someone in the group is having a particular difficulty in coping with stress, the team leaders offer individualized assistance after the debriefing. Contact by the CISD program personnel is maintained after the debriefing session to ensure that all members of the affected group have received the help they need.

The mental health professionals in the CISD program emphasize that debriefings must be conducted by people trained in group dynamics. Attempts by untrained personnel to manage posttraumatic stress, using excerpts from established CISD protocols, may actually be harmful to individuals who are already experiencing extreme stress.

Critical incident stress debriefings are offered by MIEMSS field operations program at no cost to the requestor. EMS providers in Maryland can obtain more information about this new program from their regional administrator or by calling the CISD program through MIEMSS' psychosocial services department (301/328-6416).

—Linda Kesselring

Michos Takes New Position

Capt. Mary Beth Michos, RN, recently left her position as EMS officer to become training officer for the Montgomery County Department of Fire/Rescue Services. It will be her responsibility to coordinate fire/rescue training courses for career personnel and the independent, volunteer fire corporations in Montgomery County.

During the past 13 years Capt. Michos was active in county and statewide EMS activities, including Para Scope, the Region V EMS Advisory Council, and the American Society of Testing Materials, and trained personnel in all phases of EMS. Capt. Michos is a hazardous materials medical officer and will continue to do hazmat training.

It was Capt. Michos's hope that her successor would work his/her way up through the system — and that's exactly what happened. Capt. C. Edward Bickman, the new EMS officer, was a paramedic in one of the first classes she taught. His appointment made several promotions possible in the department: Richard Long was promoted to lieutenant, and Larry Gough and Steven Proctor were made EMS sergeants.

Capt. Michos will be an at-large member of the Montgomery County EMS Advisory Council. She explains laughingly, "You can take the girl out of EMS, but you can't take EMS out of the girl."

Haz Mat Conference

The 1987 Conference for Hazardous Materials Response Teams ("Where We've Come in 5 Years") will be held May 1-3 at the Bethesda Marriott. For more information, write to Capt. Mary Beth Michos, 10025 Darnestown Road, Rockville, MD 20850.

Field Notes

By William E. Clark, State EMS Director

This month MIEMSS is proud to announce the formal initiation of a system to help the helpers when they are confronted with the symptoms of acute and delayed stress.

Maryland is famous for its system's approach to emergency medical services, and now we have added a new support sub-system to take care of our own. This program was made possible through the support and cooperation of many persons to network together to provide this essential critical incident stress debriefing system to meet the needs of our statewide EMS system.

Efforts such as this to recognize and deal with emergency services workers' stress are emerging around the country. We are pleased that Maryland has been in the forefront with this emerging work, and this expertise has been essential in developing a system here in our state to make these services available.

Emergency personnel face many personal perils and hazards in carrying out their work. It is our hope that this new system of helping the helpers will provide a significant resource to them in times of need.

Planning EMS Survival Strategies. . .

A fire engine pulled up to the scene during the shooting incident at McDonald's restaurant in California. One of the firefighters jumped off, grabbed a woman who had been shot, and hid with her behind a wheel of the fire engine while the bullets were flying. The driver of the fire engine sought cover in the driver's side jump seat. Although the driver thought he was out of reach of the shooting, a bullet entered the sheet metal on the right side of the vehicle, went through the engine compartment sheet metal, bounced off the engine, hit sheet metal coming out, lost its power, and dropped on the driver's head. He pulled the bullet out of his hair. Neither firefighter was injured, but the one outside the vehicle sitting behind the wheel had the better choice of hiding place. How can a prehospital provider judge whether a hiding place is safe? Or whether any situation is safe?

Maryland State Police TFC Mark Gabriele, who is also a volunteer firefighter/CRT with the Rosedale Volunteer Fire Company, and Dennis R. Krebs, a Lt/CRT in Baltimore County, teach a course in EMS survival for prehospital providers; portions of this course have been covered in a series of articles in this newsletter. Parts 1 and 2 described safety techniques to use while approaching motor vehicles and dangerous situations in residences. The following three parts discuss cover and concealment, hostage survival, and using reasonable levels of force.

Part 3: Cover and Concealment

This section answers the question, "What can I find to hide behind when dangerous things come flying at me?" Gabriele and Krebs believe that each time you pull up to a house you should notice possible places of cover. "Cover" refers to objects that are difficult or impossible for bullets to penetrate. Objects that can be found outdoors include big trees; anything concrete, such as retaining walls or street curbs; mounds of dirt; and the motors and wheels of vehicles. Large blue mailboxes offer cover if you stand in the shape of the mailbox with your feet apart. If you hide behind a fire hydrant you may be hit in the arm, shoulder, or leg, but your vital organs will be protected.

Possible places of cover inside a building are store counters, walls, heavy furniture, concrete block walls, and doorway frames. Shotgun blasts will penetrate drywall.

For safety's sake it is better to be standing than sitting, and better to be sitting than kneeling, prone, or supine.

"Concealment" refers to objects that prevent you from being seen. If you are out in the country near a field, get down in the brush. Shadows or getting behind the high lights of the medic unit also offer concealment. Think about your surroundings. You may feel well hidden if you duck behind a large sign or bush, but if there is a street light behind you or if cars come up behind you with headlights on, your silhouette will be seen.

If you are hidden and want to see what is happening, don't always look out from the same spot. Vary where you pop out for a quick look. Don't change your place of concealment just for the sake of changing. If you are in a safe position, stay there.

Part 4: Hostage Survival

Firefighters and medics in Montgomery County, Maryland, were sent on a call to the IBM building, where a man had crashed his car through the back door of the building and started shooting a machine gun. The SWAT team had flak vests, M-16s, and tear gas — but the firefighters and medics arrived first — and found themselves in the middle of a major incident. When the chief found out that his men were in danger he had them pull out until the area was secured. That was a tough decision to make, Gabriele says, because it might have caused lives to be lost. The SWAT team leader said there were numerous times when the unarmed personnel could have been caught off guard by the gunman running through the building. By the end of the incident well over 300 people were treated or triaged; several died of their injuries.

What would happen if firefighters or medics were taken hostage by armed gunmen? Are hostages' chances for survival good or bad? Gabriele and Krebs say that in 90 percent of cases hostages are released physically unharmed. Psychologically there might be problems.

There are three types of people who take hostages, according to Krebs: "crazies," criminals, and crusaders. "Crazies" are the psychologically disturbed people who may hold their spouse or children as hostages; criminals may take hostages who are at the scene of their crime; and crusaders might be motorcycle gangs, revolutionaries, neo-Nazis, or anti-abortion terrorists. The six stages of a kidnapping are surveillance, capture, transport, holding, and direct and implied threats. The prehospital provider is not involved in the surveillance stage; therefore, only the other five stages will be described to explain what a hostage experiences.

Capture. The perpetrator is excited, well armed, wants to gain control, and is feeling fearful and nervous. Should the provider submit or try to escape? Gabriele and Krebs recommend that at this point the provider should submit. *Follow instructions.* Remain calm and control the instinctive anger felt when you are roughed up, hit, or shoved. Avoid personal injury; remember that if you are injured you lessen your chances of escaping later. "You create a threatening image as part of the establishment if you are wearing a uniform," Krebs says. "At your earliest opportunity turn your shirt inside out and cover or remove patches or insignia."

Transport. This may involve being moved from one building to another, or only from one side of a room to another. You may be blindfolded or gagged, pushed or shoved. Emotional instability and sensory deprivation set in during this phase. Try to help yourself (and the police in the future) by being aware of sounds and smells and by noticing weapons and location. One hostage kept himself calm by constantly talking to himself and reassuring himself. To regain his composure, he kept telling himself, "I haven't been hurt; just relax."

Holding. This is the stage at which emotional problems develop. The kidnappers want you alive so demands can be made. The more time that elapses after capture, the more likely you are to remain safe. Try not to worry about when you will be released; it would be demoralizing to set unrealistic goals such as 24 hours and be wrong. Hostages have sometimes been held for months and been released.

Move. This is a second transport that might occur toward the end of the incident when negotiations are in progress. It might involve moving to a different building, to a different room, or just from one side of the room to another.

Resolution. This is the final outcome

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. . .Concealment, Hostages, Force

(Continued from page 4)
of the situation when the police gain or negotiate the freedom of the hostages.

Learn to manage yourself and your personal environment. Don't be either daring or cowardly; either one will attract unwanted attention. Use the bathroom facilities even if it must be while you are under guard. When you are given food, divide it into three portions for breakfast, lunch, and supper, because you don't know when you will be given food again. Exercise. Ex-Vietnam prisoners say that even when confined to a small box they managed some form of exercise.

Try to keep your mind active. Write letters to your family, fantasize. Measure time by heat or cold, noises, meals being served, or guard behavior (if the guards keep dozing it is likely that it is nighttime). Celebrate events like birthdays and Christmas. Establish a daily routine: meals, personal hygiene, housekeeping your own space, work, rest, exercise periods, sleeping periods.

Beware of female kidnappers — they are quick to shoot and kill, Krebs says. Males who try to get friendly with them will be in trouble.

Identification with captors is a psychological reaction to fighting for your life under these circumstances. It is called the "Stockholm syndrome," referring to the first incident in which this was recognized. Even after you have seen the terrorists kill unarmed people and commit unspeakable crimes, your anxiety to be thought of as friendly makes you think "These people are not so bad." This problem can be used to your advantage, because a captor who becomes friendly will not readily kill. Terrorist organizations are aware of this and sometimes make the guards wear hoods to prevent human contact. If guards are changed abruptly after a long time with the same ones, it might be a sign of a dangerous situation developing.

Part 5: Reasonable Levels of Force

A reasonable level of force is the minimum amount of force needed to accomplish a goal. The goals for which it is acceptable for an EMS provider to use a reasonable level of force are: to reach or treat a patient who is not breathing, has a blocked airway, is in cardiac arrest or suffering severe trauma and who will die if you do not reach him immediately; to remove somebody who is interfering with the care of a patient who will die without that care; and to move a person who interferes with your retreat from a dangerous situation.

"If you grab someone and tell him to sit down you may have a problem," says Gabriele, "because you don't have the authority to do that. However, if you move someone out of the way to reach a patient that your training as an EMS provider makes you believe will die if you don't reach him immediately, you do have a leg to stand on in court."

There are ascending levels of force that might be used; a lower level may succeed, making it unnecessary to go further. The first thing to try is the *verbal challenge*. If someone is in your way, identify yourself and give instructions. "Wheaton Rescue Squad — please sit down. She'll be all right if you just sit down." If they do sit down you have accomplished your goal, and there is no need for other measures. If someone makes you feel uncomfortable by looking over your shoulder say, "Sorry, you'll have to move; you're in my light."

If talking doesn't work the next step is *physical blocking*. Show that you have some form of authority. Put your arms out and say, "We're paramedics — move back, move back. He needs medical help and we're going to treat him. Get out of the way."

Tension at a scene might make you want to leave quickly. For example, if you're at a bar, ask for the manager if you need help; he'll be sober, and will be just as anxious as you are to see the incident end. Swoop and scoop if necessary; document your reason for moving the patient that fast.

Gabriele and Krebs, in their course, demonstrate simple come-along holds to be used if all else fails. These must be justified by documenting that you tried to use lesser levels of force such as the verbal challenge and physical blocking but they didn't work.

There is increasing concern about the safety of EMS providers. Dallas, Houston, and Pittsburgh now issue bullet-proof vests for medics; Bridgeport, Connecticut, and some cities in Florida arm their medics. Medics have been known to carry brass knuckles, knives, or blackjacks.

Gabriele says it is important to keep a sense of balance about your EMS work. "Now that we've given you the feeling you should crawl up to every car and sneak up to every house, I want to tell you — not everybody is out there to hurt us! There are still families who will thank you profusely and send cards to the station, and think you did a great job. There *are* nice people out there. So when you make a call to a car that turned over in a ditch, go about your business as usual. But if a situation makes you feel uncomfortable, think about it."

—*Erna Segal*

Jobst Trousers Recall Notice

Through its quality assurance testing, the Jobst Institute has found a potential weakness under certain conditions in the tubing used *inside* the pressure control units on certain models of its Gladiator Antishock Pants. If you use gauged models of antishock pants that have a pressure control box, please write to the quality assurance department of the Jobst Institute, P.O. Box 653, Toledo, Ohio 43694 or call 419/698-1611. They will send you a no-charge field service kit both to correct the potential problem and to extend the service life of the equipment.

Stress: Helping the Helper

May 8-10, 1987
Omni International Hotel
Baltimore, Maryland

This international conference for fire fighters, nurses, police, psychosocial clinicians, EMS personnel, and physicians will explore a broad spectrum of topics related to practical intervention strategies for assisting emergency personnel exposed to stressful events. Experts in the field will review critical incident stress debriefings, educational strategies, stress reduction techniques, employee assistance programs, family counseling, peer group support, and other related topics. Experiences from actual incidents will be discussed.

The conference is being coordinated by Jeffrey T. Mitchell, PhD, and Marge Epperson-SeBour, MSW, ACSW. For brochures or additional information, contact the Emergency Health Services Department, UMBC, 5401 Wilkens Avenue, Catonsville, MD 21228, 301/455-3223.

Yes, There's Life after Stress

Craig Coleman's experience with critical incident stress following an incident on Christmas night in 1983 was described in the December 1985 issue of the *Maryland EMS News*. Mr. Coleman was the first prehospital care provider to arrive at the home of a man who had "gone berserk" and was carrying a child and a knife. The EMS providers did not know whether the child was alive or dead. For an hour, Mr. Coleman and a police officer cautiously followed the man through the house, talking with him and trying to persuade him to give them the baby. At some point, the man, who was under the influence of PCP, beheaded his child.

Many readers have since written or called to ask about Mr. Coleman. Responding to such concern, he again wishes to share information about his recovery so other people in similar situations can know that they are not alone and that help is available.

In the months following the incident, Mr. Coleman developed severe headaches and had nightmares that made him jump from bed as if he was chasing someone or was being chased. He had ludicrous dreams that all ended with his son being killed. He made angry outbursts toward his wife and children, sometimes for no apparent reason. His children were about the same age as the child who was killed; Mr. Coleman had recurring visions of them with their heads cut off. He denied that anything was wrong and continued his work in the fire department. Ten months after the Christmas incident, he realized that he had to leave his job as a paramedic in the Baltimore County Fire Department.

"I felt that people look up to paramedics," he explained. 'Because I wasn't able to do my job, I thought that I wasn't the equal of the other paramedics anymore."

He lost not only his job but also his wife and children. The stress at home became too great and led to divorce.

Mr. Coleman knows how difficult it is for most people in EMS to ask for help. Because of their tough, rugged image and expectations of themselves, it is hard for them to admit that they have a stress problem and need help to resolve it.

Mr. Coleman acknowledges that people tried to help him cope with his stress reactions during that difficult time, but the formalized structure was not yet in place. "If I had had access to the mental health services that are available today, I would probably still have my job," stated Mr. Coleman. "A lot of the severe reactions could have been prevented."

Mr. Coleman is now employed by the MIEMSS office of training and certification. He is also involved in the critical incident stress debriefing (CISD) program (see article on page 2) as a peer support person.

"I will never forget the 1983 incident as long as I live," said Mr. Coleman. "But the memory has become very tolerable so that it doesn't interfere with the things I need to do." Mr. Coleman explained that for months after the incident, he could describe it in great detail, but, with the passage of time, the details are fewer. "I sometimes see things on television that remind me of that night. Now that I understand the reaction, it ends more quickly."

Christie Polen, LCSW, who is a family counselor in the psychosocial services department of MIEMSS and a counselor in the CISD program, noted that the diminishing of details over time is a sign that recovery is progressing. "Something will trigger the memories, and that is normal. It usually frightens people. The feelings go away faster, which shows that the person is coping with it properly."

Mr. Coleman expressed his appreciation to the MIEMSS personnel who recognized his potential and commitment to EMS and who offered him the administrative job that he now holds. "I'm not in the field," he said, "but I'm still involved in EMS, which is where I really want to be."

He is "jubilant" about his involvement in the CISD program. He hopes that his participation will help other EMS providers to avoid the stresses that he and his family experienced.

"There is life after stress," said Mr. Coleman. "There are ways to recover from it and, once you deal with it, it's not so bad." —*Linda Kesselring*

Team Studies Fatal Accidents To Find Prevention Methods

A multidisciplinary crash investigation team consisting of members of the Maryland State Police (MSP), the State Highway Administration (SHA), and MIEMSS have agreed to initiate a pilot study in January 1987 to study causes of fatal crashes and to look for possible preventive measures. Accidents occurring on the interstate system in the Baltimore metropolitan area under the primary responsibility of the MSP are being studied.

There are seven people on the crash investigation team: three MSP troopers, two highway engineers, and two MIEMSS field personnel. Each of the three agencies will provide unlimited cross-training as necessary to the other team members.

The agencies' roles are as follows:

MSP: A traffic homicide investigator conducts the accident reconstruction and coordinates the crash investigation team; gathers evidence; determines violations of law; and acts as liaison with all law enforcement agencies.

SHA: A traffic engineer examines accidents from a mechanical and engineering perspective; observes, analyzes, and tests road construction materials, road designs, traffic patterns, and other highway environmental factors at the crash site that contributed to the crash.

MIEMSS: A field operations representative acts as liaison between the team and all medical services, correlates the injuries with the mechanics of the crash, and determines if pre-crash activities contributed to the crash.

Maryland State Police investigators will be responsible for drafting the final reports with the assistance of SHA and MIEMSS representatives.

It is intended that the detailed, multidisciplinary review of the human, vehicular, and environmental components contributing to crashes will provide useful information for public education, highway environmental improvements, operator training, emergency services, vehicle inspection standards, and legislative, engineering, and enforcement systems.

The memorandum of understanding establishing the team was signed by Colonel George Brosan, superintendent of the MSP; Hal Kassoff, administrator of the SHA; William E. Clark, state EMS director (MIEMSS); and R Adams Cowley, MD, director of MIEMSS.

Advantages of Using Runsheets

Many months ago the current Maryland Ambulance Information System runsheet made its debut into our world of EMS. To the provider, this form is a complicated device that takes a lot of time to complete. But to the EMS system managers and administrators it provides valuable information in many aspects of EMS operations. Accurate reporting of medical data is also an important medical/legal responsibility of every EMS provider.

Each month a report is generated providing basic statistics for each company, such as number of runs, number of priority 1, 2, 3, and 4 calls, number of ALS and BLS calls, average response times, etc. Quarterly a more detailed management report notes the number of visits to each hospital, types of calls, types of illnesses/injuries treated, time of day/day of week trends, certification levels of providers, and ALS skills and response times. Using this information, several jurisdictions have obtained federal grants or additional funding by being able to document their needs. (If you have not had the opportunity to review these reports, ask your company officer to make them available to you.)

In addition, a quarterly skills report will be generated for ALS providers to assist with their recertification process. In order to get these monthly and quarterly reports, it is necessary to send the runsheets to MIEMSS on a monthly basis — with each batch containing runsheets only for that one month. Runsheets collected during one month should be forwarded the following month on the date regionally specified so that the runsheet statistics can be returned in a timely manner.

Like all computer-based systems, the information generated is only as good as the information placed into the system. A recent review of errors made when filling out the unit number, the county, the date, and the disposition (transport by) revealed error rates between 2 and 63 percent. In addition, about 37 percent of the runsheets did not have a complete set of vital signs on all patients transported. If your company wants good information back from this system, it must take the time to review each runsheet for quality and accuracy. Our goal is to keep the error rate below 5 percent.

In July 1986 the Maryland legislature passed a law requiring participation in the data collection system. This law also provides money to these jurisdictions that participate. Your individual participation as a first responder, EMT-A, CRT, ATT, or EMT-P will determine the success of this medical information system.

If your company needs assistance in training prehospital care providers to fill out runsheets or wishes to review the areas of information that are most frequently completed incorrectly, contact your regional EMS administrator or the Office of Prehospital Care at MIEMSS (301/328-2366).

—Ken Young
Director of Prehospital Care

Vehicle Fires, Fuel Problems Noted in Ford Ambulances

Recently several stories have appeared in various EMS publications describing fires and fuel system problems in 1982 and newer Ford E350 ambulances. The Division of EMS in Virginia, in response to two ambulance fires in Richmond, has sponsored three clinics to review the problem and to give owners of these vehicles a chance to meet directly with high-level Ford representatives. In addition, Ford factory representatives have inspected vehicles brought to the clinics and made recommendations, as well as on-the-spot corrections.

Two basic problems cause a pressure buildup in the fuel tank. *(1) Incorrect gas-fill caps that do not allow venting if a pressure buildup occurs.* Ford part #E5TZ9030A or Motor Craft part #FC897 (which is gold in color) should be used in all Ford ambulances regardless of the vehicle year. *(2) Modifications to the fuel system by the ambulance builder that cause a restriction in the fuel system emission control or other lines.* These problems are the most common causes of pressure buildup which can result in gas being sprayed out of the fill tube when the cap is removed.

Excessive engine compartment heat buildup has been identified as a major factor in the vehicle fires. Heat buildup occurs when the engine cooling system is obstructed by accessories such as lights or non-Ford air-conditioning components. It is compounded by running the engine at a high idle with a full electrical load. One of the ambulance vehicle manufacturers has discovered that the installation of higher-than-factory-provided alternators often results in not reconnecting a wire to the automatic choke, causing unburnt fuel to accumulate in the exhaust system with resulting fire.

Preventive recommendations to prevent heat buildup include remounting accessories, changing to a seven-blade fan, and having hood louvers installed. Of course, proper installation of electrical components and an inspection program are a must for everyone's safety.

In dealing with your local Ford dealer for service, request that he review Ford Technical Bulletin #385-12.

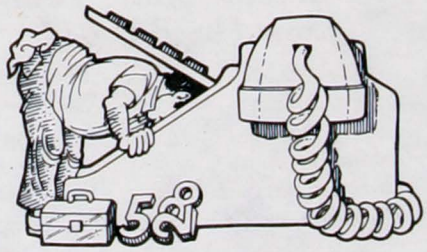
—Ken Young
Director, Prehospital Care

We've Moved!

Several MIEMSS field operations offices have moved to Whitehurst Hall at 624 W. Lombard Street. The communications office is located on the first floor; the operations research and systems analysis office, on the second floor; the computer resources and testing and certification offices, on the third floor; and the prehospital care office and Region III office, in the basement.

The office phone extensions have remained the same. All mail should continue to be addressed to the specific office, MIEMSS, 22 S. Greene Street, Baltimore, MD 21201-1595.

The Region V Office moved to 5103 Berwyn Road, College Park, MD 20740. The new phone number is 301/474-1485.



MIEMSS
has a new telephone exchange: 328

Address Correction Requested
MIEMSS, *Maryland EMS News*,
22 S. Greene St., Baltimore, MD 21201-1595

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Attention EMTs

EMTs whose certifications expired in June or December 1986 now have until June 1987 to recertify. This extension was granted so that EMTs could meet the continuing education requirements under the new recertification guidelines.

If you are due to recertify by June 30, don't wait! Contact your regional administrator for available training programs.

Your attention to detail in completing the attendance cards is appreciated. Not completing the attendance cards in entirety makes it difficult to award continuing education credits.

The regional EMS offices will be sending your recertification packages. After you have completed the recertification process, you will receive a new EMT card within the next few months.

Paramedic of the Year Named by Box 414

George Michaloski was named Baltimore City Paramedic of the Year by the Ladies Auxiliary of Box 414. Prior to joining the Baltimore City Fire Department, he had been a member of the Middle River Ambulance and Rescue Company.

Mr. Michaloski has designed and manufactured (and is seeking a patent for) a pediatric backboard designed for children with spine or neck injuries.

Maryland Institute for Emergency Medical Services Systems
and the Region V EMS Advisory Council
Present

Hosted by the Prince Georges County Fire Department
at the Greenbelt Hilton and Towers

APRIL 24 - 26, 1987

12 hours of continuing education credit for one low price—$50.
Free T-shirts for Early Bird Registrants.

For information and program schedules, please contact the Region V EMS Office at (301) 474-1485 or write P.O. Box 1658, Bowie, MD 20716