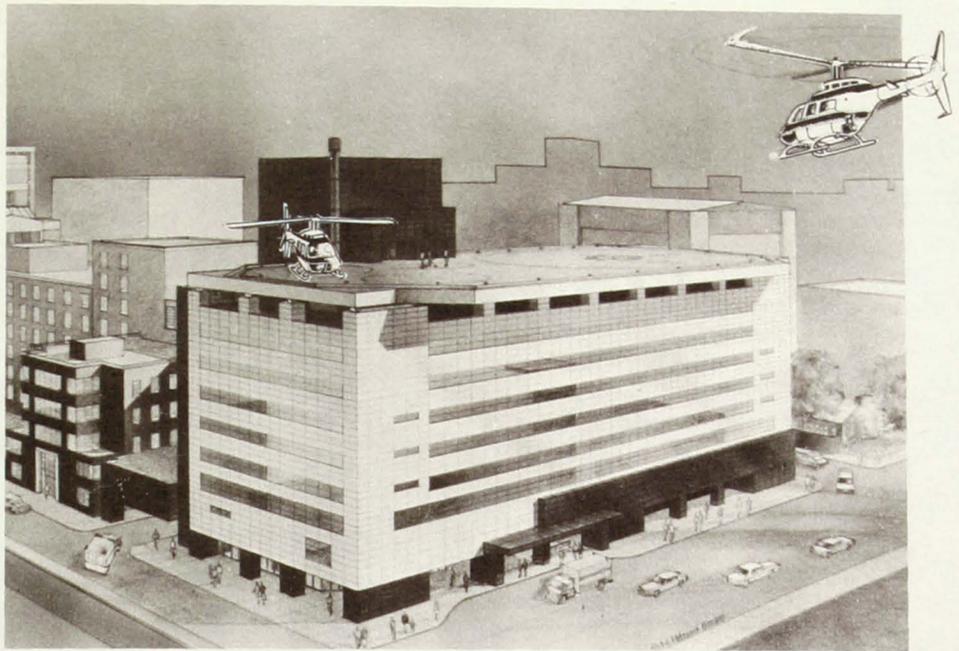




Maryland  
**EMS  
NEWS**

Vol. 11 No. 11 MAY 1985



*The architect's rendering of the proposed new Shock Trauma Center. The projected completion date is approximately three years.*

## Legislature OKs New Shock Trauma Building

Before adjourning in April, the Maryland General Assembly approved funds to build a new six-story, state-of-the-art MIEMSS Shock Trauma Center.

The Shock Trauma Center, which is part of the University of Maryland Medical System (UMMS), will receive a \$21 million state grant this year to begin construction of the new building. Legis-

lative leaders and Governor Harry Hughes also pledged their support that \$10 million be appropriated next year.

Originally \$38 million was requested by MIEMSS for a 138-bed facility. During the first months of the session, this request was trimmed to \$28 million by the decision to renovate a portion of the UMMS hospital to accom-

modate 66 intermediate care beds for Shock Trauma patients. This compromise of integrating the construction and operation of the new building with the UMMS hospital was key to legislative approval.

The proposed new building, as currently approved, would increase the number of trauma beds for critical care patients from 40 to 72 (the number of beds for intermediate care would also increase from 33 to 66 but would be located in the UMMS hospital). In the new building, the number of admitting bays would increase from 6 to 11, and the number of operating rooms from 3 to 5. In addition, a heliport would be built on the roof.

Emphasizing that the new building is essential, John Ashworth, MIEMSS director of development and special projects, noted that the current Shock Trauma Center originally was built to care for 400 patients annually but last year cared for 2,000. The problems with equipment and beds in the halls due to overcrowding have been well publicized. Mr. Ashworth also stressed: "We can't practice state-of-the-art medicine as it should be practiced in our current building. For example, we can't house x-ray facilities in the building we have now. Further, one of the biggest deficits is the fact that the heliport is located a block away and we use precious time to wind down parking garage ramps in order to get patients into the facility."

—Beverly Sopp



### STC Supporters Rally

*(Top) Sen. Francis X. Kelly (D, Baltimore County), as well as Del. Martha Klima (D, Baltimore County) (not shown), were outspoken in support of a new Shock Trauma Center building during a rally in Annapolis where former patients, families, and friends of Shock Trauma (below) demonstrated to legislators their support of a new building.*



# EMRC Marks Tenth Year of Service

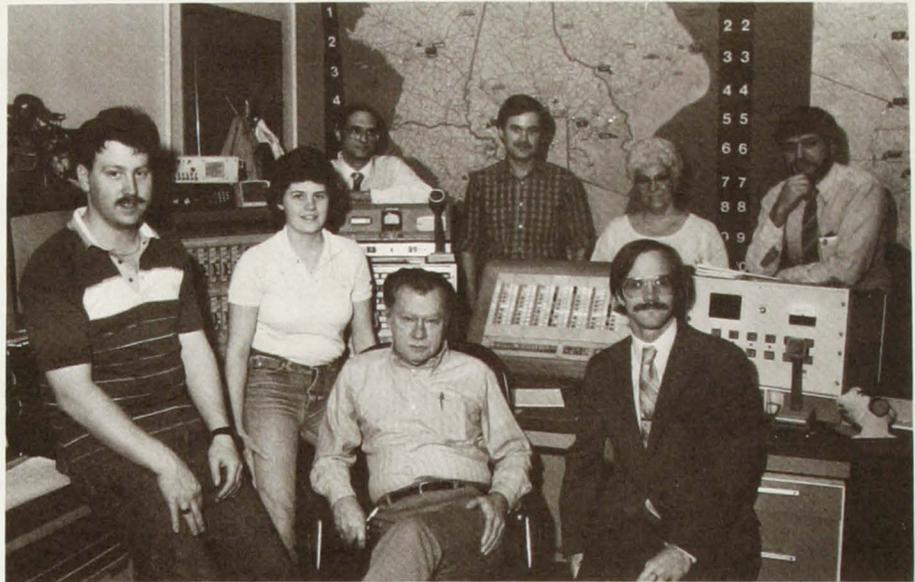
"It almost seems as though the aptitude test for this job should be to work the console for eight hours with a banana in your pocket, in a room with 100 hungry monkeys. If you come out of the room with the banana intact, you're hired. You have to be able to do a number of important things at one time, and not become distracted." Andrew (Andy) J. Pilarski, supervisor of the Emergency Medical Resource Center (EMRC), is describing the job of an EMRC operator.

EMRC, the Region III communications link between 133 ambulances, 25 hospitals, and various specialty referral centers, is observing its tenth anniversary. Seldom have so few people done so much for so many, with so few resources.

Before EMRC existed, an ambulance would take a patient to the nearest hospital emergency room on the mistaken assumption that they were all pretty much alike. In 1973, an informal group of emergency room physicians, along with the Comprehensive Health Planning Agency and the Regional Planning Council, decided that the public's needs would be better served by a coordinated system linking ambulances and hospitals, with a means of transmitting ECGs while the patient was being transported to the hospital so treatment could be started immediately. It had never been done before on such a large scale.

They applied for, and received, a federal demonstration grant of \$1.25 million to set up the system. A nonprofit organization of consumers and providers, Emergency Medical Services Development, Inc. (EMS DI), was formed with John D. Stafford, MD, as director. (Dr. Stafford, who later became director of EMS field programs at MIEMSS, is now director of EMS in Arizona.) He chose George Pelletier (now Region III administrator) as a member of his staff. The purpose of the system, as Dr. Stafford explained it, was to stabilize the cardiac patient where he was—at home or in the street—and then make the appropriate decision as to which medical facility the patient should be taken.

There were no existing state-of-the-art communication systems to use as a model—this was the first. Atlantic Research Corp., an engineering company hired to evaluate the needs of the system, determined that it should utilize UHF frequencies. The major manufacturers of communications equipment,



*The current EMRC staff: (front, l-r) Allen Roody, Tracy Zukowski, Richard North, and William Pacer; (back, l-r) Andrew Pilarski, Robert Fowler, Nancy Colburn, and Coos Hamburger; missing from the photo are Tom Pristow and Dan Dike.*

however, had VHF equipment on hand, and tried to tailor the system to the products on their shelves. Dr. Stafford recalls, "They said our system would never work."

The workhorse of the system is the Western Electric 50-20 telephone switching device. It was obtained as surplus from U.S. Army Intelligence at Fort Holabird; there were only several like it in the world at that time. When the radios came in, the operators had to help assemble them. Then came the monitor/defibrillators and setting up base stations. Mr. Pelletier observes, "Radios have a seven-year field life, and we've exceeded that. They don't manufacture them anymore, so we're cannibalizing them because we can't get replacement parts. But the monitor/defibrillators are still in use, and some have hardly even been in for repairs. We really got a good product."

Joseph I. Berman, MD, then chairman of the board of EMS DI and chief of emergency services at Sinai Hospital (now vice-president for medical affairs of the Wyman Park Health System), asked the director of Sinai Hospital for an area that could be used for a communications center. (Sinai built the room at no charge, and has been paying its utility bills all these years—according to Mr. Pelletier, a saving of approximately \$25,000 to the system.) All the towers and hospitals were hooked up to the center through leased telephone lines. The next steps were to outfit the

ambulances with radios and monitor/defibrillators, and put monitors in the hospital emergency rooms to receive the ECGs.

It took time and effort to visit each hospital and convince its staff of the benefits of joining the system. Participation was strictly voluntary—and every hospital agreed.

Mr. Pelletier, Mr. Pilarski, and A. Richard (Dick) North, another long-time EMRC operator, traveled around Region III in their private cars for months, using portable radios to call EMRC to rate the signal and determine the locations of weak spots.

On an eventful day in May 1975, EMRC was put into operation. Members of the staff stood around the console waiting for the first call to come in. It took a while. The system, in which one operator today may handle four or five calls at a time, and which has handled 167 emergency calls in one day, had a rough time getting started. People didn't know how to use the system, and there were not enough CRTs in the field to operate the equipment.

"The question was, how could you train all those people—Baltimore City, Baltimore County, the volunteer ambulance companies—with an extremely limited budget?" Dr. Berman declares, "The answer was, we trained them ourselves. The first class of CRTs trained after the establishment of EMRC was trained at Sinai Hospital. We put

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together a program with volunteer teachers that cost us nothing. Many hospitals contributed time and staff to teach them. The ambulance people worked in the emergency rooms of various hospitals for their practicum; they were allowed to help care for patients, so they learned how to start IVs and use drugs. Chief Marty McMahon, then chief of the Baltimore City Fire Department Ambulance Service, was extremely helpful in linking up the ambulances with the hospitals. The system worked; people were trained to use the system. It showed what could be accomplished with a small amount of money and a lot of enthusiasm. There was a feeling that what we were doing was important, and would ultimately save lives. It was a cooperative, grass-roots effort that worked because contacts and shared feelings already existed in the community.

"Once EMRC was in place," reminisces Dr. Berman, "our biggest accomplishments were to persuade people to take the equipment, to learn how to use it, and to be willing to have

someone coordinate the efforts of various ambulance services." Drs. Berman and Stafford feel that this system paved the way for the echelons of care systems.

After the grant money ran out, in 1975, the equipment and personnel were transferred to the state, to the Division of Emergency Medical Services (DEMS) of the Department of Health and Mental Hygiene. EMSDI ceased to exist. Many people who had been active in EMSDI became members of the Region III advisory council. In 1977, the Maryland General Assembly amalgamated DEMS and the Shock Trauma Center (known as the Maryland Institute for Emergency Medicine) into the Maryland Institute for Emergency Medical Service Systems (MIEMSS).

EMS providers came from all over to see EMRC in operation. With its console of equipment, flashing lights, constant recording of each transmission, huge wall maps lit up to mark hospitals on alerts, and red overhead lights—EMRC looked impressive. Wall panels hide innumerable wires and connections. Theoretically, through its duplex lines and the EMSTEL network, EMRC

could talk simultaneously to every hospital in Maryland. "It is possible," Mr. North points out, "to have an ambulance in Ocean City speak to the patient's doctor in western Maryland. By using a combination of central alarms and EMSTEL we can cover the whole state." Statewide calls are used for neonatal transport also. The initial purpose of EMRC has proven valid—66 percent of the calls handled concern cardiac emergencies.

The current EMRC operators are certified as EMTs, and have taken CRT training, although it is not necessary that they maintain their certification. Triage requires knowledge of the patient's needs and of the capabilities of the provider. Some operators were medics in the service, some are active volunteers in the field, and others are operators only. "We do not direct patients. We provide certain advisory information, but the decision as to where to take the patient is made by the field provider and the consultant to whom we connect him. There may be a need for several consultations for the same patient. We are the

(Continued on page 6)

## Communications System to Be Upgraded

The Maryland EMS communications system has aging problems. They are particularly acute in the Baltimore metropolitan area, where the needs of more than half the state's population must be met. Additionally, there are areas of poor radio coverage around the state, and many ambulances and other emergency response vehicles have equipment in need of replacement.

MIEMSS has developed a plan to modernize the system, calling for an eight-year plan of phased-in improvements. William E. Clark, state director of EMS field operations, explains, "The fate of the EMS communications system was before this session of the legislature. Governor Harry Hughes is aware of the needs, and he requested an additional \$1.1 million to be added to the field operation budget annually for eight years, for a total of \$8.8 million, to meet both our communication and training needs.

"The appropriation has been approved by the General Assembly and the money will be available July 1. A federal funding source is supposed to provide \$213,000 of the \$1.1 million, and that might not be forthcoming. However, \$887,000 looks good. If

necessary due to a funding shortfall, we'll have to go to an 11-year plan for the communications system.

"A new communications center, which will combine EMRC and SYSCOM, will utilize computerized consoles and status boards to be controlled by two or more operators at one time. Calls coming in simultaneously will be handled with less waiting time. It is planned to locate it at Dunning Hall on the downtown UMAB campus, the future home of MIEMSS Field Operations."

There are also plans during the upcoming fiscal year to fix four areas of poor radio coverage in Region III, at Galesville, in southern Anne Arundel County; Sparks, in northern Baltimore County; Whiteford, in northeast Harford County; and Savage, in Howard County. Region III plans to replace some ALS radios, converting from the present high-powered portable radios to a system of vehicular repeaters, handie-talkie radios that broadcast a signal on the ambulance radio.

New equipment planned for pre-hospital providers will cut down the weight of their loads considerably. The presently used Region III Pioneer radio

weighing 32 pounds will be replaced by a hand unit weighing one pound. The monitor/defibrillator that weighs 32 pounds and requires a 6-pound chart recorder will be replaced by a monitor/defibrillator with a built-in chart recorder, weighing 23-1/2 pounds. The weight of equipment will be reduced from almost 71 pounds to about 25 pounds, a significant help to the provider who must also carry a litter and a drug box, sometimes for great distances.

"There will be enhancements to the system throughout the state," Mr. Clark envisions. "There will be state-of-the-art technology. We have identified 11 major areas in the state where we have poor coverage, and there will be improvements in every region. Base stations will be added in Regions IV and V. There are very exciting things planned for all 23 counties and Baltimore City, including improvements to hospitals, ambulance companies, and central alarms. There will be more base stations, improved consoles for hospitals, and lighter, more powerful radios for ambulances. The whole state system will be upgraded."

—Erna Segal

# Neonatal Transport Nurses Help Infants

"I had flown down to get the baby, who was ice cold, and worked the whole time to warm him up. When we landed at the hospital, they wanted to change him from my isolette into theirs, out there in the cold, with the helicopter whipping the wind around. I said—'Let's put my isolette into the van with yours, close the door, and transfer the baby inside where it's warm.' I couldn't let them take my baby out in the cold!"

This incident, described by Neonatal Transport Nurse (NTN) Carol Dean, typifies the attitude of this closely knit group of nurses toward their tiny charges. Neonates (infants less than 28 days old) who need transport are usually in trouble—they are often premature infants with low birth weight, in respiratory distress, possibly with congenital heart defects or in need of surgery. Health care professionals skilled with adult or even pediatric illnesses may not realize the delicate condition of these babies; being warm might make the difference between whether or not the baby survives.

NTNs in the Maryland Regional Neonatal Program have at least two years experience in the neonatal intensive care unit (NICU) before they are qualified to apply for extended training by neonatologists, that will enable them to transport infants in the unstable environments of hurtling ambulances and vibrating, noisy helicopters. The Maryland Regional Neonatal Program covers the entire state, plus parts of Delaware, West Virginia, Pennsylvania, and Washington, DC. It is administered by Cheryl Bowen, RN, MA of MIEMSS, in conjunction with neonatal medical directors from Johns Hopkins Hospital, University of Maryland Medical System, and Francis Scott Key Medical Center (formerly City Hospitals). Teams of three NTNs each take turns being "on call" at the NICU in each of these hospitals; if no bed is available at these NICUs, they can transport the neonates to Sinai, St. Agnes, or Mercy hospitals.

Every transport is reviewed by Ms. Bowen and the medical directors, and important details are discussed at combined meetings of the NTN teams twice a month. The continuing education of the NTNs is also combined. Nurse Coordinator Kathy Aoki, RN, arranges for the special training in skills, procedures, therapies, and assessments that makes an NTN capable of the quick judgment



*Jenny Gelhaus, RN, a neonatal transport nurse from Johns Hopkins Hospital, demonstrates intubation techniques on an infant in an isolette.*

needed for care of critically ill newborns. Each team follows an extensive protocols and procedures manual to ensure the same high standard of care.

The goal of neonatal transport is to transfer the babies safely and rapidly; the NTN tries to stabilize the infant at the community hospital to the point that there is no need for further resuscitative measures during actual transport. An NTN may work on a baby for hours before permitting the baby to be transported. "Sometimes the community hospital staff, under stress because the baby is critically ill, thinks the faster you move the better, but that is not always the case," explained NTN Kathy Kostkowski. "I've already worked on a baby for eight hours before his condition was such that we could leave."

If the situation allows, the NTN, working in cooperation with the community hospital staff, will teach techniques to enable them to help another baby in the future. "The staffs in the community hospitals are vitally important—they're the first ones to see the babies," said Mrs. Aoki. "The more they know, and the more comfortable they feel taking care of them, the better the eventual outcome." The NTNs explain why certain conditions happen and how they progress, while actually initiating intensive care measures that will carry  
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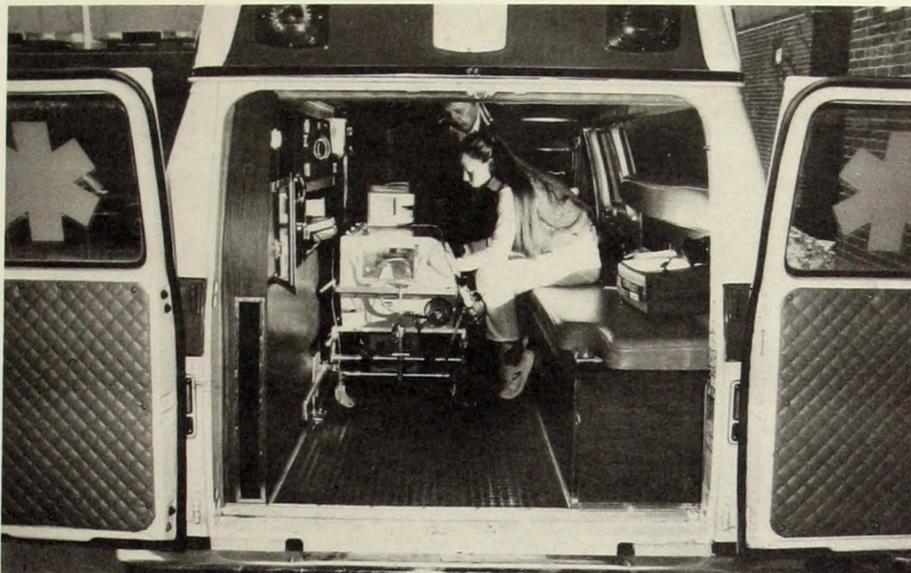
## MRNP Transport Techs

Neonatal transport nurses rely on neonatal transport technicians to drive carefully in all kinds of traffic and weather conditions, to find hospitals throughout the state, to manage some of the equipment, and to help in the care of newborns.

According to Cheryl Bowen, RN, MA, administrator of the Maryland Regional Neonatal Program, the program pays for drivers for daytime service; the rest, for nights and weekends, are volunteers. Kathy Aoki, director of education for the program, explains, "Each driver must be an EMT-A with additional training consisting of two days didactic instruction in thermoregulation, resuscitation, respiratory distress, and basic care measures for neonates. They also have 6 to 12 hours of clinical time in newborn ICUs."

The average call for an EMT-A working with a rescue squad lasts about one hour, and covers only one portion of the state. The EMT-NTTs' average transfer is 3½ hours long, and they cover the entire state of Maryland.

These volunteer and paid EMT-NTTs are vitally important to the overall effectiveness of Maryland's Neonatal Transport Program. Interested volunteers should call Lucille Karr (301/528-3930) for further information.



*Jenny Gelhaus, RN, prepares to transport an infant to a neonatal center.*

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the baby through to admission to the NICU. They always consult with neonatologists from the NICU before departure and during transport if necessary.

The Maryland Regional Neonatal Program is unique in that it specifically trains the NTN's to handle a transport. In other parts of the nation, neonatal transport teams include such combinations as nurse/nurse; nurse/physician; nurse/respiratory therapist; nurse/EMT (with six months of specialized training). However, the Maryland Regional Neonatal Program staff felt that the needs of neonates were so specific, it was more practical to increase the skills of neonatal nurses than to try to teach others all they needed to know about neonates. If an NTN thinks the transport will be particularly difficult, she can request another NTN to help.

There were 650 transports last year, with an average of two transports a day. But babies are not born in neatly arranged groups. One day last year there were five neonates in need of transport—simultaneously. The three NTN's on call responded, as did Ms. Bowen and Mrs. Aoki. There are only two ground transport vehicles in the program—an ambulance and a specially equipped van—so a Maryland State Police Med-Evac helicopter was called in. The NTN's without appropriate neonatal transport available took their boxes of drugs and equipment, and were delivered to the babies by police cars. They stabilized the babies and stayed with them until the mobile ICUs could be cleaned up and sent out to them. It was a day to remember.

Neonates do not have first call with helicopter transport—trauma does. It is reasoned that the neonate is already in a hospital with someone to work on him, while the trauma patient is in a much more dangerous environment. If an infant is stable, not respirator-dependent, and has a previously established intravenous line, it is possible for an unaccompanied State Police aviation trauma technician to make the transfer.

Before departure from the community hospital, the nurses give the parents an opportunity to hold the baby, or, if the baby is too sick to be moved, to stroke and talk to him or her. This allows time for parents to begin bonding with their baby. The NTN explains the baby's condition and the treatment he will receive, and calls the parents upon arrival at the NICU. They are kept informed of their baby's condition in the NICU, and a report is sent to the referring hospital weekly.

NTN's welcome the community hospitals' call for transport because the transport team is equipped with the specialized techniques and resources available to give the baby the best chance.

The NICU at the University of Maryland Medical System recently had a "Premie Party," and many of the returning patients were infants who had been transported. It was a thrill for the NTN's to see babies who had been desperately ill, but are now alert and active. Mrs. Aoki summed it up: "It's rewarding to have a sick baby, turn the condition around, transport him safely to NICU, and see him get better and go home."

—Erna Segal

## Ora Mae Lewis Retires in Region I

One of the founding members of the Region I EMS Council, who was instrumental in initiating the CRT program and citizen CPR training in that area, retired from her position as executive director of the American Heart Association, Western Maryland Chapter.

Ora Mae Lewis, RN, saw a lot of progress over her 29 years with the American Heart Association.

Two electrical engineers and a physician originated CPR in 1958. William Kouwenhoven, PhD, retired dean of the school of engineering of the Edison Electric Institute; his graduate assistant, G. Guy Knickerbocker; and James R. Jude, MD, a surgical resident at Johns Hopkins Hospital, who had worked with them early in his career, came up with chest compression as a way to keep blood circulating after the heart stopped. They realized that with artificial ventilation they could circulate oxygenated blood.



*Ora Mae Lewis*

The medical community was skeptical about CPR, and lawyers were dubious about the legal implications of it. At first, only nurses and doctors were taught the new technique. But when the Baltimore City Fire Department Emergency Squad members were taught CPR in 1959 and proved that properly trained laymen were capable of doing it successfully, various training programs began.

Police and firemen were the only lay people trained in the early days, but later it was felt that there was a missing link—the public should know how to perform CPR. Mrs. Lewis wrote a grant application, in consultation with Gina Glick, MD, and Denny Shroyer, a volun-

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teen EMT skilled in first aid, and administered the first 3-year grant to develop a corps of instructors and trainers to teach CPR to the public. The first group to learn CPR was drawn from rescue squads throughout the region.

Maryland was in the forefront of establishing CPR training programs. "It was hard to get it going," said Mrs. Lewis. The Maryland affiliate of the American Heart Association provided the first book and slide show, and they were used for quite a while.

Mrs. Lewis also administered the grant that trained the first CRTs in Region I. When the training was completed, the equipment was donated to Allegany and Garrett community colleges, where it could be in continuous use for training prehospital and rescue squads.

Mrs. Lewis is still a member of Region I EMS Advisory Council, and is serving out her terms as president of both the Allegany County Board of Health and the Allegany County Governor's Commission on Physical Fitness. A scholarship will be established in her honor at the Allegany Community College for a student in a health-related field.

—Erna Segal

### Readers Take Note!

We are trying to purge our mailing list of duplications. If you are receiving more than one copy of this newsletter, please let us know. It helps if we have the ID number on your mailing label, so either send us the mailing label that you want deleted or call us: Editorial/Publications Office, MIEMSS, 22 S. Greene St., Baltimore, MD 21201, 301/528-3248.

### Neonatal Emergencies

"Management of Neonatal Emergencies," part of the Region III lecture series for prehospital care providers, will be presented by Kathy Aoki, RN, BSN, perinatal nurse coordinator and instructor for MIEMSS neonatal transport team. The lecture will be held August 31, at 10 am, at the University of Maryland Baltimore County.

Ms. Aoki will discuss normal fetal to newborn transition and adverse effects to that transition; preparation for and specific steps in the resuscitation of newborns; and how to use specific equipment for newborns.

For further information, contact the Region III office, 301/528-3997.

## EMRC Observes Anniversary

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connecting link between them," explains Mr. Pilarski. The capacity of the audio equipment allows the operators to monitor up to two calls at a time to be sure the transmission is clear, and to provide further connections if needed. However, they have learned through experience to pace themselves, cutting in and out to monitor four or five calls at a time. They frequently establish up to six simultaneous conferences.

There can be only one EMRC operator at the console at any one time, and that operator is there to stay until he or she is relieved at the end of the shift. During an occasional bad snowstorm, operators have had to work through as many as 27 straight hours until relief came. When the system was young and there were just a few calls each shift, it was not too bad, but it leads to incredible demands on the operator under today's heavy load. When four or five calls come in at the same time, operators have developed the knack of listening to a different call in each ear, while keeping the information straight. Operators with years of experience can not only jump back and forth between calls, but also determine which transmission tower is being used, and whether the ECG bodes well for the patient. "We make good use of what we have," explains Mr. Pilarski. "My personal observation is that the reason the system works so well is that we have personnel who are doing an extraordinary job. There is a spirit of dedication you would never find in the commercial world, given the workload, pressure, and pay scale." Providers in the field may not know who these operators are, but they know they are an important component of the system.

EMRC has worked well, but compared to today's technology, it is a venerable antique. According to Richard L. Neat, director of communications for MIEMSS, EMRC serves a population base of 1.5 million people, and its traffic has tripled over the years. Some changes have been made, such as using microwave dishes on towers instead of leasing telephone lines, to save money. They are used by 85 to 90 percent of all the calls; the remainder must still go by telephone lines. Mr. Neat, in conjunction with Thomas Miller, electronics technician for MIEMSS, is designing a new system which will combine EMRC and SYSCOM. (SYSCOM or the Sys-

tems Communications Center, is operated by MIEMSS and coordinates the dispatch of Maryland State Police Med-Evac helicopters to accident scenes and the designated trauma and specialty referral centers.) Instead of walls full of wires and a huge console of equipment, there will be cathode ray tube computers and space age technology. Mr. Miller explains that it would be technically possible to put the entire operation on the computer, "but you could never automate the judgment needed by the operator." The new system is designed for use by three operators at a time, and will probably be located at Dunning Hall, the future home of MIEMSS field operations program. A plan to upgrade the entire communications system is also being worked on.

"We hope to improve upon the services we can give, with less waiting time to get calls through. We'll have more channels as well as more operators," Mr. Neat emphasizes. "If the plans work out, we'll be able to put the system in place and just move the operators into their new location. The only way the field providers will recognize the change will be in the extra smoothness of the operation. Perhaps this will be the last anniversary of EMRC."

Whether it is or not, hats off to EMRC, for a difficult job well done!

—Erna Segal

### EMS Film on Cable-TV

"The Right Kind of Care," a 29-minute videotape produced by MIEMSS and the Emergency Health Services Department at UMBC, will be broadcast on cable TV in Baltimore County.

Shown through the auspices of Cable Health Program, CALTEC, Channel 7, "The Right Kind of Care" will be broadcast the following times: June 4, 8, and 29 (3 pm); June 3 and 12 (7 pm); and June 6 and 20 (9 pm).

The videotape is designed so that the average citizen will ask the following questions and compare the answers with the system in their own community: Who answers the telephone when a call for help is placed? Who responds to the scene of an accident or acute illness? What kind of care is given to the patient at the scene when help arrives? Where is the patient taken to receive the right kind of care?

# EMS Survival Skills Course Planned

An EMS provider who gets a call that a person has been injured in a fight probably rushes right to his vehicle, and as he drives to the scene, thinks: head injuries, blunt trauma to the face, airway problems, oxygen, and whether a helicopter is available.

A police officer who receives the same call reacts differently. He is concerned with how many people are involved, weapons, whether the fight is still in progress, whether a misdemeanor will be committed in his presence, witnesses' statements, making an arrest, and what is the best way to approach the situation. He is interested in street survival. If the medic arrives on the scene first, he might suddenly find himself in a dangerous situation.

One of the "preconference" EMS '85 seminars offered June 21 will teach EMS providers the rudiments of the decision-making process needed to determine whether to approach or wait for police assistance; how to identify hazardous situations; and how to use physical force if all else fails.

Originated by Dennis R. Krebs, CRT/firefighter, Baltimore County Fire Department, and Mark Gabriele, CRT/trooper first class, Maryland State Police, it uses as its basis a course on street survival taught to State Police, and adapts it for EMS and firefighter's needs. It addresses subjects such as approaching motor vehicles, dangerous situations in a residence, cover and concealment, hostage situations, and the use of reasonable levels of force. The following is excerpted from a short lecture by Mr. Krebs and TFC Gabriele at EMS Care '84.

"This is a very radical course," the instructors say, "because it tells you that at certain points in time, for your own safety, you might have let a person die, as opposed to getting shot or hurt yourself. If your life is in jeopardy, you are not required to give care. You can't leave the scene—that would be leaving yourself open to charges of abandonment. However, you can back up, and ask for help.

"Suppose you get a call that a car is pulled off the road; the driver might be in distress. If there are bodies lying in the road, you can approach without hesitation. But if the car is pulled off the road nicely, don't expect cardiac arrest. People don't park well under stress. The driver might be intoxicated, or have a

gun. Suppose he watches you approach by looking in the car mirror, what does he see? A man in a uniform, with patches and a nameplate. He thinks he sees a policeman! Perhaps he's worried about losing his license, and steps out of his vehicle with a gun." The EMS provider must know how to approach the vehicle, and what to use for cover and concealment.

"Use police tactics when approaching the vehicle. Place your vehicle on an angle, using the engine block and wheels to protect you. The car door is no protection; even a 22-caliber bullet can go through it. The engine block can stop a .357 magnum bullet. A fire hydrant can stop a bullet.

"Guns and knives are not the only weapons that can hurt you. Tire irons, crowbars, baseball bats, metal pipes, scissors, anything can be used. If you have a feeling in your gut that you shouldn't approach the vehicle—don't. Back up, and call for help. For quicker response, instead of using signal 10, use signal 13, as the police do. Avoid the 'kill zone' of the car door. If he has a gun on his lap, he can shoot through the car door. Police are taught to dive to the ground and shoot through the door.

"Suppose that you find an injured person is carrying a gun? If it's stuck in the waistband of his pants, he's probably not a policeman; an officer would usually have it in a holster. Nothing says you have to treat an armed patient. If he's unconscious and you decide to remove the weapon, *secure it*. Put it back in the ambulance, at the bottom of the drug box, locked up. Or, if there is a police officer at the scene, give it to him. But, be sure you note his name, because you are now part of the chain of custody of that weapon.

"Firefighters and EMS providers can also run into dangerous situations while answering a call to a house or bar. There are domestic squabbles, drug overdoses, and psychologically disturbed individuals. Gather as much information as you can before going inside. You might hear that someone has taken a drug overdose, but don't know he has a gun in the bedroom. Or you know a man has been shot, but don't know it happened during a domestic argument. You can't go through the door without someone opening it for you; that would be trespassing. Don't stand near the opening of the door—the fatal funnel—because any number of

things can come through that door. In a domestic argument situation, look for weapons, and look for a way out.

"The way you approach people—including your tone of voice and posture—affects the outcome of the situation. If you sound belligerent or put your hands on your hips and look belligerent, you will be met by a belligerent response. Go in quietly, and listen.

"What happens if you go in, and there's a gun on the bed? Or someone on drugs comes at you with a gun? Or you're taking a man's blood pressure, and his wife is trying to hit him with an ashtray? These are dangerous situations; you are not abandoning if you leave the house, but don't drive away. Call for help. Write a complete report, sign it, have your partner and the police sign it. Keep a copy. You can be sued for three years. Document everything. (In Baltimore County, if you are assaulted, you are required to press charges. This is your recourse.)

"It is sometimes necessary to use force to move someone out of the way, in order to reach the person in need of help if the person in need of help is in danger of dying. You have a right to use a come-along hold, or pain compliance techniques, or apply pressure to the carotid artery until the troublemaker passes out. It is not the purpose of this course to make you afraid to walk through any door; it is just to help you reach a middle ground where you can function effectively and safely."

## Seat Belt Promo to Air



A public service announcement produced by MIEMSS that promotes the use of seat belts for the entire family will begin airing in May and June. The public service announcement features the Children's Chorus of Maryland. Posters (shown above) have been distributed and also are available through the offices of the regional administrators.

7215 Rolling Mill Rd., Baltimore, MD 21224  
Address Correction Requested

Director: R Adams Cowley, MD  
Editor: William E. Clark,  
(301) 528-7800  
Managing Editor: Beverly Sopp,  
(301) 528-3248

University of Maryland at Baltimore  
22 S. Greene St., Baltimore, MD 21201-1595

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## 'Convincer' Shows Need for Seat Belts

The sign on the side says "Seat Belt Persuader," but the effect of the Persuader has been so strong that the Maryland Department of Transportation (MDOT) has changed its name to the "Convincer." The Convincer is a bucket seat from an automobile mounted on a sled that moves down a ramp, and jolts to a stop.

To demonstrate the need for wearing seat belts, MDOT uses the Convincer to simulate the impact of a low-speed collision. The rider sits in the seat, restrained by lap and shoulder belts, and travels the nine feet down the ramp. Depending on the speed set, the Convincer will reach 5 to 8 miles per hour before jolting to a stop against rubber bumpers. Even at its lowest speed, there is enough of an impact to leave a lasting impression in the rider's mind.

Most people are surprised at the force of the collision when they are "going so slowly." They are asked to imagine the crash if they were going at the average impact speed of 40 miles per hour.

Mounted on wheels, the Convincer is towed to displays at shopping centers, schools, conferences, colleges, and employee organizations. It can be exhibited indoors or outdoors, but it should be on level ground, and the front bumper



should be placed against a stationary object such as a curb. It is operated by trained volunteers or members of MDOT's Public Affairs Division.

In many demonstrations, crash-test dummies are used, both buckled and unbuckled, to provide vivid evidence of how dangerous collisions can be at any speed. This is particularly effective for large crowds, such as those at fairs and conventions.

According to John Bertak, public affairs director of MDOT, the Convincer

was dramatically used in Washington, DC, in cooperation with the McDonald's/AAA seat belt campaign, "Make it Click." Several of the newspeople present rode the Convincer holding a 35-pound dummy of a child on their laps. Many people believe that it is safe to travel with a baby or child on an adult's lap, if the adult is using a seat belt as the reporters were. That idea was proven false when the dummy was propelled forward on impact to smash against the "dashboard" just as it would have been if they had been in an automobile.

Those who are not allowed to ride the Convincer include anyone under 15 years of age; pregnant women; persons who have recently undergone surgery; persons who have recently been ill or injured; or those with neck or back problems.

Riders or spectators of the demonstration who have been convinced of the importance of buckling up are given safety belt pledge cards, to jog their memories in the future. The Convincer can be reserved for a special event by contacting the Maryland Department of Transportation, Division of Public Affairs, P. O. Box 8755, BWI Airport, Maryland 21240-0755, or calling 301/859-7302.  
—Erna Segal