

Cellular Phones: Right for EMS Communications?

How reliable are cellular telephones for medical communications? Can emergency medical personnel depend on them in their daily calls? In mass casualty situations?

Cellular telephones have become very popular. As of mid-1989, according to the U.S. Department of Commerce, more than 2.6 million Americans had subscribed to cellular phone systems—a 67% increase over the previous year. For about \$300, anyone can buy a basic portable unit and have it installed in a vehicle. A monthly fee as low as \$35 puts that person in voice contact with the world.

The sales staffs of cellular phone manufacturers have sensed a ready market in emergency medicine and are making their contacts, displaying their

wares. Some EMS jurisdictions outside Maryland have been so impressed with cellular phones that they now rely on them as a primary means of communication.

What is this new technology? How does a call get from an EMT's vehicle to a hospital physician giving medical direction? Where do these transmissions fit in an EMS system's protocols and decision-making trees?

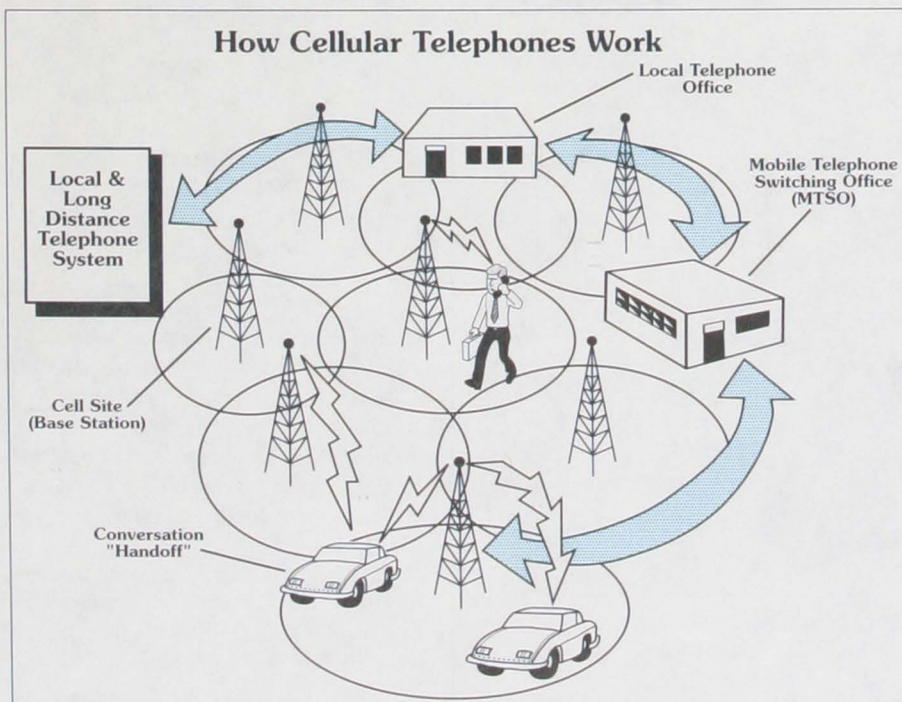
A radio signal from a cellular phone is beamed to a cellular site built and maintained by the cellular company. A cellular site has a limited number of channels and therefore can handle only a certain number of calls. From the site, the transmission goes to a switching office, where a computer coordinates calls for the service area.

The next link is to the circuitry that supports the public-access dial phone systems. Those networks of lines run on poles or through underground conduits across the continent.

Since the cellular phone system shares the lines that serve households and offices, they are vulnerable to the same disruptions—from ice storms, hurricanes, earthquakes, fires, and computer-operator errors. Although telephone companies strive to maintain continuous service, systems can be damaged or overwhelmed. After the 1989 earthquake in California, phone service was reinstated in a remarkably short time, but the system then became saturated by calls being made into and out of the state. A fire in a telephone hub station in Illinois in 1988 resulted in all phones in that exchange being inoperable for weeks. The 9-hour breakdown in the east coast phone system last January blocked half the long-distance and toll-free 800 calls placed on one major phone company's lines: the culprit was a problem with network control computer software. These are vulnerabilities of dial phones as well as cellular units.

Gene Bidun, director of MIEMSS communications, noted additional perils for EMS care providers who rely on cellular phones for medical transmissions. He presented the scenario of a vehicular crash on a metropolitan roadway at rush hour. Civic-minded drivers with cellular phones call 9-1-1 to report the incident. Tower channels are being used. As traffic slows, other drivers call home to tell their families they will arrive late. More tower channels are

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occupied. Responding EMS personnel wanting to use the cellular system may not be able to find channel "space" because access to the local cellular site is saturated.

In mass casualty incidents, cellular phones can supplement radio communications. But the site saturation problems can emerge again, particularly in events that draw national media attention. During the response to the Amtrak crash in Baltimore County in 1987, EMS personnel found themselves unknowingly competing with reporters who had established cellular phones links with their studios. Media use of cellular channels blocked access to the system.

Holidays are peak times for telephone use by the public and the time when emergency medical assistance is most needed. At midnight on New Year's Eve, well-wishers congest the phone lines at the same time that many drunken drivers are on the roadways. On other holidays, when many people travel and thus increase the potential for crashes, phone lines are busy with calls from families and friends. Emergency personnel relying on cellular phone systems may have difficulty making the contacts necessary to relay medical information.

Hospital-based EMS operations

may find that cellular systems can meet their needs. In such structures, ambulances travel a limited radius from the hospital; cellular phones can provide a direct communication link between field personnel in the area and hospital staff members as long as conventional phone circuits are available.

Federal regulations prohibit the use of cellular phones on helicopters. Their altitude enables their communication signals to travel further than signals from land vehicles. A transmission from an aircraft flying in a northern Maryland county, for example, could reach a cellular site re-using the same frequency in Pennsylvania. That connection would interfere with transmissions on the distant system and

with the cellular company's customer billing procedures.

Mr. Bidun noted that "cellular telephone services can be a viable backup to a properly designed and installed UHF medical-channel communication system. They are inappropriate for use as the single primary method of communication between a prehospital care provider and a hospital physician.

"Cellular phones are better than nothing. But in medical care, the communication system must be reliable."

◆ Linda Kesselring

Nursing Workshops Begin

Many new topics have been added to the schedule of nursing workshops sponsored by the EMS Nursing and Specialty Care Department of MIEMSS. Monthly calendars noting the workshops, dates, locations, costs, and CEUs (for nurses, and where applicable, for EMTs/CRTs) are available by calling 301-328-3930.

Region III Report Form

A new streamlined incident reporting system, designed to supplement but not replace the longer one that includes runsheets and other documentation, has been instituted in Region III. The form is already folded and ready for mailing so it can be filled in on the spot. Region III is the only region using this form.

Providers in career and volunteer ambulance companies, hospitals, and commercial ambulance companies have been given the new report forms to check off for unusual occurrences, good or bad. "The new form is not for every call—just for one that is out of the ordinary," says John Donohue, Region III administrator. "This provides a quick way to start the ball rolling, whether for a job done exceptionally well or for difficulties that need to be addressed." When a form has been used, the Region III office will send the company a replacement to keep on hand for future use.

The new system is a collaborative project of the Quality Care Committee of the Region III EMS Advisory Council, the Region III Medical Director, and MIEMSS.

For Further Information

Miles JB: Network at risk. *Informationweek*, July 23, 1990, pp 26-29.

Moran R: Cut off! *Computer Decisions*, August 1988, pp 65-69.

Wiles CE III, Ramzy AI, Belzberg H: Cellular telecommunications at Amtrak's worst crash. *Prehospital and Disaster Medicine* 1989;4(2):160-162.

Dedicating Cumberland's New Hangar



Lt. Gov. Melvin Steinberg cuts the cake celebrating the dedication of the new hangar for Cumberland's Maryland State Police Helicopter 5 in Region I. Looking on are Del. George Edwards, Del. Caspar Taylor, Del. Betty Workman, and Del. Kevin Kelly.

Responding to Farm-Related Accidents

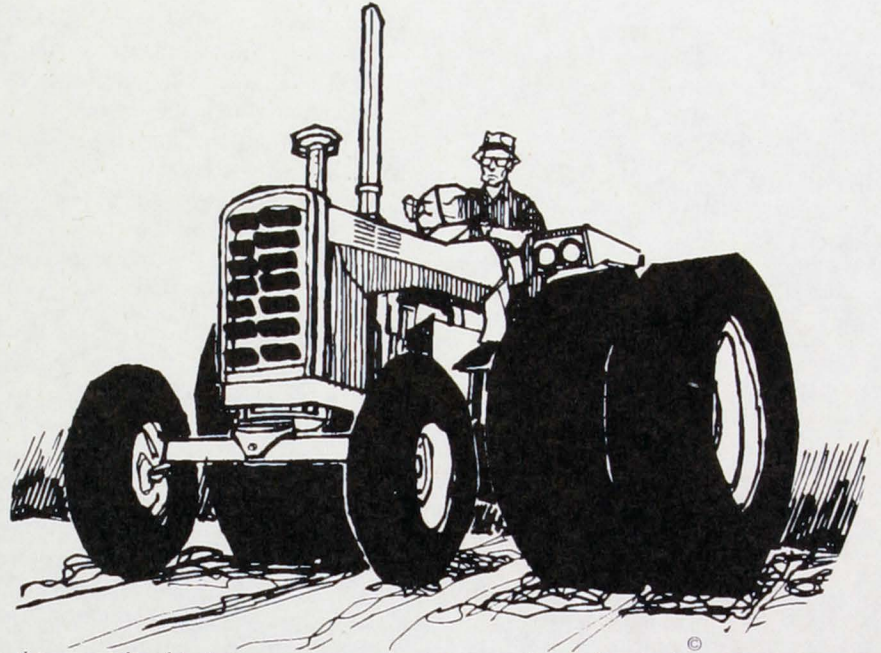
Serious agricultural accidents sometimes occur during the autumn harvesting season, including people getting caught in cornpickers, having an extremity sliced off in quarter-inch segments while forage harvesting, or being caught in auger assemblies. Because farmers often work in isolated locations and are frequently not expected home until the end of the day, they could be injured for a long time before anyone finds them.

Unfortunately, most prehospital care providers have more experience with motor-vehicle crashes than with farm-related accidents. The two differ greatly in the ruggedness of equipment involved (farm equipment is much more solidly built); poor accessibility to the scene (a field that has been plowed for 100 years is not smooth riding for a highway vehicle); and advice on disassembly or extrication (farm machinery presents unique and unsuspected hazards; experts must be called in).

Injuries may be caused by machinery upsets, grain bin entrapments, entanglement within large machinery, and hazmat exposures to toxic gases, agricultural chemicals, and pesticides. The use of 3- or 4-wheel ATVs (all-terrain vehicles) as an alternative to horses or tractors can result in serious injuries. Special medical considerations relevant to farm-related injuries include the high risk of infection caused by the environment and excessive bleeding caused by machine damage.

Injuries may occur in the middle of a muddy field, making it impossible to use vehicle-mounted lights, air systems, or electrically powered rescue tools. Standard rescue equipment that easily works on cars or trucks may not budge the more solidly constructed farm equipment, which is designed to last at least 20-25 years.

The University of Maryland Cooperative Extension Service, in coordination with the Maryland Fire and Rescue Institute (MFRI), offers courses in farm rescue, agricultural chemical emergencies, and silo fire and rescue. Gary Smith, safety specialist of the Agricultural Engineering Department, and Charles (Chuck) Woods, MFRI Western Maryland Office regional coordinator, teach the courses. EMS personnel who want to participate



in this specialized training may request a course through their MFRI regional administrators. The course can be for either one or two days and is available for 15-150 participants anywhere in the state. In addition to being taught in Maryland, by request the courses have also been given in Pennsylvania, New York, North Carolina, South Carolina, and South Dakota, and at the International Fire Instructors' Conference in Cincinnati.

"We teach providers to be careful of numero uno," says Mr. Smith. "We want them to be part of the solution, not the problem. Special techniques and knowledge are definitely needed." Mr. Woods emphasizes, "If you don't know what you're doing, don't do it. There might be 20 or more levers and controls to contend with—and you might cause additional damage."

The handbook used in the course is "Farm Accident Rescue," a publication of the Cooperative Extension of the Northeast Regional Agricultural Engineering Service, which is composed of 13 land-grant universities (including Maryland) and the US Department of Agriculture. The same office has also issued a new self-help safety manual for farmers, entitled "First on the Scene." This manual, available at a reasonable cost from MFRI and the extension offices, tells how to keep from being injured and what to do in case of injury. Mr. Woods recommends it to fire/rescue/EMS personnel.

Special hints from Mr. Smith and Mr. Woods for the prehospital care provider include the following:

- Learn about farm equipment by visiting dealerships; they will be glad to explain how their machinery operates. Dealers are knowledgeable about other brands of equipment as well as their own and can be called from the site by phone or through EMS radio. Neighboring farmers or workers are also good sources of information and will be willing to help.

- Keep a list in your unit of local farm equipment dealers and sources of information about hazardous materials and poison centers.

For information about chemicals, including pesticides, call CHEMTREC (1-800-424-9300, toll-free), a nationwide service supported by chemical manufacturers. Emergency numbers for poison centers are: Maryland Poison Center, 301-528-7701 in metropolitan Baltimore; 1-800-492-2414 elsewhere in Maryland; National Capital Poison Center (metropolitan Washington, DC), 202-625-3333; TTY 202-784-4660.

- Pesticides or fertilizers might be encountered in their most toxic forms in and around the farm. Be careful of what you move and what you touch. Some pesticides are so concentrated in some forms that three drops on the hand might be fatal.

- Know the limitations of the rescue unit and its equipment. A one-

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Update on 'EMS for Children' Grant Activities

Significant progress has been made in implementing the Emergency Medical Services for Children (EMS-C) grant from the US Department of Health and Human Services to MIEMSS and Johns Hopkins Medical Institutions. Major achievements have been as follows:

- An analysis of experience with pediatric patients within the Maryland EMS system, utilizing existing databases, has been completed.
- Training videotapes on pediatric airway management and parental access will soon be available to prehospital care providers.
- The Pediatric Severity Assessment Tool is now being field-tested.
- Pediatric Advanced Life Support (PALS) courses, developed by the American Heart Association and the American Academy of Pediatrics, have been enthusiastically received. This certification course provides lectures,

skill stations, and interactive stations on respiratory failure, shock, preventing cardiopulmonary arrest, newborn resuscitation, rhythm disturbances, basic life support and bag-valve-mask ventilation, advanced airway management, vascular access, fluids, and post-resuscitation stabilization and transports. The course will be offered five times in different parts of the state in the upcoming year.

- All of the states involved in the EMS-C grant will contribute to the development of a national project offering a self-study pediatric emergency nursing curriculum. It will be an EMS-C/Emergency Nurses Association collaborative project.

Under the sponsorship of Senator Daniel Inouye, Congress now funds the EMS-C grant among many states throughout the nation; approximately 16 states participate at this time. Each grant is for 3 years; when a grant ends, another state is added, up to four in a

year. One of the conditions of the grant is that each state develop other sources of funding to keep the activities ongoing after the federal grant concludes.

A nationwide EMS-C conference is being planned for November. Ameen I. Ramzy, MD, state EMS director, and Patricia Moloney-Harmon, RN, MIEMSS pediatric critical care nurse specialist, are co-chairpersons.

Dr. Roberts Honored

Robert R.R. Roberts, MD, a charter member of the Region II EMS Advisory Council who has served continuously since 1973, recently resigned his position when he also retired from his orthopedic surgical practice in Frederick County.



Terry Shook, Region II EMS Advisory Council president, and Dr. Roberts.

Dr. Roberts helped develop prehospital EMS training programs in the region, particularly in Frederick County. When the EMT-A program was introduced, he quickly became certified. He also taught courses and enthusiastically supported the program countywide.

Dr. Roberts was recently honored by the Board of County Commissioners of Frederick County. He was presented with a certificate of appreciation from J. Anita Stup, president of the board. In addition he received a plaque from Terry N. Shook, president of the Region II EMS Advisory Council, on behalf of the council.

Farm-Related Accidents

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half ton pickup truck or a jeep will not be effective trying to move or stabilize a tractor weighing 3-4 tons.

- Be careful when approaching any farm equipment. If it has not been turned off, you could get caught in it.
- Do not attempt to dismantle equipment unless you really know what you are doing. Farm equipment uses stored energy, such as springs. The wrong bolt unbolted or the wrong knob turned could release a spring with tons of force.

Tires on tractors are much heavier than one would expect, because they are filled with a caustic calcium chloride solution. If the tire has been punctured and the solution comes in contact with skin, it should be flushed off immediately. Serious complications may occur if the solution comes in contact with an open wound. If the provider does not know about the extra weight of the tire, he may block and crib for 200-300 pounds; however, the tire might weigh 1800-2000 pounds. Such misjudgment could cause the boxing to collapse.

- Never trust hydraulic systems; always block or crib before working them.

- Use a tractor or farm wagon if the emergency vehicle cannot be used; vehicles meant for farm use can go to the location of the incident. Chaining the overturned vehicle to another vehicle of equal or greater size may be the only way to stabilize it; the tractor can be used as a stabilizer point.

For consultation or on-scene help anywhere in the state, contact Gary Smith at 301-454-3901 (work) or 301-262-2070 (home); Chuck Woods can be reached by calling Allegany County Civil Defense at 301-777-7112, 301-724-4970 (work), or 301-729-4938 (home).

◆ *Erna Segal*

Region III Ambos Inspected

As part of the ongoing Voluntary Ambulance Inspection Program, Region III announces that all units in the following areas have been inspected and passed:

Harford County; Carroll County; Baltimore County (career units); Jacksonville Volunteer Fire Company, Baltimore County; Riviera Beach Volunteer Fire Company, Anne Arundel County; and Middle River Volunteer Ambulance and Rescue Company, Baltimore County.

Region I Surveys EMS Care Providers

A 1989 survey of EMS field providers in Region I gives insights to aid in management of volunteer squads, recruitment, and retention and to form a baseline for comparison that should be helpful in other regions as well.

William E. Crawford, CRT, a Frostburg State University intern working in the Region I office, developed a study for Region I based upon a survey done in New Jersey in 1985. Mr. Crawford selected pertinent areas from the original study by Dr. JoAnn Gora and Dr. Gloria Nemerowicz. His study focused only on the relationships between providers' attitudes about their volunteer work and their decisions to stay in or leave EMS. Questions were adapted for Maryland EMTs, CRTs, ATTs, and EMT-Ps. Of the 536 field provider surveys mailed out, 207 (39 percent) were returned.

The survey also included demographic questionnaires sent to ambulance company officers and focused interviews with elected and line officers, sometimes conducted individually and other times with several participating at a time.

Below is a profile of a "typical" Region I provider who answered the survey.

- 78 percent are BLS certified; 22 percent are ALS certified
- 71 percent are between the ages of 26 and 49; 35 percent, between the ages of 31 and 39

Weller Recognized For Work in CISD



At the Western Regional Critical Incident Stress Debriefing (CISD) team meeting, Michael Weller receives a certificate of outstanding contribution from Marge Epperson-SeBour, program director. Mr. Weller was honored for his work in developing CISD in Region II.

- 64 percent have been in EMS longer than 5 years
- 61 percent are males; 39 percent are females
- 73 percent are married; 66 percent have children
- 73 percent have full-time jobs in either "skilled" or "blue-collar" jobs
- Of those belonging to rescue squads (63 percent) or fire department ambulance services (21 percent), 98.5 percent have at least a high-school education, and 55 percent have at least one year of college education.
- 38 percent live less than 1 mile from their squad; 35 percent live more than 3 miles away
- 92 percent of the Region I providers who responded to the survey are volunteers: 35 percent give more than 40 hours per month; 65 percent give less than 20 hours per month

Most providers probably joined their squads for unselfish reasons; the majority answered that they always wanted to help others or they wanted to learn how to save lives. Other motivations included having friends or family members on the squad, thinking they would be good at EMS, and being asked to join by squad members. Less than 10 percent said they joined for the thrill of riding an ambulance. Asked what type of calls they liked responding to most, a common response was, "...the ones where I can make a difference." Special traits and abilities that all EMS providers should possess were said to be compassion, patience, and concern for others.

Of the providers who have been in EMS for less than 1 year, 70 percent indicated that they joined because of family or friends. Many providers indicated that they became EMTs because they were needed by their squad or community, as opposed to wanting to become EMTs. This raises the possibility that at least some providers become certified to please others rather than themselves and may explain why some EMTs are reluctant to recertify after their initial commitment is over.

When asked what might cause them to become inactive in their squad, frequent responses were burnout, frustration, and "other," described by half the responders as "problems with other squad members." The possibility exists that because the survey did not

have a specific category relating to squad problems, squad-related problems might be the cause of the frustration or burnout. This may be a result of fewer people accepting the responsibility of responding to comparatively more calls than they would have 10 years ago. Besides the strain of the increased work, it may mean spending more time with a seldom-changing group of people, which may lead to social disagreements.

Many providers expressed the opinion that there was not enough recognition. Maryland's EMS regions reward all field providers fairly and equally on the basis of longevity in EMS and give recognition to individual squads with the focus on collective achievements. A wide disparity exists, however, among the various squads as to how they praise their members. Some squads have elaborate, ongoing forms of recognition, while others have virtually none. Those squads that seek to involve their members' families as much as possible in the atmosphere of the squad appear to be more successful in maintaining their members' levels of satisfaction.

Data suggest that field providers may rely heavily on each other for a network of support to cope with the special stresses under which they work. Personal satisfaction may reflect whether peers are able to supply the necessary moral and psychological support. Field providers are proud of their squads and their own abilities to administer emergency medical care.

Unanticipated benefits to providers from EMS work include personal satisfaction, community respect, social factors, self-confidence, new nonmedical skills, and an aid to securing paid employment.

Many more issues are addressed and possible solutions to the problems offered. For a copy of the Field Providers' Survey Results, call the Region I office at 301-895-5934 or 301-746-8636. There is a nominal charge for mailing.

For further information on emergency care volunteers, read *Emergency Squad Volunteers: Professionalism in Unpaid Work* by JoAnn Gora and Gloria Nemerowicz.

◆ Erna Segal

Prehospital Care and High-Risk Pediatric Patients

Sending high-risk pediatric patients home with complicated equipment is a relatively new concept. "It was probably made possible by the invention of miniaturized technological equipment and was no doubt encouraged by medical insurance companies to save money," says Teri Peck Reid, RN, PNP, of the pulmonary clinic at Children's Hospital National Medical Center in Washington, DC. "But some parents have even lobbied the legislature to make it possible to treat their children at home instead of in health-care facilities." The treatment might take months or years.

Prehospital care providers should know about the types of diagnoses of typical high-risk pediatric patients at home; why the EMS system may be activated by the children's caregivers; and some of the problems faced by families caring for their children in "miniature ICUs" at home.

Types of Diagnoses

Respiratory Disabled. Premature infants, born at an average of 26-30 weeks of gestation, but sometimes as young as 23 weeks, are often respiratory disabled. Babies that are intubated from the time of delivery and put on a respirator for more than 2 weeks will probably develop BPD (bronchopulmonary dysplasia). Their lungs are not yet capable of breathing, so they would die if they didn't have air forced in under pressure. However, the forced air causes scars on the lung tissue, and the tube in the trachea causes scarring and possibly stenosis. The babies may require apnea monitors, suction machines for oral-nasal secretions, or oxygen by nasal cannula from a large stationary tank next to the crib or a portable tank over the parent's shoulder. Aerosol medications are given via nebulizers. Once extubated, the scarred lung tissue remains, but new healthy tissue will grow and compensate for it. This process may take months or years; in the meantime, the child wheezes, has a barrel chest, and may mimic chronic emphysema. The child can't eat well or grow well due to the lack of sufficient air.

Congenital Apnea. Central apnea (cessation of breathing), the most common type of apnea, is caused by extreme prematurity. Brain-lung

connections are not mature enough to tell the body when to breathe. There might be brain damage from hypoxia or a brain lesion. Obstructive apnea, another type of apnea, is a result of some anatomic abnormality of the respiratory tract. An apnea monitor does not help the baby breathe; it only rings an alarm when the breathing stops. Infant CPR is taught to a parent whose baby is sent home on an apnea monitor. An effort is made to encourage a secondary caregiver, such as father, grandparent, neighbor, etc., to learn how to use the monitor and infant CPR. The baby on an apnea monitor has patches similar to an ECG attached to the chest. When the breathing stops, a loud beep is sounded until the parent turns it off or until the child's breathing corrects itself. Children's Hospital uses a standard setting of 20 seconds for an apnea delay; the bradycardia setting is 80; and the tachycardia setting is 250 because even crying may set off the alarm. The newest apnea monitors are computerized; they store memory and can give a printout to the hospital that includes the ECG, breathing rate, heart rate, and time. Not every baby has such advanced technological equipment.

Feeding Disorders. Motor dysfunctions of the muscles around the oral cavity are secondary to a congenital brain disorder that prevents the suck/swallow/breathe mechanism. The children may lack the ability to suck at all. They must be fed by either nasogastric or gastrostomy tube or by intravenous feedings.

Malabsorption. A baby with this condition loves to eat but has a short gut and not enough bowel to hold the food. The baby must be fed with an indwelling nasogastric tube hooked up to a feeding pump; gastrostomy tubes sewn into the stomach; or a mix of methods, including intravenous hyperalimentation and lipids through a central line.

Tactile Defensiveness. Resistance to touch occurs with infants who have had weeks or months of invasive, painful, threatening stimuli bombarding them in an effort to save their lives. From the beginning they have had suctioning, nasogastric tubes reinserted every few days, tracheostomies, and

feeding apparatus. By the time a baby with such a history is from 6 months to a year old and ready to eat, if given a bottle and nipple he will clench his lips, arch his back until he almost falls off your lap, and gag. It may take months with an occupational therapist or speech therapist to teach one of these children how to accept touch around the lips. The therapist will start far away with a hand puppet and gradually come closer. Eventually, a bottle, nipple, and spoon will be introduced into the mouth. The baby might be so frightened of having food in his mouth he might gag. His natural instincts have been wiped out; he needs to learn how to suck, swallow, and breathe. These infants will usually be fed with a gastrostomy tube until the tactile defensiveness is resolved.

Hospice Patients. These patients are terminally ill. They may have intravenous lines for hydration and have apnea monitors. Children over the age of 3 almost always know about dying. Parents are at different parts of the spectrum of acceptance.

Physically Disabled. These patients will have a range of physical disabilities and supportive equipment. They can range from a quadriplegic on a ventilator to merely a child with a fractured leg in a wheelchair.

Why EMS Has Been Called

Parents call 911 because something in the "miniature ICU" at home has gone wrong. There might be a power failure, an equipment failure, a plugged tube, a cracked central venous line or IV line, or the oxygen has run out. It is the equipment company's job to fix their equipment STAT. Parents have 24-hour phone numbers to call to replenish their oxygen supply or to contact their equipment company.

Parents/caretakers have been given instructions on how to handle such emergencies, but sometimes they panic when something goes wrong. Living under such conditions can be very stressful for the family. They call 911 because in addition to the skilled help prehospital care providers can give, their presence is reassuring.

Children's Hospital gives a letter of instructions to parents to be given to a rescue squad. Contacts are sometimes made in advance of an emergency to

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Anne Arundel Alarmers' New Vehicle



Wilbur Brandt (above) and Roland Kroeger (below) of the Anne Arundel Alarmers are shown with the association's fire-police-medical support unit.

EMS and High-Risk Pediatric Patients

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familiarize medics with the equipment involved. Some squads that have treated a child in the past make routine calls every so often to ask if the child is still on the monitor or other equipment.

What Is Expected of EMS Providers

The job of prehospital providers dealing with high-risk pediatric patients is not to make the equipment work—it is to take care of the child. Prehospital providers should obtain physician consultation at the appropriate specialty referral center immediately.

In the case of a hospice patient, parents are told to contact their home health-care nurse on call or to call the hospital, but not to call 911. However, some parents might call 911. Prehospital care providers should follow the Maryland Hospice Protocol in managing the patient.

◆ Erna Segal

The Anne Arundel Alarmers Association wanted to do more. They already went as volunteers to fires and other emergency incidents to serve food and drinks to fire department personnel, but they were looking for another way to show their appreciation. That's why they equipped the last 12 feet of their 40-foot vehicle as a medical support unit for exhausted or slightly injured fire fighters or other emergency providers. It could also be used for slow transport. The vehicle has been used to give first aid at fires and to the public at the Bay Bridge Walk and other activities and could also be used as a secondary triage area in a mass casualty situation.

The custom-built vehicle has a full kitchen, a bathroom, and a dining table that can be converted to a double bed. The medic unit was designed by Lt. William Stinchcomb, biomedical officer of the Anne Arundel County Fire Department. It is supplied with two litters; oxygen; suction; two monitors/defibrillators; EMS, fire, and Department of Natural Resources radios; and non-narcotic medications. The medic unit is not permanently staffed, but volunteer EMTs and first responders, some from other fire companies, staff it when necessary. If ALS is needed, it is supplied by the Anne Arundel County Fire Department.

The A.A. Alarmers fire-police-medical support unit responds to second-alarm or greater fires; it may also be requested by public safety agencies or non-profit organizations anywhere in the state.

Seat Belt Convincer Available from MSP

The Maryland State Police (MSP) is sure about the value of seat belts. Accordingly, several months ago the MSP took over a 19-year-old "Seat Belt Convincer" from the Maryland Department of Transportation to be used under MSP auspices.

Two troopers in the MSP Crime Prevention Unit, Coordinator TFC Jerry Skrzypiec, at MSP headquarters in Pikesville, and TFC James Emmerick, at MSP Westminster barracks, operate the Convincer. They also give a 2-hour course to train other troopers to set up and operate it.

After discussions with TFC Emmerick, GEICO Insurance Company offered to refurbish and maintain the Convincer for the MSP. Repaired and painted regulation MSP colors, the Convincer is available for use at special events.

The Convincer is a 17-foot long display with a car seat mounted on a sled. After the passenger signs a waiver and is properly buckled in, he/she slides down a 15-foot ramp at the rate of 6 mph. Even at that slow rate of speed the jolt is impressive; people who get on as hard-core skeptics about the efficacy of seat belts change their mind after the ride.

TFC Skrzypiec says, "The effect is like backing out of your driveway and hitting a brick wall without touching the brakes. I have never had one person get off as a nonbeliever, and at events like the State Fair we handle as many as 2,800 people. Our biggest problem is that some people look upon this as a thrill ride instead of an educational tool; we have to keep them from trying it again and again. We only allow one ride per person. Those who don't ride the Convincer become believers when they see the facial expressions of those who do."

For information about scheduling the MSP Seat Belt Convincer, contact TFC Jerry Skrzypiec at 301-653-4386 or call your local State Police barrack.

◆ Erna Segal



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Health Care Providers Urged to Get Vaccines for Communicable Diseases

An increase in communicable diseases in the community, particularly measles, mumps, and chicken pox, has prompted concern for health-care providers who might come in contact with infectious patients. Measles and chicken pox are airborne diseases and more highly contagious than mumps. Vaccines are available for measles and mumps, but there is no vaccine available at this time for chicken pox.

According to the Department of Health and Mental Hygiene, Maryland is currently experiencing its worst measles outbreak in 10 years. Suzanne Elliott, RN, infection control practitioner for the MIEMSS Shock Trauma Center, suggests that to protect against exposure to the disease, health care providers should receive the vaccine if they have not previously had two measles vaccinations or the disease. If they are not sure about whether they have

had the vaccine, they can receive the vaccine again with no increase in risk or side effects. Most people born in the US before 1957 can assume that they have immunity from measles through having either the vaccine or the disease. A blood test can determine a person's immunity, but it is easier, faster, and cheaper to have an additional dose of the vaccine.

Ellis S. Caplan, MD, chief of infectious diseases at the MIEMSS Shock Trauma Center, recommends that prehospital care providers check with their companies, county EMS authority, or personal physicians about protecting themselves from possible exposures by having these readily available vaccines; hospital providers should check with their supervisors or employee health representatives. Health care providers should have hepatitis and tetanus vaccines as well.

DATED MATERIAL

Wrap-Around Ankle Hitch For Hare Traction Splint

The use of a padded Velcro wrap-around ankle hitch is being explored for the Hare traction splint. Not only is this a simpler hitch to use than the older T-strap, but it also allows the Hare traction splint to be shortened significantly. It can also be used on an

adult or a child, with or without footwear. A very similar type of hitch is already used by the Maryland Fire and Rescue Institute as part of the standard Hare traction training in the EMT-A course.

The use of this alternative type of ankle hitch can allow the Hare traction splint to be set up so that it does not extend further than 3 inches below the bottom of the foot. This will greatly improve one's ability to fit patients with traction splints into the Dauphin helicopters. However, one is still likely to have difficulty with patients taller than 6 feet, 2 inches.

We are currently exploring different ways of making a wrap-around hitch available to all ambulances. In the meantime, we will be placing one on board each of the Dauphin aircraft. We will be developing a procedure to deal with the situations when a patient cannot fit on the helicopter because of a traction splint, where the Maryland State Police EMT-Paramedics will be able to maintain traction while changing from the old T-strap to the new wrap-around hitch.

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