

Hand Center Spurs Innovation

"Trauma to the hand is almost totally preventable!" exclaims E. F. Shaw Wilgis, MD, chief of the division of hand surgery at the Union Memorial Hospital (UMH), and vice-president of the American Society for Surgery of the Hand. "People don't think. If you put your hand between the log and a logsplitter, it'll get chopped."

The staff of the Raymond M. Curtis Hand Center at UMH, one of the MIEMSS-designated specialty referral centers, can determine the seasons of the year by the type of injury most prevalent at the time. During the winter, fingers are injured or amputated by snow blowers; spring and summer, by hedge clippers and lawnmowers; autumn, by logsplitters; and before Christmas, by power saws used by people working hurriedly at night to finish gifts before the holiday.

Approximately one-quarter of the 2300 operations performed last year were for trauma-related injuries. Most of the remaining cases were for occupational illnesses caused by damage to tendons and nerves from doing repetitive work. Others were concerned with removing tumors, replacing arthritic joints, reconstructing birth deformities, and helping post-stroke victims. "It all starts with trauma," Dr. Wilgis explains. "We are forced to accommodate the defect, and this leads to innovation. Traumatic injuries give us the impetus to try

new approaches, but many times trauma victims benefit from the extensive rehabilitation given to non-trauma patients."

The Hand Center has expanded its scope to develop a total, comprehensive center for the treatment of all injuries and diseases that occur in the hand. It has become a nationally known training ground for young physicians who have completed their residencies in surgery, orthopedics, or plastic surgery. After the one-year training period, many start hand centers elsewhere. Plastic surgery residents at the Johns Hopkins Hospital have had six months of training at the Hand Center.

Another major advance by the Hand Center has been in research into microsurgery, including the repair of vessels, and the shift of tissue from one part of the body to another—complete with its own blood supply, nerves, fat, and skin. "It's like plugging it in," Dr. Wilgis exclaims. "This is a tremendous advance. We already have the technical ability to take a finger from someone else—for example, a cadaver—and transplant it. The rejection problem is not licked yet, because you don't necessarily want to subject a person to the risk of strong drugs for the purpose of restoring a digit. However, we anticipate that some day there will be digit banks, just like organ or blood banks." The research staff recently distinguished itself



Dr. Wilgis, demonstrating the BTE Work Simulator. The attachment Dr. Wilgis is using requires two-handed shoulder, elbow, and wrist motion, with a hand grip.



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by having eight presentations at the national meeting of the American Society for Surgery of the Hand, including one which won an anatomy award.

In the meantime, they are replacing lost fingers with toes. "They may not look good, but they work," says Dr. Wilgis. Once the toe is attached to the nerves of the hand, it will send a message back to the "computer" in the brain that it is a finger, and react like one. This is especially important when a thumb is replaced.

The microsurgical laboratory is doing research into using a temporary host for digit transplantation. For example, suppose a patient is brought into the Shock Trauma Center with liver, chest, and head injuries, and his thumb was cut off. Obviously, the most urgent, life-threatening injuries must be taken care of first. However, the thumb would die by the time an operation could be performed to replant it. But, if the thumb were to be "banked" in such a way that it could receive circulation and nourishment, it would remain viable for several days until the patient was in condition to receive it.

Although it is preferable to operate promptly in cases of hand trauma, there are some situations when it is best to delay surgery. A hand operation can take 12 hours, and the patient's condition may not tolerate that much anesthesia initially. "This is a different kettle

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Partial view of the Hand Center's "heavy workshop" area, which is under the direction of Stanley Berlin, chief of work adjustment services.

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of fish," observes Dr. Wilgis. "This is not a life-threatening trauma. We can't have people die. We have a zero mortality rate. We're not dealing with loss of life, but loss of limb. Sometimes we have to give up the limb to protect the life. But outside of amputation and bleeding, there is nothing that cannot be fixed three or four days later. Nerves, bones, and tendons can all be fixed later."

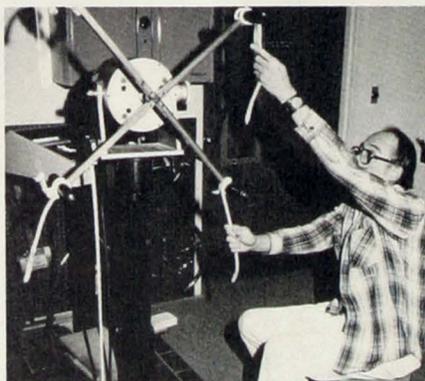
The third area in which the Hand Center has developed expertise is in rehabilitation. Dr. Wilgis explains, "Five or six years ago we could restore a hand, but the patient would be frustrated because he couldn't go back to work and do his job. We heard, 'You did all this beautiful work on my hands, but . . .'. So we spent a lot of time developing the heavy-duty workshop area, to retrain people for their jobs. We plan rehabilitation from the very beginning of treatment, get out of the stage where infection is a problem, and come back months later to finish."

The hand surgeons (there are 12 on staff, along with three fellows-in-training), physical and occupational therapists, hand social workers, and industrial specialists consult and coordinate individual rehabilitation plans for each patient. They work closely to monitor his progress, to ensure appropriate and effective treatment.

A work capacity evaluation is made, which includes job site visits, to determine what skills are necessary for the return to the job. The "work hardening" program improves the patient's early skills to increase his endurance and

the ability to tolerate a full work schedule. From 50 to 70 percent of patients are able to return to their original jobs. There are some who never will. Some companies make an effort to bring back an injured worker unable to do his former job, and arrange for him to work in an altered job capacity.

A computerized work simulator was invented by John J. Engalitcheff, Jr., a retired engineer and a close friend of Dr. Raymond Curtis, who is the founder of the Hand Center. The computer interacts with the patient, controls the exercise sequence, monitors performance, and prompts patient actions. At the completion of each activity in the protocol, the simulator prints out a record that documents the patient's performance. This feedback encourages the patient, and when he has finished this form of rehabilitation, "We can docu-



Conrad Yung-Kwai, industrial science specialist, demonstrates the BTE Work Simulator with an attachment requiring overhead reaching and grasping. This simulates a job pulling rope or cable.

ment that this person can do the job for eight hours. It takes a lot of work, starting slowly and changing the resistance until the patient can master it, but when he's finished, he can do the job," says Dr. Wilgis. The simulator eliminates the people who aren't really trying.

The environment of the Hand Center is one of encouragement and support. The patient beginning rehabilitation works closely with others who have had similar injuries. The accomplishments and determination of patients further along in their therapy are often an inspiration to the new patient.

Another innovation at the Hand Center is the Heather Suite, ten hotel-like rooms adjacent to the rehabilitation unit, available for patients who must travel long distances for their physical or occupational therapy. A recent guest in one of the rooms was Homer Collis, a retired draftsman and machine designer, from Martinsburg, West Virginia. He was using up some scrap lumber by making a tool box with drawers. A perfectionist, and certainly experienced with tools, Mr. Collis tried to correct a drawer front that was 1/16 of an inch too wide. His ring got caught in the 6-1/2 inch saw blade whirring around at 3400 rpms. It almost severed his ring finger, and seriously injured the next two fingers. "Drop your guard, and you've had it," Mr. Collis said. He was staying in the Heather Suite during the week while he had whirlpool, flexing, and stretching therapy to keep his fingers from stiffening. He and his wife returned to Martinsburg for weekends.

"This is an advancing field," Dr. Wilgis says. "We look forward to transplants, artificial joints for arthritis and trauma, and making use of what is left to the patient with spinal cord injury. Our goal is to help the patient return to a more normal life style, get back to his original job, if that's possible, or to another job in an altered job capacity."

—Erna Segal

Para Scope '85 Program

Para Scope 85 will be held August 23-25 at the Bethesda Marriott Hotel in Montgomery County. This year's theme is "Streetsense." The conference will provide practical tips and common-sense techniques for prehospital care providers in applying booklearning to actual life experiences. For information, contact Capt. Mary Beth Michos, RN, CEN at 301/251-2465 or Lt. Willa Little, RN, CEN at 301/279-1834.

New Neonatal Ambo Speeds Responses

Each time neonatal transport nurses (NTNs) helped lift an isolette weighing more than 300 pounds into the ambulance, or needed additional electrical or oxygen outlets, or sat with their knees wedged in against the isolette, they wished for an ambulance that met the needs of this mobile intensive care unit for infants less than 28 days old. Wishes will come true in July, when a new neonatal ambulance will be delivered.

The new ambulance accommodates two infants on complete life support systems—a very important feature, since there are frequently twins in need of transport. There is a hydraulic lift (with manual backup) for the isolettes, room on board for two NTNs, storage space, many oxygen outlets and large capacity tanks, and numerous electrical outlets. There is an inverter that converts power from the engine battery to AC power so monitors and isolettes work without individual batteries. It was designed with air-conditioning ducts placed where they won't blow cold air on the babies, and lights just where they are needed. It is the culmination of years of observation, planning, and hoping.

Cheryl Bowen, RN, MA, of MIEMSS, administrator of the Maryland Regional Neonatal Program, designed the new ambulance with the help of suggestions from NTNs, neonatal transport technicians (NTTs), and volunteers. "George Smith (acting administrator of Region II) helped a lot," Ms. Bowen states. "He was an active volunteer in the program and gave us good advice on specifications such as the electrical system to ensure adequate alternator capacity. Driv-

ers (NTTs) suggested fog lights, because ground transport is used when helicopters can't fly in foggy weather.

"We tried hard to make it a useful ambulance, and to use our space wisely. We also had to consider the smoothness of the ride. Babies don't weigh very much, and they bounce off the bed in a rough ride. That makes it difficult to keep the tubes secure. We rode in a lot of ambulances before we found one that would meet our needs for size but still have a smooth ride."

The first ambulance owned by the Maryland Regional Neonatal Program (MRNP) was purchased with grant money in 1980. Last summer it was put out of service, because it was decided that rather than spend the \$30,000 needed to repair and upgrade it, it would be more practical to try and obtain a new ambulance. In the interim, an ambulance was leased. (It has since been bought.) "That ambulance is good, but small," Ms. Bowen explains. "It was not intended to be a primary vehicle; it was intended for short-term use." MRNP uses a van as a reserve.

Vendors were sent a packet of specifications approximately one-inch thick, when the ambulance was sent out for bids. MRNP sought private funding. Because the program is jointly operated by the University of Maryland Medical System (UMMS), MIEMSS, and Johns Hopkins Hospital, the development offices for these institutions were asked to raise funds. A \$25,000 grant from the American Ambulance Company was raised by MIEMSS and UMMS, and Johns Hopkins Hospital matched the funds. The dream became a reality.

"Response times will improve with the addition of this new ambulance," Ms. Bowen states enthusiastically. "We're going to hire more drivers in July, giving us 24-hour full-time driver coverage, with volunteer backup in case of emergency. And because this ambulance functions as a complete intensive care unit, it is even feasible that it could be utilized on occasion to transport an adult patient with exceptional needs. If we have anticipated our needs as well as we believe we have, in the future we should be able to save a lot of money when the truck wears out by just replacing the chassis and keeping the same 'box.'"

—Erna Segal

CHNMC Gets Grant To Teach Instructors

Children's Hospital National Medical Center (CHNMC), whose pediatric trauma center is part of Maryland's EMS system, has received \$120,000 in first-year grants from the Department of Health and Human Services (DHHS) and the Department of Transportation (DOT) to establish a three-year program to provide EMS instructors from across the nation specialized training in treating critically injured or ill infants and children.

The new program is a continuation and expansion of the current CHNMC training program for prehospital care providers, funded through a two-and-one-half-year grant awarded in 1982 by the Devore Trust, a private foundation in Washington, DC. By focusing on the training of prehospital EMS instructors—who will then return to their states and offer similar training—the new program improves the ability to disseminate pediatric emergency care information nationwide.

Participants selected by state EMS agencies, DHHS, DOT, and CHNMC will travel to Washington, DC for a five-day course composed of lectures, skills training, and clinical experience within the hospital. Instruction will be provided primarily by staff at CHNMC from the departments of pediatrics, surgery, nursing, social work, child life, anesthesia, respiratory care, and neonatology.

For additional information, contact Marisa Mize, RN, at 202/745-5569 or Elaine Runion at 202/745-5570.



Ameen Ramzy, MD, state medical director for field operations, shows a plaque of appreciation that was presented to the American Ambulance Association. Ron Gutberlet, MD (University of Maryland neonatal program) and Janet Graber, MD (Johns Hopkins neonatal program) look on.



Field Notes

By William E. Clark, State EMS Director

A new 110-hour, Maryland EMT-A training and certification program has been approved for statewide implementation, beginning in July 1986. The enhanced program integrates the first-responder training with the EMT-A training; the first 40 hours of the EMT-A course will satisfy the first-responder requirements. This will resolve a national dilemma—where the first-responder training is not coupled with EMT-A training in a modular format, it makes it difficult and often repetitive for a trainee to proceed to a higher level of training.

The new program standardizes and integrates first-responder and EMT-A training, like rungs in a ladder. This, in effect, will modularize BLS training, in the same manner in which ALS training has been standardized and modularized for CRTs, ATTs, and EMT-Ps.

Maryland was one of the first states to adopt EMT-A training and certification following its development by the U.S. Department of Transportation. Now, after a decade, we have gained great experience from this program. Many providers and organizations requested that the Maryland program be studied to determine how it might be improved to meet their needs.

In September 1983, Dr. R Adams Cowley appointed a Task Force to study the EMT-A program and make recommendations for improving the program. The Task Force submitted its report to Dr. Cowley in August 1984. (The findings and recommendations were printed in the September 1984 issue of the *Maryland EMS News* and were widely distributed throughout the state.)

In November 1984, a series of seven public hearings were held around the state to solicit public comments. Additional written comments were received through early January.

A combined meeting of the EMT-A Task Force and the Director's EMS Prehospital Advisory Committee (DEMSPAC) was held on January 14, 1985 to review the public comments and to come to consensus on the final recommendations.

As a final step in the revision process, the recommended changes were submitted to the Maryland Fire-Rescue Education and Training Commission

(MFRETC) for their consideration. The recommendations were reviewed at their February 1985 meeting in Annapolis. After much discussion, several proposals were referred to a subcommittee for study and clarification.

At the April 1985 MFRETC meeting held in Bowling Green, the commission gave final approval to the summary of proposed substantive changes to the Maryland EMT-A program for implementation statewide by July 1986. The commission agreed that programmatic changes that will assist the EMT-A candidate throughout the training program should be implemented as soon as each aspect of the program revision is ready.

The following is a summary of the substantive changes to the Maryland EMT-A program indicating the planned implementation date for each:

1. Utilize U.S. DOT standard EMT-A curriculum (1984 revised edition)—100 hours for training and testing (classroom and skills) and 10 hours for local internship. MIEMSS will work with the local jurisdictions to develop guidelines. The MIEMSS and MFRI staff will work together to implement the 110-hour EMT-A program which will begin statewide July 1986.

2. Utilize a standardized textbook statewide. The standardized textbook for Maryland will be the current edition of the Brady textbook.

3. Utilize standardized lesson plans statewide. The MIEMSS and MFRI staff will be working together to develop the statewide format in which the U.S. Department of Transportation EMT-A lesson plans will be utilized. We are planning to pilot the standardized lesson plans in October 1985.

4. Utilize a standardized statewide practical examination that is referenced to the *Maryland Way: EMT-A Skills Manual*. Classes beginning July 1, 1985 will be tested practically according to the *Maryland Way* only.

5. Utilize a standardized statewide certification examination with questions referenced to the statewide standard textbook. This will be in effect for classes beginning July 1, 1985.

6. Sponsoring agencies conducting courses leading to EMT-A certification will utilize quizzes and tests that are

standardized (for their classes) and developed by the sponsoring agency. Sponsoring agencies conducting classes beginning July 1, 1985 will be responsible for developing these quizzes.

7. Requirement for CPR instructor annual recertification will be dropped (this is currently being addressed by the Maryland Instructor Certification Review Board).

8. At a minimum, students will be trained and tested practically according to the *Maryland Way: EMT-A Skills Manual*. This will go into effect in classes beginning July 1, 1985.

9. Students will receive evaluation forms that will be used in the practical skills evaluation at the beginning of the course. All students in classes beginning July 1, 1985 will receive these forms.

10. The EMT-A course (110 hours) can be conducted straight through (continuous) or in two modules. Continuous training includes: all lessons, quizzes, tests, internship, and certification process. Modular training includes Module 1 and Module 2. The listing below outlines the modular training that will begin with classes starting July 1, 1986. However, this approach will be "piloted" beginning in October 1985 with several classes identified by MIEMSS and MFRI.

Module I (40 hours)

- Introduction to Emergency Care (credit for experience and/or self-study—up to 10 hours)
- Anatomy and Physiology and Patient Assessment
- Airway Obstruction and Respiratory Arrest
- Cardiac Arrest
- Skills Development and Practice (I)
- Practical Use of Airway Adjuncts
- Shock, Bleeding, and Primary Patient Survey
- Burns and Exposure to Heat and Cold
- Skills Evaluation and Quiz—Airway Care, Pulmonary Arrest, Cardiac Arrest, Bleeding, and Shock
- Injuries to Extremities
- Skills Development and Practice (II)
- Injuries to the Skull, Spine, and Chest
- Skills Development and Practice (III)
- Heart Attack, Stroke, Diabetes, and Epilepsy

- Injuries to the Chest, Abdomen, and Genitalia
- Poisons and Drugs
- Emergency Childbirth
- Instructor-Administered Written Exam

Module II (60 hours)

- Bleeding and Shock (Advanced)
- Military Anti-Shock Trousers
- Principles of Musculoskeletal Care
- Fractures of Upper and Lower Extremities
- Skills Development and Practice (IV)
- Injuries of the Head, Face, Eye, Neck, and Spine
- Skills Development and Practice (V)
- Skills Evaluation and Quiz—Injuries (Mod. II)
- Medical Emergencies I
- Medical Emergencies II
- Emergency Childbirth
- Burns and Hazardous Materials
- Environmental Emergencies
- Psychological Aspects of Emergency Care
- Lifting and Moving Patients
- Principles of Extrication
- Skills Development and Practice
- Skills Evaluation and Quiz—Medical Emergencies, Childbirth, Environmental Emergencies, and Lifting and Moving Patients
- Ambulance Operations I—Emergency Vehicle Driving, Records and Reports, and Communications (credit for experience and/or self-study—up to 10 hours)
- Ambulance Operations II—Vehicle and Equipment Maintenance, Scene Control, Disasters, etc. (credit for experience and/or self-study—up to 10 hours)
- Situational Review (credit for experience and/or self-study—up to 10 hours); plus Final Written Exam (MIEMSS-conducted) and Final Practical Evaluation of Skills (MIEMSS-conducted)

Local Company Level Training (10 hours)

To be determined for each local jurisdiction. Guidelines to be developed by MIEMSS meeting with each of the 23 counties and Baltimore City.

11. The practical evaluation exam leading to certification may be conducted by the sponsoring agency provided that MIEMSS guidelines are followed. MIEMSS must provide an on-site coordinator for this process. The ability for sponsoring agencies to conduct practical examinations according to this policy is currently in

effect and will remain in effect.

12. No "on-site retraining or retesting will be conducted at the practical skills examination." A date will be scheduled for retraining and retesting at the time the course is approved. Classes beginning July 1, 1985 will not be retrained or retested on the night of their original practical examination.

13. Students needing retraining may elect to either: (a) attend scheduled retraining session or sessions, or (b) study independently in areas of weaknesses. Students in those classes beginning July 1, 1985 may exercise this option.

14. Students needing retesting may satisfy this requirement by either: (a) retesting on a scheduled practical exam, or (b) obtaining three instructor signatures, "signing off" on the individual's proficiency. Students enrolled in courses beginning July 1, 1985 may exercise either of these options.

15. MIEMSS will work with the State Board of Medical Examiners to allow for recertification of prehospital care providers at their highest level of certification. MIEMSS is continually working with the Maryland State Board of Medical Examiners to effect this change. At this time the ATTs' and EMT-Ps' certifications and recertifications include their EMT certifications as well.

16. EMT-A recertification should be available by: (a) successfully completing a formalized refresher training program and passing a written examination, or (b) successfully completing a self-study refresher program (to be developed) that will include "independent study, 12 hours of formal continuing education, and passing the written exam." For those classes beginning July 1, 1985, students will be required to attend formalized refresher training programs, as is the current policy. As soon as MIEMSS and MFRI develop an effective self-study refresher program both agencies will conduct pilot self-study programs to ascertain the effectiveness of this independent study.

Nurse Coordinator Position Open

Trauma Nurse Coordinator position available with MIEMSS. Requires a masters-prepared, expert clinician in trauma and disaster management, experience in education and administration. State, national, and international responsibilities. Call 301/528-3930 for details.

9-1-1 Goes On Line Statewide July 1

The 9-1-1 emergency system of communication was introduced in Maryland in 1972, and will be implemented statewide as of July 1 of this year. The dates that each county came on line with the system are as follows:

County	Date
Charles	1972
Prince Georges	1973
Montgomery	1974
St. Marys	1977
Calvert	1977
Cecil	1978
Howard	1978
Kent	1978
Garrett	1978
Allegany	1979
Baltimore County	1980
Dorchester	1981
Frederick	1982
Caroline	1982
Carroll	1984
Queen Anne's	1984
Harford	1984
Washington	1984
Baltimore City	1985
Anne Arundel	1985
Worcester	1985
Talbot	1985
Wicomico	1985
Somerset	1985

Speech Communication Program Accredited

The Speech-Communication Disorders Program at both the MIEMSS Shock Trauma Center and its satellite clinic at Montebello Rehabilitation Center has been awarded national accreditation in its speech-language pathology and audiology services by the Professional Services Board of the American Speech-Language-Hearing Association.

Fewer than 300 of the nation's 2,500 clinics and centers have been accredited to provide speech, language, and hearing services, according to Roberta Schwartz, director of the MIEMSS speech-communication disorders program.

"The comprehensive evaluation included a review of our staff, clinical practices and procedures, records and reports, and physical facilities and equipment," Ms. Schwartz said. "Following this evaluation, the Professional Services Board awarded accreditation."

Neuropsychological Tests Aid Planning

The neuropsychological testing program at the MIEMSS Center for Living (CFL), a structured psychosocial program that includes a retraining component, started as a small project begun four years ago at the Shock Trauma Center to meet the needs of post-hospital trauma clients and their families. Most people (90 percent) who receive services have suffered closed-head injuries, and have problems or deficits that impair their ability to function. The extensive program of psychosocial intervention and educational training is a step along the way to rehabilitation. Neuropsychological evaluation is needed to develop an appropriate treatment plan.

The degree of the patient's loss of ability to function may range from minimal to severe. Trauma can affect the brain on the same side and/or side opposite where the blow occurred. It can affect performance in all sensory areas, including language, reasoning, memory, ability to learn, concentration, span of attention, motor functions, and problem-solving ability. Vision and touch might also be affected. Individuals with this type of injury may have emotional problems getting used to being different from the way they were. Some people may become apathetic, while others become disturbed and agitated.

Neuropsychological assessment is designed to determine areas of functioning that have been impaired, as well as those that have been spared. Elaine Karp, PhD, clinical psychologist at CFL explains, "Neurologists and psychologists complement each other's work; neurologists determine the presence and location of deficits, while psychologists determine how they affect performance.

"There's no reason to do the assessment unless you're going to do something with it. Recovery is a process that can start almost immediately and go on for a couple of years. Our goal is to figure out exactly what problems each person has, and develop a program so he or she can either recover function, or develop strategies and techniques to use where there are deficits. Ultimately, our goal is to get the person back to being as independent as possible, to work, to function within the family, and to reach a maximum level of well-being."

The evaluation can take up to 10

hours, and is often done in more than one day, stopping when the patient is fatigued. The assessment starts by obtaining information about the individual's pre-injury level of functioning. For this purpose, a psychosocial history is obtained; family and social adjustment is evaluated, as well as educational and occupational achievements. Current levels of functioning in these areas are also scrutinized.

Formal testing procedures utilize a variety of instruments, each having a specific purpose. The Wechsler Adult Intelligence Scale is used to assess verbal and nonverbal aspects of intellectual functioning; the Wechsler Memory Scales evaluate verbal and nonverbal memory; and the Wide Range Achievement Test is used to evaluate arithmetic, reading, and spelling skills.



Elaine Karp, PhD, administers the Tactile Performance Test, which requires fitting wooden shapes into cutouts of the same shape while blindfolded.

The Halstead-Reitan Neuropsychological Test is the major tool used to determine neurological deficits. The battery consists of the Tactile Performance Test, which requires the ability to fit wooden shapes into cutouts of the same shape while blindfolded; the Category Test, to find a correct principle that applies to a number of situations; and the Trail Making Test, which resembles making a picture by connecting dots, except the sequence becomes more complicated when the person has to shift between numbers and letters. The Aphasia Screening examination addresses the individual's ability to understand and express verbal communication, and other tests are used to determine the ability to discriminate speech sounds and rhythms. Additional tests evaluate motor skills, including finger-tapping speed and grip strength.

The results of these tests provide information about the nature, severity, and pattern of deficits. The findings are interpreted in terms of how well the individual processes information and solves problems. The information provides clues as to which hemisphere(s) or lobe(s) is involved. For example, language deficits frequently indicate left hemisphere damage. Severely impaired right-hand finger strength in a right-handed person suggests left hemisphere damage.

In addition to intellectual and neuropsychological instruments, the evaluation includes an assessment of personality. For this purpose, the Minnesota Multiphasic Personality Inventory is used to determine the presence and nature of psychological problems. The test consists of 566 statements to

which the individual responds with a "yes" or "no" answer. The inventory provides a profile of the individual's personality, including level of depression, anxiety, worry, ruminative thinking, strange or unusual ideation, body concerns, alienation, and level of energy.

After the testing is completed and the results are analyzed, the client and family come in to discuss the findings. Recommendations are made for needed treatment and training, and information is provided as to where help is available.

An important step in the adjustment process is acceptance of one's new status. Thus, emotional and cognitive issues need consideration. In some instances, psychological counseling is considered to be the important first step toward preparing the individual to enter

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Ipecac Abuse Should Not Bar Its Legitimate Use by Public

Recently you may have heard or read some disturbing information about syrup of ipecac, a nonprescription drug used to induce vomiting in poisoning cases. Since March, a few individuals have been using the national media to raise concerns regarding the safety of ipecac syrup, citing a possible link between ipecac syrup and two fatalities in patients with eating disorders who had repeatedly abused ipecac syrup. Based on these two cases, they are advocating that ipecac syrup be made a prescription drug and/or that a warning about the toxicity of ipecac be added to the label.

According to Gary M. Oderda, PharmD, director of the Maryland Poison Center, "Ipecac syrup is not intended for repeated use. Abuse of emetics and laxatives can be dangerous. Appropriate warnings should be placed on these products to help prevent this type of abuse. However, restricting the sale of ipecac syrup will inappropriately limit its intended use in poison emergencies. This restriction will delay treatment and may endanger poisoning victims, especially young children (the most frequent victims of unintentional poisonings) and will increase health care costs by necessitating unnecessary emergency department visits."

Last year, according to American Association of Poison Control Centers (AAPCC) data, over 100,000 people were safely given syrup of ipecac, more than half of these in a home setting.

The Maryland Poison Center at the University of Maryland School of Phar-

macy believes that ipecac syrup is a safe and effective nonprescription agent that should be kept in all homes, especially those with children under five years of age. If a poisoning occurs, call the Maryland Poison Center (528-7701 in the Baltimore area or 1-800-492-2414 elsewhere in Maryland) to see if ipecac syrup should be given.

—*Jacquie Lucy*
Maryland Poison Center

Idling Ambos: More Info

Below is an addendum to the article published in the last issue on not idling your ambulances to avoid putting patients with severe emphysema or anemia in life-threatening situations. We would like to point out that although the information which was based on an American Academy of Orthopaedic Surgeons newsletter article is certainly valid, there may be trade-offs. Dick Neat, director of MIEMSS communications, points out that if your ambulance has any engine problems and you turn the engine off, you may have trouble restarting it. Problems could also result with battery-operated devices such as suction units or with radios. However, please be aware that infiltration of fumes can be a problem—keep the patient compartment doors of the ambulance closed; also check for leaks around the ambulance doors and windows. In addition, many emergency department personnel ask that you turn off your ambulance engine after you back up to the emergency department to unload your patient.

Tests Aid Rehabilitation Plans

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and complete an educational program successfully. In other situations, emotional problems may be resolved as the person realizes that he or she can develop skills and improve performance in various areas. The CFL, under the direction of Marge Epperson-Sebour, MSW, offers services including psychotherapy; speech and language, psychosocial, and educational evaluations; a cognitive relearning program; social reorientation programs; and a social center. "If the client is ready, we recommend the Life Enhancement Education Program (LEEP) at the Center for Living, which uses components such as psychodrama,

dance and movement, and group therapy, as well as job readiness and leisure skills, to prepare the patient for rehabilitation or vocational training."

According to Dr. Karp, "Support of the family is important. We find people angry because the accident changes the relationship; they're no longer married to the same person. On the other hand, I know of someone who was in a coma for several months, and suffered a great many deficits. His wife was totally involved with him and his rehabilitation. She was determined that he get better. She helped him, and insisted on his progress. He is now fully restored to work."

—*Erna Segal*

Region I

The Western Maryland Trauma/Disaster Short Course was held May 4–5 at the Grantsville Holiday Inn. Over 200 EMTs and CRTs, representing five states, attended the program. The evaluations of the workshop were excellent, and the region is looking forward to next year's program which will be held the first weekend in May.

Region I is geared up for region-wide ambulance inspections for the month of July. The supplies on ambulances will be inventoried by the MIEMSS regional office, and special countywide inspections of oxygen and radio equipment will be held July 17–18. In addition, ambulances will be checked for carbon monoxide leaks into the patient and driver compartments.

On May 1, Region I instituted the new Maryland CRT medical protocols. Not only were special training sessions held for all Region I CRTs, but in-service training programs were conducted for all Region I emergency department personnel. This training was conducted by Mike Walls, Region I ALS Coordinator.

Region I's newsletter, the *Mountain Medic*, has taken important steps forward for self-sufficiency. Advertisements have been obtained from local businesses, and it is expected that revenues generated will ensure the continued high quality of printing for the newsletter. Special thanks to Dennis Mallery and others who are working to solicit advertisements.



Kenneth May receives award.

Kenneth L. May, vice-president of the Regional Emergency Medical Services Advisory Council (REMSAC) and president of LaVale Rescue Squad since 1980, recently was named one of five winners of the Distinguished Community Service Award by C&P Telephone Company of West Virginia. Mr. May is involved in numerous community activities, in addition to his EMS work in Region I, where he has been an active EMT for the past six years, and past president of Region I's EMS advisory council.

—*Dave Ramsey*
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New ALS Medical Protocols Take Effect

Implementation of the new Maryland medical protocols for CRTs and EMT-Ps on July 1 represents a further step in the continuing evolution of pre-hospital advanced life support in Maryland. Many individuals contributed to the development. The regional medical directors from all five EMS regions considered the past experiences and input of prehospital care providers and emergency care physicians in developing the protocols.

An extensive review process took place prior to the final approval of the protocols by the Board of Medical Examiners of the State of Maryland on September 20, 1984. Subsequent to this, the protocols were distributed so that orientation and training could take place prior to the July 1, 1985 implementation date.

Despite review and planning for implementation, concerns have been expressed regarding the protocols and their implementation. Because we are human, none of us particularly welcomes changes in the way we are used to doing things. The intent of this discussion is to address concerns about these changes. It is my hope to reassure field providers that the new developments in these protocols are in the best interests of their patients and of the field providers who serve them.

On April 3, 1985, a document was distributed that responded to a number of specific questions involving the medical protocols. Rather than restate the responses to specific questions which were raised, this discussion will focus on several broad topics.

One development in the new protocols is the incorporation of the advanced cardiac life support (ACLS) guidelines of the American Heart Association into the Maryland Medical Protocols for CRTs and EMT-Ps. This should facilitate communication between consulting hospitals and pre-hospital care providers, and provide improved continuity of care for patients.

A second development is the provision of more extensive algorithms for cardiac care, consistent with ACLS guidelines. These guidelines have been one area of major concern for some field providers. It must be reemphasized that it is not the intent of the protocols that field providers independently provide the care outlined in the algorithms. Rather, the intent is to provide a mechanism by which the field provider *may* continue advanced life support for a cardiac patient if it is genuinely impossible to obtain physician consultation. With efforts toward improvement in the communication system, the situations in which communications failures occur

should become fewer and fewer as time progresses. Conversely, if an individual provider attempts to proceed through the protocols without making genuine efforts to obtain consultation, this would be regarded as a serious protocol violation.

A third development in the new protocols is the incorporation into a single document of certain new protocol sections as well as a number of appendices relating to patient care. Unifying protocols and procedures into a single Maryland medical protocol document for CRTs and EMT-Ps should serve to facilitate consistency in the application of patient care.

Changes are seldom easy, but they can be attained if there is a need for them and if careful planning and training have taken place. The new protocols are good, but like any document prepared by human beings it is not perfect. I would ask CRTs and EMT-Ps to make a good faith effort in applying these protocols toward excellent patient care. Likewise, if problems are encountered please make note of these so that we may consider your input in future protocols.

—Ameen Ramzy, MD
State Medical Director
for EMS Field Operations