



(L-r) MIEMSS Director R Adams Cowley, MD, Governor William Donald Schaefer, and J. Alex Haller, MD, director of the Johns Hopkins Pediatric Trauma Center, participate in the Governor's press conference at the State House in Annapolis to formally announce and answer reporter's questions about the pediatric critical illness grant.

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## Pediatric Critical Illness Studied

MIEMSS received a grant from the US Department of Health and Human Services to conduct a one-year model demonstration project that will be an extension of the statewide EMS system for children with the addition of a pediatric critical illness component. This is a natural evolution of MIEMSS experience with pediatric trauma and neonatal transport.

R Adams Cowley, MD, director of MIEMSS, is the project director and administrative principal investigator. Ameen I. Ramzy, MD, deputy director of MIEMSS and state EMS director, is codirector of the project and is responsible for systems evaluation, prehospital care, and transport. J. Alex Haller, MD, director of pediatric surgery at the Children's Center of Johns Hopkins Hospital and head of the Pediatric Trauma Center, is the scientific principal investigator of the Johns Hopkins subcontract. Scientific principal investigator for pediatric critical illness is Frank Gioia, MD, of the departments of anesthesiology and critical care medicine at Johns Hopkins Hospital, who directs the pediatric intensive care unit, the major tertiary care facility for children in the state.

There are four components to the demonstration project. The first will study the epidemiology and demographics of pediatric trauma and critical illness in the state to quantify incidence, regional distribution, and existing outcome measures by mortality, hospital stay, discharge

disposition, and short-term followup. Data will be used in developing plans to meet specific emergency needs and to target future interventions required to improve outcomes. Particular attention will be paid to the needs of handicapped and

minority (including native American) children.

The second component will develop standards for pediatric patient triage within the MIEMSS echelons of care and

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## Governor Supports EMS

Governor William Donald Schaefer recognizes the importance of the EMS system to Maryland citizens and has continually demonstrated his support since becoming the State's Chief Executive.

One vital area is budgetary support. Governor Schaefer has provided in his capital and operating budgets monies to further improve the EMS system. Two of the largest projects include the replacement and expansion of the Med-Evac helicopter program and the new R Adams Cowley Shock Trauma Center. In addition, more monies have been allocated to the MIEMSS budget to replace and enhance the statewide EMS communications system and to provide additional training support for EMS providers, especially in self-study and recurrent training.

The procurement process for the new Med-Evac helicopters is well underway and the delivery of the first three twin-engine helicopters is anticipated around November 1988. In addition, a goal has been set to establish an eighth Med-Evac section to be located in Montgomery County by the end of 1988.

Work continues on the new Shock Trauma Center. This world-class facility is expected to come on-line as the flagship of the EMS system around January 1989.

In the communications area, several of the major initiatives funded for FY 1989 include the establishment of a combined state-of-the-art SYSCOM and EMRC communications center in Baltimore and the related upgrade of Region III hospital consoles; the establishment of an automated helicopter flight-following system for the Med-Evac fleet; the initiation of the replacement of ALS ambulance radios with new repeater radios; and the initiation of a major infusion of new monitor/defibrillators for ALS ambulances.

In the training area, new and expanded training opportunities will be available statewide to include a new initiative in self-study utilizing computer-assisted learning and video tape modules.

The Governor's support of the system ensures that Maryland's EMS system continues to provide the best hope of survival for those persons in need of emergency medical care.



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## Region I Awards Reception

Region I held its EMS Awards Reception on February 6 at the Grantsville Holiday Inn. At the reception which was attended by more than 120 people, the Region I EMS Advisory Council presented awards to the following.

### Ambulance Inspection Programs

Ambulance companies that received certificates of excellence included: City of Cumberland Fire Department (Ambulance #370); Corriganville Volunteer Fire Company, Inc. (Ambulances #375 and #385); Community Volunteer Fire Company and Ambulance Service (Ambulances #396 and #398); Ellerslie Volunteer Fire Company, Inc. (Ambulance #390); Frostburg Area Ambulance Service (Ambulances #359 and #364); Flintstone Volunteer Fire Company (Ambulances #338 and #377); LaVale Volunteer Rescue Squad, Inc. (Ambulances #371 and #374); Mt. Savage Volunteer Fire Company No. 1 (Ambulance #379); Northern Garrett County Rescue Squad (Ambulance #926); Southern Garrett County Rescue Squad (Ambulance #930); and the Oldtown Volunteer Fire Department, Inc. (Ambulance #318).

### Emergency Department Nursing Staff

Plaques were given to the emergency department nursing staffs of the following hospitals in recognition of their dedication to quality patient care and support of Maryland EMS: Memorial Hospital and Medical Center of Cumberland, Inc.; Sacred Heart Hospital; Frostburg Community Hospital; and Garrett County Memorial Hospital.

### Outstanding Saves

Certificates of appreciation were

awarded in recognition of extraordinary rescue efforts when three individuals were endangered by the rupture of a hydrogen sulfide tank at the Westvaco Paper Mill. Companies to receive plaques were the Westvaco Rescue Squad; Tri Towns Ambulance and Rescue Service, Inc.; Luke Volunteer Fire Company; Tri Towns Volunteer Fire Company #1; and Potomac Volunteer Fire Company #2.

Two dispatchers who received certificates of appreciation for giving outstanding prearrival instructions that saved lives were Drew Sheally and Michael C. Saunders.

### Service Awards

Awards for 15 years of EMT service were given to: Wayne Babb; Shirley R. Baker; Marvin E. Beachy; Joseph M. Eshelman, Jr.; Helen Kahl; Rudi B. Kolb; Ralph Lichty; Edward Livengood; Loretta A. Rush; Edward B. Shuck, Jr.; James O. Wilburn; and William Crawford.

EMTs who received awards for 10 years of service were: Linda G. Beachy; Gary W. Carpenter; Ronald D. Carr, Jr.; James W. Dawson, Sr.; Henry M. Knieriem; Elwood Lashley; Diane May; Wolverton D. Murphy; Paul E. Parish; Ann Smith; Robert M. VanMeter; Patience G. Vrieze; Hilda M. Wilburn; Anthony W. Wolfe; and Sandra K. Youngblood.

EMTs honored for five years of service included: Daniel J. Beiler; Steven L. Bowman; Wanda M. Bowser; Samuel Friend; David L. Kyle; Eric R. Livengood; Kathy R. McMillian; Carol Newman; John H. Roby; Nancy K. Savage; Donna Shafer; DeNoma R. Stallings; Cecil E. Stein; Lucy E. Stein; and Earl Paul.

# Calendar

## March 24-25

*4th National Traumatic Brain Injury Symposium*

UMAB, Baltimore, MD

Sponsored by Speech-Communication Disorders Program of MIEMSS

Call 301-328-6101

## April 5-10

*EMT Association of Colorado*

Grand Junction, CO

Call 303-243-5506

## April 29, 30, May 1

*Conference for Hazardous Materials Response Teams*

Marriott Hotel, Bethesda, MD

Sponsored by Montgomery County Department of Fire and Rescue Services

Call 301-251-2114

## April 30, May 1

*Western Maryland Trauma & Disaster Short Course*

Wisp Resort, McHenry-Deep Creek Lake, MD

Sponsored by Garrett Community College, Western Maryland Regional Office of MFRI, Region I Office of MIEMSS

Call 301-895-5934

## May 6

*Trauma and the Elderly*

Philadelphia, PA

Sponsored by Jefferson Medical College of Thomas Jefferson University

Call 215-928-6992

## May 13-15

*EMS Care '88*

Sheraton Towson Conference Hotel, Baltimore, MD

Sponsored by MIEMSS and the Baltimore County Fire Department

Call 301-328-3996

## June 10-12

*Change for the EMS Manager*

University of Maryland Baltimore County

Sponsored by Emergency Health Services Department, UMBC

Call 301-455-2335

## August 19-21

*Parascope '88*

Marriott Hotel, Bethesda, MD

Sponsored by Montgomery County Department of Fire and Rescue Services

Call 301-251-2114

## September 22-25

*Hot Zone (conference on hazardous materials)*

Tulsa, OK

Sponsored by International Association of Hazardous Materials Specialists

Call 301-681-6800



# 10th National Trauma Symposium

## Prehospital Liability: How to Protect Yourself

At the present time, EMTs and other prehospital care providers are not heavily at risk for malpractice cases, according to David Spackman, Esq., who addressed the topic of prehospital liability at the 10th National Trauma Symposium.

In his seven years as legal counsel to the Boston Department of Health and

Hospitals, Mr. Spackman said that he has seen only one case of EMTs being sued—and even that case involved extenuating circumstances.

But Mr. Spackman cautioned that as prehospital care becomes more sophisticated, there may be more lawsuits. To protect themselves, prehospital care pro-

viders need to follow certain general rules of conduct such as:

- checking both equipment and supplies before going in service (if it could be proved that a defective piece of equipment or a missing drug needed for patient care could have been detected prior to transport, the prehospital care provider could be judged to be liable)

- record-keeping that is accurate and complete. Prehospital care providers should remember to record facts, not opinions; to put “N/A” or a line through the blank space to indicate that the question was intentionally not answered; and to be careful about making alterations (“crossing out” should be done so that the “mistake” can still be read if needed).

- holding oneself accountable to national training and equipment standards
- conducting oneself with “polish” and “politeness”

- treating and transporting a patient if there is even the slightest chance that the patient needs treatment

- driving safely

Mr. Spackman mentioned that legal activity (regarding prehospital care) in the future will probably focus on the following issues:

1. Where should the patient have been transported? (To answer this, according to Mr. Spackman, state-approved protocols and designated trauma centers need to be in place.)

2. The relationship of prehospital care providers to law enforcement officers (for example, can the police demand EMT records on certain patients in order to get information on alcohol/drug use; regarding this question, Mr. Spackman says that information should not be given out unless it is done in accordance with a standing protocol or unless there is a court subpoena.)

3. Antitrust suits will increase as ambulance companies align themselves with hospitals and as more hospitals align with other hospitals. With increasing competitiveness among health-care facilities, false advertising might also become more frequent.

Mr. Spackman urged prehospital care providers not to allow fear of lawsuits to rule their actions. They should simply give good patient care and follow the general rules of conduct.

—Beverly Sopp

## JCAH Urges QA Incentives

“You can’t just look at numbers to determine quality in hospital care. Resources are finite and making choices is a heavy responsibility. We don’t want to make wrong choices for the patient,” said Dennis S. O’Leary, MD, president of the Joint Commission on the Accreditation of Hospitals (JCAH), at the 10th National Trauma Symposium.

According to Dr. O’Leary, the power equation shifted between those who provide health care and those who purchase it. It is due not to a patient shortage, but to an excess bed capacity, and in some of the urban areas, to more physicians per capita than are necessary. These factors put health care professionals in a weakened position in the political environment. The purchasers of health care restructured the system, providing incentives for less care. This exploded as a public policy issue two or three years ago when consumer groups realized that the quality of care might be affected. Physicians and hospitals are more publicly accountable now; there is a professional liability crisis; and risk management legislation (which is really quality assurance legislation) has been passed by the legislatures of several states. The political system threatens to take over a set of major medical profession responsibilities.

Over the past few years, the development of competition in the delivery of health care services has unarguably been driven by price, which is not a substantive issue on which to separate the market, Dr. O’Leary says. In the future, the issue separating the market will be quality assurance (QA) “based not on self-proclamations of excellence, or glossy advertising, or political agility with state legislators, but on the ability to demonstrate that you are providing high quality care.” Health care professionals need to monitor and evaluate the quality of care and redesign their internal systems

to provide incentives and rewards to people who work to attain that high level of care.

There are already QA methods such as case-based review. Newer methods of statistical profiling that rely on large databases are external systems that can be imposed by a paternalistic society relying on data rather than on patient outcome. JCAH believes there should be a three-dimensional system that looks at structure, function, and outcome. For this reason, JCAH developed the Agenda for Change, which has five components. These include the development of:

1. *Clinical indicators.* This component is an important dimension of care and is measurable; it includes specialty areas, procedures, and performance across the organization. It combines data-driven QA systems with current QA systems. Together they create a focus, zero in on high risk and high volume situations. It uses data-gathering as a means to an end leading to effective problem analysis, peer review, and problem-solving.

2. *Organization and management indicators.* This is equally, if not more important than the development of clinical indicators. It is the organization’s total commitment to the care of the patient.

3. *Risk adjustment methods or severity of illness.* The patient is an important variable. “Physicians need to learn how to make these methods work in an efficient and practical manner. We don’t have a severity of adjustment system for DRGs, or resource allocation review, or a system for severity of illness review. They are important tools for comparing hospitals and trauma centers. There are people who want to compare you whether you want it or not. If we don’t develop good risk adjustment methods, others will develop bad ones. That makes it a priority.”

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# 10th National Trauma Symposium

## Relationship of Alcohol and Trauma Studied

Although alcohol has long been recognized as an important factor in the causation of vehicular crashes and other traumatic insults, its effects on injury severity and outcome have not been so well defined. Clinical, roadway, and laboratory studies of these effects were the subjects of three plenary presentations at the 10th National Trauma Symposium.

### Clinical Results

The effect of alcohol on injury severity and death among 1,000 vehicular crash victims admitted to the MIEMSS Shock Trauma Center was evaluated by Carl Soderstrom, MD (department of surgery), and James Eastham, Jr, ScD (director of the emergency health services department at the University of Maryland Baltimore County). Dr. Soderstrom presented the results of that study, which concluded that alcohol consumption was not associated with severity of injury or overall mortality.

Of those 1,000 patients, alcohol was detected in the blood of 404 (74 percent had a blood alcohol level (BAL)  $\geq 100$  mg/dl). Seventy percent of the patients were men; the mean age was 31.2 years.

By calculating Injury Severity Scores (ISS), a subgroup of severely injured victims with ISS  $\geq 16$  was identified (396 patients). Seventy-four of the 76 deaths in the entire sample occurred in that subgroup. The death rate was almost twice as low for those who had been drinking compared with those who had not. The seemingly protective effect of alcohol may be explained by the fact that the severely injured patients who had been drinking had significantly lower mean ISS (were less severely injured) than the nondrinking victims. In regard to patients' ages, it was noted that fewer patients who were 50 years of age or older presented with a positive BAL yet had a death rate 2.5 times that of younger patients. Overall, motorcycle drivers had the highest death rate.

Dr. Soderstrom reviewed other published reports that suggest that alcohol has a protective effect against severe injury. This conclusion must be viewed in the context of the select populations studied. Crash victims who had been drinking are more likely to suffer serious injury and die at the scene of injury than nondrinking victims. Those with positive BALs who live long enough to be admitted

to a trauma center have less severe injuries and thus higher survival rates.

The conclusions drawn by Drs. Soderstrom and Eastham concur with those of other investigators: Alcohol does not have a positive influence on the medical outcome of vehicular crash victims admitted to a trauma center.

### Roadway Results

As the associate director of driver studies at the University of North Carolina Highway Safety Research Center in Chapel Hill, Patricia Waller, PhD, is conducting research on the correlation of alcohol use and the severity of vehicular crashes. She described a project that involved records of over one million motor vehicular drivers in North Carolina. Twenty-six variables in 12 categories defined crash scenarios, including degree of vehicular deformation, involvement of a vehicle with another vehicle or object, and the drivability of the vehicle after the crash. The driver's use of alcohol was ascertained from police reports, and the severity of the crash was assigned a value on a seven-point scale. The results of the study indicate that drivers using alcohol were more severely injured in crashes than their nondrinking counterparts in comparable crashes.

In other analyses, the difference of involvement averaged two-fold greater for drivers who had consumed alcohol. The biggest differences (approximately

four-fold) were associated with less severe crashes.

Another study is underway that involves 1500 victims. Their clinical presentation is being linked with crash statistics. Special attention is being given to victims' behavioral and physiologic adaptations to alcohol.

Dr. Waller noted findings that have been derived from animal studies. In a

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### JCAH on QA Issues

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says Dr. O'Leary. If possible, risk adjustment should make use of injury severity scoring systems and be adjusted for age, interhospital transfers, etc.

4. *Ongoing, interactive relationships between organizations that we accredit and ourselves.* This requires the development of data, the exchange of information, and a means of providing feedback.

5. *A new survey in the accreditation process.*

JCAH already has a pilot program in operation utilizing the Agenda for Change. Various specialty medical areas have been asked to provide lists of clinical indicators in their fields. It is hoped that health professionals of all specialties will examine their operations—and it will make an enormous difference. Dr. O'Leary considers it a challenge for the future.

—Erna Segal



At the 10th National Trauma Symposium are (l-r) John Stene, MD, PhD (MIEMSS director of anesthesiology), Ake N.A. Grenvik, MD (who presented the Dr. T. Crawford McAslan Lecture), Mrs. T. Crawford McAslan, Salvatore J.A. Sclafani (who presented the Dr. Robert T. Ayella Lecture), and Carl A. Soderstrom, MD (MIEMSS associate director, physician education and symposium planning committee member). Dr. Grenvik, professor of anesthesiology/critical care medicine at the University of Pittsburgh School of Medicine and medical director of the ICU at Presbyterian University Hospital, spoke on ethical problems in organ donation. Dr. Sclafani, professor of radiology at the State University of New York Health Science Center at Brooklyn and director of trauma radiology at Kings County Trauma Center in New York, discussed using imaging to avoid laparotomies in trauma.



# TNN Holds Third Annual Meeting

The Trauma Nurse Network (TNN) is composed of professional nurses involved in trauma care—from prevention through rehabilitation. The network was organized in 1984 to provide communications mechanisms that promote professional development, nursing research, and personal growth. Its current membership totals 1300 nurses from the United States and Canada.

In conjunction with the 10th National Trauma Symposium in Baltimore, the TNN held its third annual meeting on November 18. The session was attended by approximately 100 nurses and was chaired by TNN's national coordinator, Mary Beachley, MS, RN, CEN, who is also the state trauma nurse coordinator for MIEMSS Field Nursing.

A landmark action was taken at this meeting in the adoption of the definition and philosophy of trauma nursing as well as education standards. Progress was

## Alcohol and Injury

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comparison of animals to which alcohol had been administered and animals that did not receive alcohol, animals with alcohol went into shock sooner after less blood loss. Animals with alcohol had more extensive damage after trauma to the spinal cord and/or cerebrum.

The pre-incident use of alcohol by trauma victims may lead clinicians to assess a greater severity of neurologic injury due to patients' depressed levels of

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also made toward the agreement on trauma nursing designation standards.

Although standards of care have been established for hospitals and physicians, no such statement has ever been compiled for trauma nursing. The TNN recognized this void and, through its national network of nurses in practice and at academic centers, has prepared a document that puts forth the necessary criteria. The adoption of these standards is the result of a 2-year process involving the drafting of the statements by a TNN committee and review of the text by the entire TNN membership via the network's newsletter.

The following definition of trauma nursing was adopted: "Trauma nursing is a specialty area of nursing practice which encompasses all aspects of nursing care for the injured or those at risk for injury. The practice of trauma nursing is a holistic endeavor to provide a continuum of care beginning with prevention and encompassing prehospital, resuscitation, stabilization, supportive care, rehabilitation, and reintegration into society." The philosophy statement consists of tenets of "assumptions about humans and health" as well as the "mission" of trauma nursing. Specific items are listed within the categories of the education standards, pertaining to general knowledge, phases of trauma care, and other related clinical topics.

In the discussion of trauma nursing designation standards, revisions were made in the criteria and will be published

in the TNN newsletter for consideration by the membership. The vote on the revised text will be tallied in May 1988. The standards consist of many specific elements under the broad headings of nursing administration, nursing practice protocols, nurse staffing, and quality assurance.

The adopted standards will be circulated to other nursing specialty groups such as the Emergency Nurses Association, the American Nurses Association, and the American Association of Critical Care Nurses as well as to the American College of Surgeons' Committee on Trauma, the American College of Emergency Physicians' Committee on Trauma, and the Joint Commission on the Accreditation of Hospitals. Those groups will be asked to incorporate the appropriate portions of the trauma nursing standards into their documents on standards of care.

Mrs. Beachley presented an update on federal legislation of interest to trauma nurses. The TNN was represented by Mrs. Beachley at a special interest hearing on Senate Bill (SB) 10, which was introduced by Senators Kennedy and Cranston in January 1987. In brief, this legislation would 1) provide financial resources for trauma patients not otherwise covered by medical insurance, 2) offer EMS grants for systems needs and communications (similar to the grants made available in 1973), and 3) support the organization of trauma systems at the state level. SB1488 would establish a national center for pediatric trauma. May 1988 will be designated National Trauma Awareness Month if House Bill 373 is accepted by the Congress. An investigative committee on med-evac and hospital-based helicopter transports is being chaired by Senator Gore; no legislative action has been generated from this committee, but proposals are anticipated.

The TNN is moving toward a formalization of its structure. It is proposed to be a national organization (without local chapters). The intent is not to replace other nursing organizations but to be a specialty organization devoted to communication, research, and prevention as related to trauma nursing care.

To obtain more information about the TNN, contact Mary Beachley, MIEMSS Field Nursing, 22 S. Greene St., Baltimore, MD 21201-1595, 301/328-3930.

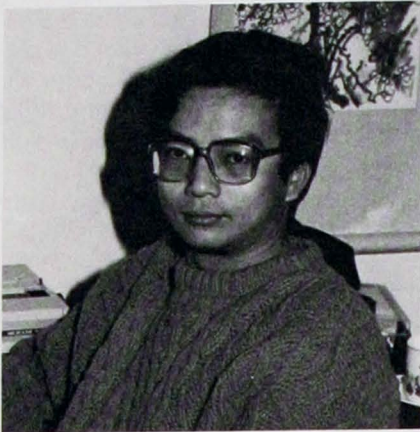
—Linda Kesselring



At the 10th National Trauma Symposium are (l-r) Carol Spicer (mother of Pam Bell), DeAnne Bell (daughter of Pam Bell), Carol Curran, EdD, MSN, FAAN (who presented the first annual Pam Bell Lecture), and Carl Soderstrom, MD (MIEMSS associate director, physician education and symposium planning committee member). Dr. Curran's lecture was entitled "High Tech, High Touch Professional or Helpless Handmaiden: Will the Real Nurse Please Stand Up?" Dr. Curran is the vice-president for health care management and patient services of the American Hospital Association.



# Trauma Care in China Described



*Dr. Yang Pan*

Emergency/trauma care in Beijing (formerly Peking), the capital of China, is different from trauma care at MIEMSS, according to Yang Pan, MD, a graduate student pursuing the master of science degree in the emergency health services (EHS) department at UMBC. Although Beijing is much larger than Baltimore, with a population of 10 million people, there are fewer motor vehicles and more bicycles on the road, lessening the likelihood of serious injuries from high-speed crashes.

A new trauma center was built last year in Beijing under the sponsorship of Italy. But a busy night in the emergency department (ED) might include only a few trauma patients; the other hundred or so patients might have internal medicine problems such as cardiac problems or colds or have uncomplicated injuries. In this way the ED resembles the urgent care centers in California, Dr. Pan says. Between the hours of 6 pm and 8 am Dr. Pan has treated 120 ED patients, relying on his two nurses to help with simple suturing. To control the volume of patients, those who present with colds must have a fever to be seen. All patients are given antibiotics.

"Hospitals are very crowded," Dr. Pan explains. "Families stay with their patients, not in waiting rooms, and the hallways, rooms, and treatment areas are very congested."

There are three levels of hospitals in China: local, city, and university. Patients know that the most skilled personnel and the finest equipment are in the university hospitals, so the other two hospital levels are under-utilized. Dr. Pan would like to see BLS and ALS programs set up for nurses and physicians at all hospital levels so people would not feel the need to crowd into the university hospitals.

Health care is paid for by the government in China. In the past the government paid for it directly, and money was spent freely and sometimes wasted. Now each sector is held accountable. Government ministries are divided into companies; each company must oversee its own health budget. Hospitals must also conform to budgets. When this system was first begun, a company representative would go to a hospital and say, "I'll give you \$1,000 per year (for example) to take care of my employees' health." That much money in advance seemed like a bonanza to the hospital manager, so the deal was made. Then the company representative would go to his employees and say, "You can go to the doctor any time you want." Everybody went, the hospitals lost money, and the people running the hospitals got smarter.

The system is different now. Income in China is very small. Twenty dollars (\$80 Chinese) is one month's salary. Each employee is allowed \$20 per year for medical care. If the person does not see a doctor at all during the year, that \$20 is given to him/her as a bonus. If the doctor is seen but the charge is less than \$20, the cost is paid but the balance of the money reverts to the company. (For example, if the doctor charges \$12, the remaining \$8 goes back to the company.) If the charges for the year are more than \$20, the company will pay, but the following year the employee's medical care will cost him/her a small amount. Often young workers will not use their medical care but older workers will. Dr. Pan approves of the Kaiser Permanente system of charging different amounts of insurance for differing levels of health care. There is no individual health insurance in China.

Many of the ambulances in Beijing are new vehicles just bought from Hong Kong or Japan. An ambulance is staffed by a driver and two technicians. Each technician carries a small black bag with a red cross on it, containing small equipment and simple medication. The only other equipment on the ambulance is possibly a small cylinder of oxygen. Dr. Pan recently saw a newspaper article admonishing the ambulance service because 75 percent of their trips were for personal use such as moving or shopping. Since this adverse publicity, ambulance service has improved, Dr. Pan says, but it is still difficult to get an ambulance, perhaps because there might not be enough technicians to staff them.

One of the problems contributing to overcrowding in the trauma center is that patients stay an average of two weeks and there is a constant demand for their beds. Unfortunately, other hospitals do not wish to accept these patients. Dr. Pan would like to see transfer agreements among hospitals similar to what he has seen here.

There are many other adaptations of American methods that Dr. Pan would like to see implemented when he returns to his country in a few years. As the final paper for one of his EHS courses, he is outlining a program for Beijing that would include EMS training for technicians, nurses, and physicians.

Two specialties that Dr. Pan would like to see established in China are physical therapy and social work. Although there is a need for physical therapy, it would be difficult to find the room for the necessary equipment in their overcrowded hospitals; every room is needed for patients. The concept of social work does not have the same meaning in America and in China. In China, a "social worker" is an elderly neighborhood woman who looks in on families who might be having trouble to see if she can advise them. She depends on her life experiences and instincts, but she has no formal training or education on the subject.

Dr. Pan is not practicing medicine in Maryland while he is studying at UMBC, but he did practice during the two years he spent in California prior to coming here. For one year he worked at the Stanford Medical Center department of surgery as a visiting scholar. He observed, talked to patients, diagnosed, and discussed cases with his professor. During his second year, he practiced as the first operating assistant in the operating room for Kaiser Permanente. "It was very helpful; I learned many new techniques," he observes. "China may have these techniques now, but I am not sure; I have not gone home for more than two years."

Many Chinese students are traveling to other countries to study. Dr. Pan says, "China needs modern technology and trained administrators. It's hard to get organized without them." He cites courses such as one he is taking at UMBC in the management of information systems as an example of varied concepts suitable for top managers. In China at present, in the absence of trained management personnel, a hospital manager or leader may

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# Reports on Alcohol's Role in Traumatic Injury

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consciousness caused by intoxication. This skewed evaluation may extend to the inaccurate impression of a "rapid" recovery as the effects of alcohol abate.

A uniform national standard for the BAL at which a person is "legally drunk" has not been established. Dr. Soderstrom reported that, based on 50 years of experience, the American Medical Associ-

## Trauma Care: China

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be a nurse with 20-30 years of clinical experience who is thrust into a role for which she has not been prepared.

Several months ago, Dr. Shau, the chairman of the Chinese Emergency Medical Association, announced in the newspapers that there would be a new emphasis placed on emergency health services "as has been done in foreign countries for many years." James N. Eastham, Jr., ScD, chairman of the emergency health services department at UMBC, has been in contact with Dr. Shau in reference to future education and research opportunities.

Dr. Pan says there have been many changes in China over the past 10 years; the government is much more open to change. "Don't worry about having an interpreter if you go over there," he says. "People are eager to speak to foreign visitors and they want to practice speaking English. You'll have travel guides everywhere!"

—Erna Segal

ation recommends that such a level be set at 50 mg/dl. Most states have set the limit at 100 mg/dl; Maryland's highest permissible BAL for drivers is 130 mg/dl, the highest in the nation. Dr. Waller agreed with the level of 50 mg/dl. A proposal is before the North Carolina legislature to reduce that state's level from 80 to 50 mg/dl.

The chronic use of alcohol worsens the severity of injuries that the drinker incurs in a vehicular incident. Drunk drivers are less likely to wear seat belts, and unbelted drunk drivers tend to be badly injured in crashes.

In summary, Dr. Waller stated that 1) alcohol affects judgment, 2) alcohol impairs psychomotor performance (once in a "bad" situation, the drunk driver is less likely to get out of it), and 3) for any crash, the drunk driver is more likely to be injured or killed than the sober driver.

### Laboratory Results

The use of animals as physiologic models in the study of alcohol's influence on morbidity and mortality after traumatic insult was discussed by Thomas Anderson, PhD, program leader in neurosystems research for General Motors Research Laboratories in Warren, Michigan. In studies with animals, the amount of applied force can be controlled and the physiologic responses can be monitored.

In studies of cardiac contusion, the intravenous administration of alcohol to create a blood level of 60 mg/dl led to 60 percent mortality after trauma. Following

delivery of alcohol via a gastric tube, a 17 percent mortality rate was associated with low levels of ethanol. Increasing the alcohol concentration to 180 mg/dl (the mean level in fatalities from motor vehicular incidents), the death rate rose to 70 percent. While animals with acute increases in blood alcohol concentrations showed minimal physical injury after cardiac trauma, they had significant increases in mortality from cardiac arrhythmia.

Dr. Anderson's work and that of others show that functional impairment after spinal cord trauma increases with the level of alcohol. In humans, the central gray matter is often the site of initial traumatic injury and is the most frequently injured portion of the nervous system. The injury then progresses over time to include the white matter. This is being studied in animal models.

Another area of research interest is the involvement of nerve cells and surrounding vasculature in spinal cord injury. Investigators are looking at mechanical and chemical mechanisms.

Computers are replacing animals in some studies of the physiologic responses to trauma. Dr. Waller noted that animal studies still have an important place in this research, because results from computerized simulations are not reliable in every instance. Dr. Anderson continued that computers cannot be programmed to duplicate physiologic processes that are not yet understood.

—Linda Kesselring



**CARNIVALE**

Phyllis Friedman (left), chair for Shock Trauma's 1988 Gala dinner-dance, and husband Mendel Friedman, president of Jolly Company, Inc., buy the first table of tickets for the April 30th event from a costumed Ami Taubenfeld. With a Carnivale theme, this year's event at the Towson Center of Towson State University features the music of Gene Donati, gourmet food by Overlea Caterers, and a silent auction. Tickets for the black-tie affair, which benefits Shock Trauma's endowment fund, cost \$150. For information, call 301-328-2006.

**CARNIVALE**



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

Managing Editor: Beverly Sopp,  
 (301) 328-3248

Editor: William E. Clark,  
 (301) 328-7800  
 EMS Director: Ameen I. Ramzy, MD  
 Director: R. Adams Cowley, MD

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

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## Pediatric Critical Illness Grant Awarded

(Continued from page 1)

will examine current systems for identifying the severity of injury and illness. It will also evaluate the applicability of present systems to the acute illness and injury of children.

The third component will refine and place into modular form current advanced pediatric life support (APLS) educational materials. These materials will be developed by combined staff of MIEMSS and Johns Hopkins, including field nursing and pediatric medical staff, and will be adapted for primary physicians, nurses, and prehospital care providers.

The fourth component will apply the products of parts one, two, and three to the current EMS system; initiate organizational structures for disseminating patient care and triage standards for pediatric illness and injury; review systems utilization; and examine quality assurance issues within the EMS system for children. It will also include a study of currently existing modes and patterns of pediatric transport and facilitate the application of new knowledge to providers.

Since an adult and pediatric trauma system is already operational statewide in Maryland, medical protocol modifica-

tions can be analyzed and implemented based on findings and patient needs. This model will contain a tested structure that will allow the pediatric EMS system structure and findings to be made available to other states or regions.

A management advisory group will be established to assist Dr. Cowley, Dr. Ramzy, Dr. Haller, and Dr. Gioia in setting future priorities and project directions. The advisory group will also serve as an internal means of quality control and evaluation regarding the appropriateness of the analytic methodologies and survey techniques used in establishing the nature of unmet pediatric emergency care needs, including rehabilitation and long-term care. In addition, it will begin to work toward enhancing the system of pediatric emergency echelons of care.

—Erna Segal



### 4TH NATIONAL TRAUMATIC BRAIN INJURY SYMPOSIUM The Neglected Disease

at the University of Maryland at Baltimore campus  
 March 24-25, 1988

sponsored by  
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**Roberta Schwartz, MEd, CCC-SLP, Director**  
**SPEECH-COMMUNICATION DISORDERS PROGRAM**  
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 University of Maryland at Baltimore  
 22 South Greene Street, Baltimore, Maryland 21201

### Talbot ALS Director Recently Elected

Talbot County Advanced Life Support Services has elected Easton resident Wayne Dyott as its new executive director. Mr. Dyott replaces Levin F. "Buddy" Harrison IV, who recently has been elected chief of the Tilghman Volunteer Fire Department.

Other officers for the Talbot ALS program are H. Kevin Knussman, assistant executive director; Gary Jones, secretary; and James Morris, treasurer. Lawrence Patrick and Buddy Harrison will serve the organization as trustees.