



Telehealth: Do the Benefits Outweigh the Costs?

The topic of telehealth continues to interest many members of the EMSC community. However, there are still a number of unanswered questions concerning how it can be utilized to improve children's care throughout the EMS continuum and whether its benefits outweigh the costs of the new technologies. In other words, will certain telehealth systems reduce assessment and treatment time, prevent unnecessary or inconvenient transport, and improve access to health care in rural communities?

The EMSC National Resource Center (NRC) is reviewing governmental reports and meeting with key agency representatives to better understand the conceptual framework for and emerging issues in telehealth. Much of the information collected emphasizes the importance of conducting a needs assessment and establishing a coalition of supporters prior to any technology investment.

Reports also indicate that many early telehealth demonstration projects failed because they were too expensive or difficult to use. Problems often arose because existing practice patterns and preferences were not analyzed before new systems were implemented. Issues such as how physicians will be compensated for online consultations were unresolved.

Other major challenges to broad-based implementation of new telehealth systems include:

- the life expectancy and incompatibility of equipment;
- requirements for on-site technical expertise;
- concerns about patient confidentiality;
- legal issues related to multi-state licensure;
- risks of malpractice; and
- the need for better reimbursement schemes.

Telehealth System Development

Debate continues to center on which broadcast technologies offer the best service at the lowest price. The most popular options are single- or multiple-user T-1 lines, low-orbit satellites, and microwaves.

T-1 lines, which are telephone lines with a special connection that allows them to send and receive digital signals, offers a data transfer rate of 1.54 million bits per second. That is double the rate of a standard 28.8 kilobits per second modem. The T-1 line is also a dedicated connection, meaning that it is permanently connected to the Internet. In addition to being very expensive, these types

(See Telehealth, page 14)

MCHB Increases EMSC Targeted Issue Funding

Seven New Grants Awarded in FY 2000

On October 1, 1999, seven new targeted issue grants for emergency medical services for children (EMSC) officially will be up and running. This year, the Maternal and Child Health Bureau (MCHB) received a record of 26 applications in this category. Although MCHB originally intended to fund only four grants, sufficient funds were secured to support seven, based on competitive review and scoring.

The targeted issue grant category was established to address special needs or concerns of regional and national significance affecting children throughout the EMSC continuum of care. These grants typically yield new products,

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Eighteen New Objectives Proposed for the *EMSC Five-year Plan*

In June, more than 25 experts met at the Emergency Medical Services for Children (EMSC) National Resource Center (NRC) in Silver Spring, Maryland, to develop new objectives and activities that support the revision of the *EMSC Five-year Plan*. The document, which provides guidance for the EMSC Program, prioritizes national activities, and promotes the integration of EMSC into the vision of the broader EMS system, is being



Jon Krohmer, MD, and Jim Flaherty, MD, review EMSC Five-year Plan objectives related to medical direction, clinical care, and health service integration. In March 2000, a draft plan will be posted to the EMSC web site for a 60-day public comment period.

current objectives. Fifteen objectives were proposed for deletion from the plan because they were completed between 1995 and 1999.

"This is one of the only plans I have come across that does not simply get filed away," said David Heppel, MD, director of the Maternal and Child Health Bureau's Division of Maternal, Infant, Child, and Adolescent Health. "You can be sure that what is suggested and what is finalized will influence the daily activities of the NRC staff, state grantees, and the Partnership for Children Consortium."

In August, the EMSC National Steering Committee reviewed the task force recommendations. The task forces are expected to reconvene in the Fall for additional revision activities.

In March 2000, the draft plan will be posted to the EMSC web site at www.ems-c.org for a 60-day public comment period and sent to approximately 200 individuals for consideration. The final version of the *EMSC Five-Year Plan, 2001-2005* will be released at the Annual EMSC Grantee Meeting in early 2001.

amended to address the unmet pediatric emergency care needs for the years 2001-2005.

The group of leaders were divided into six task forces addressing Human Resources, System Finance, Legislation, and Regulation; Communications and Public Access; Professional Education and Public Education; Medical Direction, Clinical Care, and Integration of Health Services; Research, Evaluation, and Information Systems; and Health Promotion and Prevention. Their preliminary work resulted in the proposed development of 18 new objectives and the revision of 31



Professional Education and Public Education Task Force members: Jane Ball, RN, DrPH; Deb Henderson, RN, PhD; and George Foltin, MD, discuss the importance of expanding EMSC's role in monitoring and using new technologies for EMS education.



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EMSC News welcomes articles on people, programs, and procedures related to emergency medical services for children. All manuscripts, artwork, or photography should be submitted to Suzanne Sellman at the EMSC National Resource Center.

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EMSC Region Meeting Calendar

Heartland EMSC Coordinating Council (HECC)

Date: Tentatively scheduled for late April or early May 2000

Location: To be determined

Participating states: Iowa, Kansas, Minnesota, Nebraska, North Dakota, South Dakota, and Wyoming

Contact: David Boer at boerd@siouxvalley.org

New England EMSC Regional Teleconference

Date: October 1, 1999

Location: individual state sites

Participating states: Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont

Contact: Patrick Malone at pmalone@zoo.uvm.edu

Southeastern EMSC Regional Meeting

Date: Spring 2000

Location: Charleston, South Carolina

Participating states: Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee

Contact: Karen Frush at frush002@mc.duke.edu

Three region meetings were held in September. Coverage for these meetings will be provided in the next issue of *EMSC News*.

Intermountain Regional EMSC Coordinating Council (IRECC)

Date: September 16-18, 1999

Location: Reno, Nevada

Participating states: Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming

Contact: Nels Sanddal at nsanddal@citmt.org

EMSC/Great Lakes Injury Prevention Network (Region V)

Date: September 24- 25, 1999

Location: Oakbrook, Illinois

...PUBLIC POLICY NETWORK...

Public Policy and School Bus Safety

In the recent report, *Transportation Review: School Bus Safety*, by the National Conference of State Legislatures (NCSL), Transportation Policy Associate Melissa Savage discusses school bus safety and shares information about public policy strategies under consideration at the state level. Excerpts from the full article, which can be found at the NCSL web site, www.ncsl.org, are provided below.

Every week 23.5 million children travel to and from school by bus. In fact, more than 400,000 school buses travel approximately 4.3 billion miles each year. According to the National Highway Traffic Safety Administration (NHTSA), school bus transportation is one of the safest forms of transportation — nearly 2,000 times safer than traveling in the family car.

On average, nine passengers under the age of 19 and 23 school-age pedestrians are killed in school bus crashes each year. Although each fatality is tragic, this figure is small when compared to the 5,400 or more children between the ages of 5 and 18 who died in motor vehicle crashes during 1997.

The current school bus safety record indicates that the present occupant protection system is succeeding. As a result, legislation requiring seat belts on school buses often is difficult

to pass. In addition, the installation of school bus seat belts can be costly and it can be difficult to ensure that each child is wearing the lap belt correctly.

Until recently, New York and New Jersey were the only states that had enacted school bus seat belt laws. However, the New York law only requires seat belts be installed on school buses, not that they be worn. A 1997 survey conducted by the New York Department of Education found that only 44 of the state's 709 public school districts require students to wear seat belts.

In 1999, more than 30 states introduced legislation requiring the installation of seat belts on school buses. Florida was the only state that passed legislation. The new law requires the installation of seat belts on school buses purchased after December 31, 2000, which passengers will be required to wear.

Some state legislatures have addressed other issues relating to school bus safety. For example, in North Carolina, designated bus monitors supervise children as they get on and off the bus and while they ride, allowing the bus driver to concentrate on driving. Other states have installed video cameras on school buses to monitor student behavior. In addition, some states have developed safety-training programs to teach students and their parents how to avoid accidents while getting on and off of the school bus.

Participating states: Illinois, Indiana, Iowa, Kentucky, Michigan, Missouri, Minnesota, Ohio, and Wisconsin

Contact: Evelyn Lyons at elyons@wpo.it.luc.edu

Region IX Injury Prevention Network

Date: September 16-17, 1999

Location: Honolulu, Hawaii

Participants: Arizona, California, Hawaii, Nevada, the Health Resources and Services Administration, the National Highway Traffic Safety Administration, and the Federal Highway Traffic Safety Administration.

Contact: Aida Berkovitz at aida.berkovitz@nhtsa.gov

NRC Moderates Mobile Healthcare Forum's Pediatric Section

The Emergency Medical Services for Children (EMSC) National Resource Center (NRC) has agreed to serve as moderator for the pediatric EMS section of the Mobile Healthcare Forum (MHF), an online 'hub' for professionals, agencies, and suppliers seeking EMS-related information and resources. In this capacity, NRC will provide content links and annotations to various pediatric resources, moderate the pediatric discussion group, and facilitate chat discussions with various EMS experts.

"This arrangement is very beneficial to both parties," said NRC's Librarian Linda Pierce, MLS. "We have the pediatric knowledge,

resources, and contacts. In addition, we have experience in conducting online chats and moderating electronic discussions. In return, MHF will enable EMSC to reach a broader audience. Our current listserv, which will remain fully active, only reaches EMSC grantees and federal officials. Now all prehospital providers, as well as other health care providers, have access to online pediatric discussion groups and chat rooms."

To access the pediatric section, visit www.mhf.net and click on "EMS Compass." In addition to pediatrics, this section features resources for cardiology, critical care transport, dispatch/communications, education,

medical direction, respiratory, and general EMS.

MHF also offers numerous unique electronic facilities for EMS professionals, including: a conference center with moderated message boards and chat rooms; a mall with more than 150 EMS-specific product and service providers; a university with an index of online courses from multiple education providers and EMS suppliers; online polls, surveys and debates; a library; two auditoriums for virtual conferences; and much more. For more information about EMSC's involvement with MHF, contact Pierce at (301) 650-8015 or via e-mail at lpierce@emscnrc.com.

News from NEDARC

A study initiated by the National EMSC Data Analysis Resource Center (NEDARC) found that school-based EMS incidents more often are attributable to injury, related to a sports activity, and resulted in transport to a medical facility.

The study is highlighted in the article, "Prehospital Emergency Care for Children at School and Nonschool Locations," which was published in the June 1999 issue of *Pediatrics*. The study examined South Dakota's emergency medical services (EMS) data involving children between the ages of 5 to 18 years to determine the differences between school-based and nonschool-based EMS incidents. By describing the characteristics of school emergencies resulting in an EMS dispatch, this population-based study may help emergency medical providers and school personnel prepare for school-based incidents.

"The Epidemiology of Pediatric Air Medical Transports in Utah," a study published in the July/September 1999 issue of *Prehospital Emergency Care*, found that:

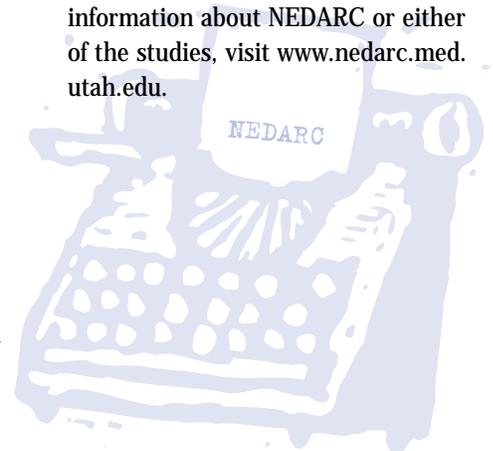
- children four years of age and younger are more likely to be air-transported for illness-related conditions;
- children five years of age and older are more likely to be air-transported for injury-related conditions;
- children with special health care needs use a higher volume of air medical transport services than the general pediatric population; and
- air medical transport is expensive, and inappropriate air medical transports may occur.

The primary purpose of the study was to identify the patients who utilize the air medical transport system, describe the medical services provided in the prehospital setting, and analyze the charges for transport to and treat-

ment at Primary Children's Medical Center, a pediatric tertiary care center in Utah and a referral center in the Intermountain region.

Presentations

NEDARC staff recently presented at the California EMSC Conference in Oakland and the EMSC/Great Lakes Injury Prevention Network (Region V Meeting) in Oakbrook, Illinois. If you need assistance with your EMSC project or would like a NEDARC representative to present at your meeting, please call (801) 581-6410. For more information about NEDARC or either of the studies, visit www.nedarc.med.utah.edu.



NRC Steps-up Research Activities: Hires New Specialist

The Emergency Medical Services for Children (EMSC) National Resource Center (NRC) would like to welcome Isabelle Melese-d'Hospital, PhD, who joined its team in May as the full-time research specialist. Melese-d'Hospital previously worked as a social science researcher in the area of adolescent sexual and reproductive health attitudes and behaviors at the University of California, San Francisco. Her background is in health promotion, early pregnancy, and sexually transmitted infection prevention education.

In her new role, Melese-d'Hospital provides technical assistance to EMSC grantees and federal representatives. She also works on several national

EMSC-funded research projects. Two of her current projects are described below.

National Registry of EMTs Survey

In this survey, currently registered emergency medical technicians at the basic, intermediate, and paramedic levels from all 50 states, Puerto Rico, and the U.S. Coast Guard, were asked to assess their training and knowledge of pediatric emergency care, identify shortfalls in pediatric continuing education, rate their level of comfort in responding to critical pediatric emergency calls, and identify barriers to obtaining pediatric continuing education.

The data, which is currently being analyzed, will be disseminated

to state EMS directors to illustrate how their states fare in relation to the national average.

Interagency Committee for EMSC Research

In September 1999, this committee of federal agency representatives met at NRC in Silver Spring, Maryland, to review and comment on a draft EMSC Joint Program Announcement, a federal initiative to promote EMSC research and research funding. The final announcement is expected to facilitate researchers' attempts to obtain feedback on and funding for EMSC-related research projects.

Old Ambulances Save Lives, Bring Hope to Hondurans

Paramedics for Children (PFC), an all-volunteer organization dedicated to bringing aid to children of third-world countries, is scouring the United States for surplus ambulances, emergency medical equipment, and volunteers to help expand emergency medical services for children in Honduras.

"Emergency medical services of any type are non-existent for many of the poor people in the outlying areas of Honduras. It's the children and the elderly who seem to suffer the most," said Rodger Harrison, director of PFC. "Because we are small, we can mobilize fast and react to any emergency. We take great pride in knowing that all the money and supplies we receive are delivered by us directly to the people of Honduras."

Harrison got the idea of sending ambulances to Honduras after experiencing first-hand the devastating effect that Hurricane Mitch had on the country in 1998. Mitch killed approximately 10,000 people and caused millions of dollars in property damage.

"If these units had been in place during the hurricane, we could have saved a lot of people," Harrison said.

In addition to establishing all-volunteer EMS services, PFC coordinates relief flights of food and medicine to third-world countries such as Colombia and Jamaica.



In August 1999, the first ambulance donated to PFC arrived in Honduras by boat. It will be reconditioned and used in Copan Ruinas, where PFC is establishing the country's first all-volunteer ambulance service.

For more information, call (704) 525-1121 or visit the PFC web site at www.paramedicsforchildren.com. Spanish-speaking individuals with medical backgrounds are desperately needed for the missions.

AAP's Section on Emergency Medicine Grows by 27%

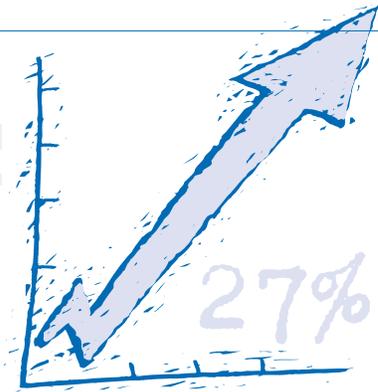
Responding to a request from its membership, the American Academy of Pediatrics (AAP) in 1981 established the Section on Emergency Medicine (SEM) to provide a forum for the discussion of problems relating to the treatment and care of pediatric cases in the emergency department. Since that time the section's membership has grown to 806 members and 10 affiliates. "Membership continues to grow at a rapid rate," said SEM Liaison Susan Tellez. "In the past three years, membership has increased by 27%."

The section's overall mission is to improve the care of acutely ill infants, children, and adolescents by stimulating research in, and the teaching of, emergency care for children and disseminating knowledge of pediatric

emergency care through Academy channels to the medical profession at large.

The section's current activities include:

- educational programming at AAP's Annual Meetings and Spring Sessions;
- PREP-EM (Pediatrics Review and Education Program in Emergency Medicine), a four-to five-day continuing medical education course that reviews the salient issues of the clinical practice of pediatric emergency medicine;
- the Ken Graff Young Investigator Award, which provides up to \$10,000 for a research project that addresses issues pertinent to the acutely ill or injure child; and
- special leadership retreats conducted in collaboration with the American College of Emergency Physicians.



In addition, the committee publishes a biannual newsletter, *Emergency Section News*, and hosts its own section of the AAP web site, located at www.aap.org/sections/pem.

Membership in the section is open to all fellows of the Academy with an interest in pediatric emergency medicine. An applicant must meet certain criteria in order to join. The annual dues are \$35.

For more information or to join the section, contact AAP's Division of Sections via e-mail at sections@aap.org or visit www.aap.org/sections.

Emergency Guidelines for Schools

Now Available for Local Reproduction

The *Emergency Guidelines for Schools*, an emergency care resource for school staff without full-time medical or nursing support, can be downloaded from the EMSC web site at www.ems-c.org as an IBM-compatible, PageMaker 6.5 file. Once transferred to a disk or CD-ROM, the guidelines may be duplicated at any local print shop.

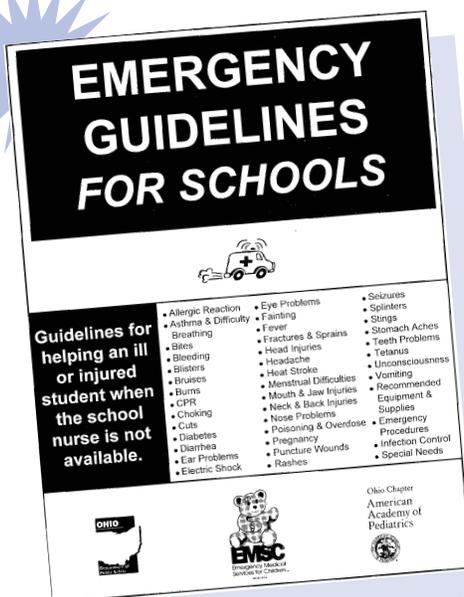
The guidelines contain color-coded first-aid flowcharts, an explanation of more than 37 of the most common pediatric illnesses and injuries, a list of recommended first-aid equipment and supplies, and advice for caring for students with special health

care needs. This popular booklet was produced in 1998 by the Ohio Department of Public Safety's Emergency Medical Services for Children (EMSC) program in cooperation with the

Emergency Care Committee of the Ohio chapter of the American Academy of Pediatrics.

The cost of printing the booklet will depend on the type of paper and binding used, and the number of booklets ordered. To keep costs to a minimum, the EMSC National Resource Center (NRC) suggests the use of non-glossy paper, 80 to 120-pound cover stock, and 60-pound text stock. Fold and paste binding — where color tape is placed along the spine of the booklet — is less expensive than spiral binding. Individuals with access to a color printer, should consider printing one copy from the web site and having it duplicated at a local copy center.

For assistance in downloading this document, please contact NRC at (202) 884-4927. *Emergency Guidelines for Schools* is one of more than 25 products that are available as downloadable documents from the EMSC web site.



EMSC SYSTEMS SCOOP

Emergency Medical Dispatch for Children

Today, nearly 90% of the nation is covered by an organized emergency medical dispatch (EMD) system. Dispatch often is the first link in the chain of emergency response. As a result, the strength of the nation's EMS system depends on rapid access to a skilled emergency medical dispatcher. This is especially true in emergencies involving children.

In June 1998, a group of experts met in Washington, DC, to discuss EMD for children. Jointly sponsored by the Health Resources and Services Administration's Emergency Medical Services for Children (EMSC) Program, the National Highway Traffic Safety Administration, and the Georgia Department of Human Resources' Office of Emergency Medical Services, the gathering aimed to address the following:

Capability of Current EMD System. The group believes that the EMD system generally is meeting the needs of children. It contends that an ongoing commitment to continuous quality improvement, research, and training is needed to maintain adequate coverage for children and the community.

Pediatric Dispatch Cards. Based on available evidence, the panel does not believe that a specific pediatric dispatch card set is necessary or

unnecessarily, resulting in a net negative effect on system performance.

Survey on Pediatric Emergency Medical Dispatch

- Agencies in 17 of 25 states (68%) "Strongly Agreed" or "Agreed" that their communications officers were comfortable in dealing with adults calling for medical help concerning child patients.
- Four agencies "Strongly Agreed" and 10 "Agreed" that their communications officers were comfortable in dealing with children calling for medical help concerning adult patients.
- Agencies in 10 states "Strongly Agreed" or "Agreed" that their communications officers would feel comfortable in dealing with children calling for medical help concerning child patients.

Source: National Communication Center Survey, 1997. Twenty-five of the 50 states completed the survey instrument.

appropriate. The current card sets, which cover 32 common medical complaints, are adequately meeting pediatric needs. Developing an additional set of cards without specific evidence of need might complicate the protocols

Improving the Nation's EMD System. Two additional concerns with the EMD system relate to the consistency of local adherence to established protocols and the utilization of a continuous quality improvement program. The group recognized that national standards, such as the ASTM Standard for EMD Management, have been developed to identify the essential elements of an effective EMD system. The experts stress that the overall quality of the national EMD system depends on the manner and degree to which voluntary standards are implemented throughout the nation. In addition, a continuous quality improvement system must be in place to actively monitor and assess a statistically significant percentage of EMD calls.

Barriers to Further Development. The group contends that one of the most serious barriers to progress in EMD is a widespread assumption that strict adherence to standards is unnecessary. System administrators and the communities they serve may believe that a partial adoption of the EMD standard is adequate. Members maintain that this false confidence may prevent many system administrators from allocating sufficient attention and resources to EMD.



EMSC Activities Help Child-care Providers

The Emergency Medical Services for Children (EMSC) National Resource Center (NRC) and several EMSC grantees are working to improve the health and safety of children in childcare programs through collaborations with state and national childcare organizations. EMSC's aim is to ensure that childcare settings are safe, healthy environments and that caregivers are prepared to handle pediatric emergencies.

NRC Activities: The recently re-designed EMSC web site contains a special section on childcare issues with links to childcare products, national programs, and resources, including state-by-state childcare profiles. This section can be searched by key words. Topics include playground safety, first aid and CPR, licensing regulations, and training curricula, among others.

The new NRC fact sheet on childcare for providers and other members of the EMSC community, can be downloaded from the EMSC web site at www.ems-c.org.

New EMSC Grantee Products: The Ohio and Oklahoma EMSC programs have developed curricula for childcare providers that are available on CD-ROM. To order these materials, contact the EMSC Clearinghouse at (703) 902-1203. Information about the CD-ROMs also can be downloaded from the EMSC web site.

First Aid for Day Care Personnel: Developed by the Ohio EMSC program, this curriculum contains a trainer manual with sections focusing on injury prevention, emergency preparedness, bleeding and shock, children with special health care needs,

first aid, and much more. The curriculum is accompanied by PowerPoint visual aids and participant handouts. To order the curriculum, contact the EMSC Clearinghouse.

Emergency First Care and Injury Prevention: A Training Curriculum for the Childcare Provider (2nd edition): Developed by the Oklahoma EMSC program, this revised curriculum contains modules on injury prevention, childcare provider well-being, emergency action principles, airway and breathing emergencies, bleeding, shock, soft tissue injuries, and much more. This product is also available through the EMSC Clearinghouse.

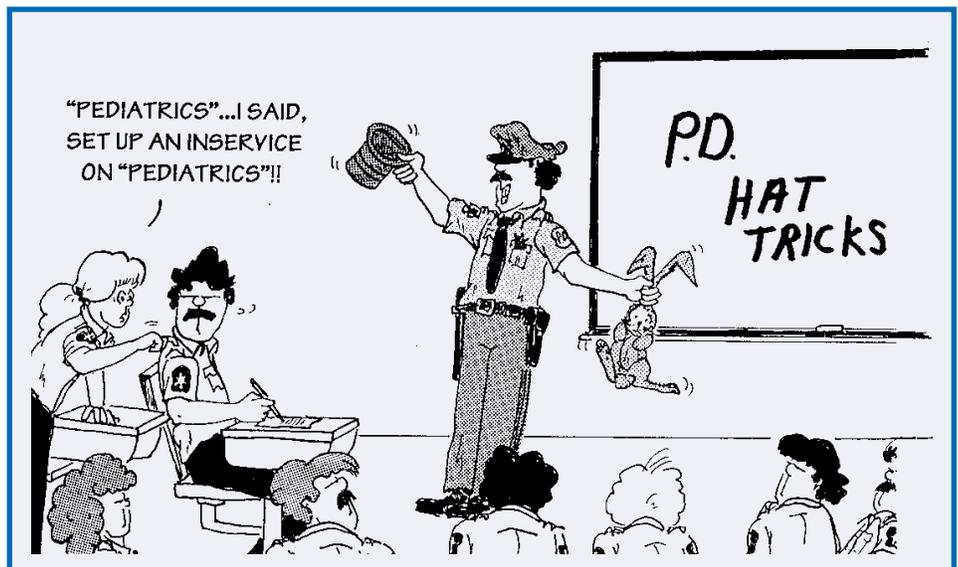
The National Training Institute for Childcare Health Consultants: This MCHB-funded, train-the-trainer program is geared for health consultant trainers for state-level childcare health consultation programs. It is taught in two three-day training sessions at the University of North Carolina at Chapel Hill with a three-month at-home study section. For more information, please contact Sandra Cianciolo, RN, MPH at (919) 966-6288 or via e-mail at sandra_cianciolo@unc.edu.

EMSC Seeks Members for Family Advocacy Network

The Emergency Medical Services for Children (EMSC) National Resource Center (NRC) is looking for family and consumer representatives to participate in the National EMSC Family Advocacy Network (FAN). Parents serving on EMSC advisory committees and task forces, parents of children who have received emergency care or who have special health care needs, and state consumer advocates, including those affiliated with the state chapter of Parent Teacher Association and Family Voices are encouraged to participate.

Individuals who are interested in or know of a parent or other consumer representative who is willing to assist with state EMSC programs are encouraged to contact Shulamit Lewin via e-mail at slewin@emscnrc.com.

FAN members will receive quarterly mailings of EMSC-related materials on important family and consumer issues. NRC will also provide members with information to assist families in advocating for the improvement of pediatric health care and in supporting EMSC programs throughout the nation.



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...WHAT'S NEW? An EMSC Product Update ...

MCHB Increases Funding

(from page 1)

data and research findings, clinical practice guidelines, and model systems.

EMSC wishes to congratulate all of the grant recipients, listed below by title, organization, and project director.

Analysis of the Impact of Economic Status and Health Insurance Status Upon Delivery of EMSC, University of Utah, Anthony Suruda, MD, MPH.

EMSC Child Care Risk Reduction Initiative, Pennsylvania Department of Health, Margaret Trimble.

Implementation and Evaluation of a Support Group Network for the Families of Severely Injured Children Using Interactive Video at Regional Sites in a Rural State, University of Kentucky, Susan Pollack, MD.

Injury Prevention Resources for Medical Care Providers, Loyola University of Chicago and Critical Illness and Trauma Foundation, Thomas Esposito, MD, MPH.

Mental Health Services for Youth Who Present to Emergency Departments for Self-destructive and Interpersonal Assault Injuries, George Washington University, Tina Cheng, MD, MPH.

Outcome Assessment in Children Requiring Interfacility Transport, University of Pittsburgh, Richard Orr, MD.

School Health Emergency Assessment Program, Northwestern University Medical School, Vidya Chande, MD.

Course on Pediatric Emergencies (COPE)

By the West Virginia EMSC Project (1998)

This pediatric emergency training manual is intended to prepare emergency medical technicians (EMTs) for the changing needs of children in the new millennium. It presents a multifaceted program that addresses all of the elements necessary for raising healthy children with special attention focused on pediatric assessment and intervention. The 330-page manual costs \$21. Ask for product #795.

TRIPP: Teaching Resource for Instructors in Prehospital Pediatrics (Print version)

By the Center of Pediatric Emergency Medicine (CPEM) (1998)

This 807-page resource is an "encyclopedia of prehospital pediatric knowledge." It contains a multitude of didactic and clinical information — from educational methodologies and teaching skills to issues concerning children with special health care needs and injury prevention. TRIPP provides EMS instructors instant access to fundamental pediatric information. The printed version costs \$25. Ask for product #798. A CD-ROM version of the guide can be downloaded from the CPEM web site at www.cpem.org.

EMSC: Making It A Matter of Public Policy

By the EMSC National Resource Center (1999)

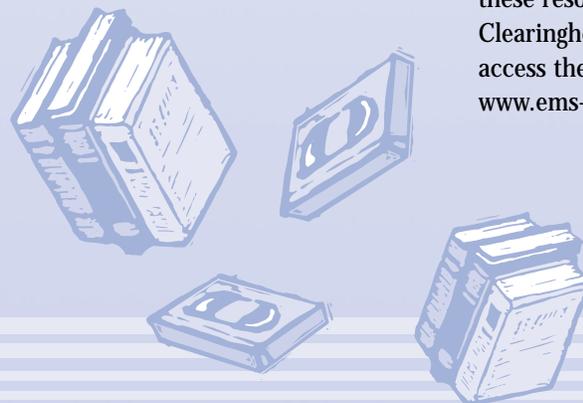
As of 1999, 18 states have passed legislation mandating EMSC-related measures or programs. Other states are in the process of developing such efforts. This two-color, two-page fact sheet briefly describes each state's EMSC laws and when they were enacted. The first 100 copies are provided free of charge. Each additional set of 100 costs \$5. Ask for product #800.

NAEMSP Model Pediatric Protocols

By the National Association of EMS Physicians (1999)

This publication documents developing field treatment protocols for children. It presents selected protocols from a comprehensive review of more than 250 representative protocols that were collected from a national sample. The selected protocols represent optimal treatment practices that comply with accepted national standards, such as those found in the EMT-Basic and EMT-Paramedic National Standard Curricula. The first copy of the guide is available free of charge. Each additional copy costs \$3.50. Ask for product #819.

To obtain hard copies of any of these resources, contact the EMSC Clearinghouse at (703) 902-1203 or access the EMSC web site at www.ems-c.org.



State of the States Update Corner

participating in the first simultaneous, multi-site cardiopulmonary resuscitation (CPR) training in the United States. Approximately 2,253 Florida residents received the training and a copy of the EMSC-funded handbook, *How to Handle and Prevent Childhood*

Emergencies. For more information, contact Janet Tiberian via e-mail at jtiberian@nbhd.org.

the state. An office preparedness manual will be available in the Spring of 2000. For more information, contact Sue Hohenhaus via e-mail at sue.hohenhaus@ncmail.net.

North Dakota

Between 1987 and 1996, North Dakota had the second highest suicide rate for adolescents between the ages of 10 and 14, and the sixth highest suicide rate for adolescents between the ages of 15 and 19 in the United States. As a result, the state's EMSC project is focusing its activities on adolescent suicide prevention. An Adolescent Suicide Prevention Task Force has been established to write a statewide prevention plan, which is scheduled for completion this Fall.

North Dakota also has trained more than 900 emergency medical technicians, using its Pediatric Prehospital Care Course; assisted with the production of training videotapes on child abuse and shaken baby syndrome; developed and distributed basic and advanced life saving equipment lists; and started analyzing state ambulance-run report data and the emergency department survey results. For more information, contact Shelly Arnold at (701) 328-2388 or (701) 328-1026 or via e-mail at sarnold@state.nd.us.

Virginia

In September, Virginia's EMSC program worked in collaboration with the Maryland EMSC program and the Massachusetts EMSC continuing education program to conduct a pediatric disaster life support (PDLs) train-the-trainer course in Leesburg, VA. The course uses interactive lectures and hands-on skills training to provide information about triage, diagnosis, treatment, equipment needs, communication with and transport of pediatric

Alaska

Alaska's Emergency Medical Services for Children (EMSC) program has begun the preceptorship program for pre-hospital emergency medical care responders. During the 20- to 24-hour course, pediatricians and pediatric nurses provide hands-on pediatric assessment training in a hospital pediatric unit. Fifteen EMS providers will be selected from around the state to participate in the course free of charge. Three Anchorage hospitals have volunteered to participate as host sites.

At the state's Annual EMS Symposium this November, several presentations will include discussion of pediatric care and EMSC. For more information, please contact Doreen Risley at (907) 465-8633 or via e-mail at drisley@health.state.ak.us. Additional information can be found at www.hss.state.ak.us/dph/ems/ems_home.htm.

Florida

As part of its EMS Week activities, Florida's EMSC program helped make history on May 22, 1999, by partici-

New York

The Center for Pediatric Emergency Medicine (CPEM) is collecting positive news stories, such as those featuring doctors, nurses, and paramedics going beyond the call of duty to save a child's life, to inspire and educate people about EMSC. The stories will be featured in "Making a Difference," an ongoing column appearing in each issue of CPEM Bear Facts. Please e-mail your article to Marsha Treiber at mt31@is6.nyu.edu. To view the latest issue of CPEM Bear Facts, visit www.cpem.org.

North Carolina

In September, North Carolina's EMSC hosted the American Association of Pediatrics' field test of the new Pediatric Education for Prehospital Professionals (PEPP) course. North Carolina will implement the new version in 2000.

North Carolina is also conducting a randomized, controlled study of emergency preparedness in 50 emergency departments throughout

Tennessee's EMSC Project Participates in Family Reunion 8

Tennessee's Emergency Medical Services for Children (EMSC) project presented information to a national audience on EMSC's state and national efforts to reduce child and youth death and disability during Family Reunion 8: Family and Community, on June 21-22, 1999, at Vanderbilt University in Nashville, Tennessee. Moderated by Vice President Al Gore and his wife Tipper, Family Reunion is an annual conference that strives to strengthen family life in America.

At the request of the White House, Tennessee's EMSC Statewide Project Coordinator Rhonda Phillippi, RN, facilitated a roundtable discussion on "Efficient Links Between People and Neighborhoods: Transportation, Communication and Access to Technology." The need for accessible nationwide emergency numbers, carefully coordinated transport services, and programs that build relationships among community members to help address the unmet needs of children in emergency situations were discussed.

"The roundtable was an excellent opportunity to share information about EMSC initiatives and to network with other professionals and community

members who are concerned with the well-being of our nation's children," Phillippi said.

The Tennessee EMSC project was spotlighted as an example of how families and communities can influence public policy. "Thanks to EMSC's initiatives to bring community members into public policy, Tennessee now has one of the broadest legislative packages regarding pediatric equipment and provider education requirements," Phillippi said.

The Tennessee EMSC program became involved with Family Reunion through a partnership with Boost 4 Kids, a federal initiative championed by the Vice President's National Partnership for Reinventing Government, which recognizes state and local leaders who improve the lives of children.

For more information about Tennessee's EMSC project, contact



Above: Tennessee EMSC Project Coordinator Rhonda Phillippi meets with Vice President Al Gore. Above Left: Pictured from left to right are U.S. Secretary of Transportation Rodney Slater, JD; Phillippi; and National Highway Traffic Safety Administration Administrator Rick Martinez, MD.

Phillippi via e-mail at Rhonda.Phillippi@mcmail.vanderbilt.edu. To find out more about Family Reunion and Boost 4 Kids, visit www.familyreunion.org.



Second Biannual National Congress on Childhood Emergencies

March 27-29, 2000
(Annual EMSC Grantees Meeting:
March 26-27)

Omni Inner Harbor Hotel
Baltimore, MD

For information,
please call (202) 884-4927

disaster patients, and the special psychosocial needs of pediatric patients and their families and caregivers during mass casualties and critical incidents.

The course was offered to EMS personnel in Virginia, Maryland, and Washington, DC, who were willing to become PDLS trainers. For more information, contact Melinda Duncan at (703) 425-0080 or via e-mail at melinda@vaems.org.

Washington

The Washington EMSC project's statewide survey of hospital pediatric capabilities and its survey of CPR training for public high school students are well underway. Project staff are also busy completing a needs assessment resource guide, which will be used to identify and prioritize gaps in pediatric emergent care and prevention services. For more information, contact Sheri Reder via e-mail at sreder@chmc.org.

YOUR QUESTION COUNTS!?

Q: Why did the EMSC Grant Submission Deadlines Change?

A: In previous years, the deadline for submitting EMSC and other Maternal and Child Health Bureau (MCHB) program grant applications was designated for the early Spring. Usually within two months after the deadline, grant review panels met, reviewed applications, and forwarded their decisions to MCHB's Grants Management Branch. During the summer, Grants Management Branch worked diligently to ensure that the grants were awarded by September 30, the end of the fiscal year.

Last year, MCHB's Grants Management Branch was directed to balance its workload. As a result, many MCHB programs, including EMSC, changed their Fiscal 2000 application deadline to November 1. In addition, the anticipated date of grant awards and project start-up will change to March 1. Future deadlines for grant applications may vary by a week or two, but they will always occur in the Fall.

To comply with the new grant deadline, nearly all state system grants must submit a competitive proposal for future funding during the Fall 1999 cycle. Implementation Grants in the

first or second year of funding and Partnership and Targeted Issues Grants in the first year of funding were the only grants excluded from competition for funds in Fiscal 2000.

Q: What Is the EMSC Grant Review Process for New Applications?

A: The grant review process usually consists of five-steps:

Step One: Staff from the EMSC Program and MCHB Grants Management check to ensure that each application is complete and includes all of the required information.

Step Two: Peer reviewers are recruited. Three panels of eight to ten peer reviewers usually are needed for the EMSC grant review process. Each panel includes at least one EMSC grantee, emergency physician, pediatrician, EMS state director, MCH state director, nurse, and prehospital provider.

Step Three: Completed applications are separated into groups of 15 or 20 and forwarded to a peer review panel. A comprehensive review of each proposal is performed by two to three peer reviewers. Each reviewer prepares a written

evaluation based on the criteria provided in the grant application guidance.

Step Four: The full panel reviews the peer reviewer evaluations and discusses each proposal's strengths and weaknesses. Once completed, the panel votes to approve or disapprove the proposal. If a specific weakness is identified in a proposal, the panel can make an approval conditional upon meeting a specific requirement. The applicant must fulfill the condition before funding is awarded. The panel also may offer recommendations to the applicant of an approved grant to help improve the project, but they are not mandatory.

Step Five: Approved proposals are rated by each peer reviewer on a scale of one to five, with one indicating the highest priority or greatest importance. An average score is calculated, which becomes the ranking score for funding. MCHB funds the top-ranked proposals until the available funding is exhausted.

EMSC policy prohibits a reviewer from participating in the review of any grant proposal of which he or she has a conflict of interest



Roving Reporter

Arthur Cooper, MD, from the Center of Pediatric Emergency Medicine, and Andrew Stern, a paramedic with the New York State Department of Health, demonstrate the proper use of bag valve masks on infants during a regional Teaching Resource for Instructors in Prehospital Pediatrics (TRIPP) train-the-trainer session at St. Luke's EMS Training Center in Utica, New York.

Women's Clubs Recognized for Support of EMSC

On June 19, 1999, the Emergency Medical Services for Children (EMSC) Program presented three national club and four state awards to Junior members of the General Federation of Women's Clubs (GFWC) for their efforts to improve injury prevention and medical care for the nation's children.

The awards program, which began last year, recognizes clubs that are active in childhood injury prevention projects as well as the provision of pediatric equipment and training for their local EMS squads and hospitals.

"This collaboration shows that members of voluntary community-based organizations can be excellent partners in the fight to keep our nation's kids safe," said Ken Williams, national field director of the EMSC National Resource Center. "We owe a lot of credit to Gail LeShane, chairman of the GFWC Juniors' Special Project, and Maxine Scarbro, GFWC's international president, who helped make this partnership a reality." Scarbro said that "the work performed by Juniors' clubs

in support of children's health and safety is a real source of pride to GFWC."

The three national award winners are:

Best Injury Prevention Project *The GFWC Junior Women's Club of West Deptford, New Jersey*

The West Deptford, New Jersey club runs an annual "safety town" event that addresses bicycle helmet usage, car safety seats, and first-aid for children. They also donate funds for local EMS providers to purchase equipment.

Best EMS Equipment and Training Project *The GFWC Junior Women's Club of Cumberland, Maryland*

The Cumberland, Maryland club raised \$999 to purchase pediatric equipment for their local ambulance squad and hosted a "play festival" that featured injury prevention information and a State Farm 9-1-1 simulator.

Best Hospital Equipment and Training Project

The GFWC Junior Women's Club of Warwick, Rhode Island

The Warwick, Rhode Island club hosted and staffed a special banquet that raised \$175,000 for Hasbro Children's Hospital. This club also received an EMSC state award.

The state award winners are: The Juniors of New Jersey

Approximately 345 Juniors donated more than 694 hours to car child safety seat training.

The Juniors of Ohio

Members distributed emergency care guidelines to area schools and to domestic violence and homeless shelters.

The Juniors of Tennessee

Members worked with a regional medical center to equip and decorate a pediatric room in the emergency department. They also shared information about EMSC with a local television station and donated a variety of stuffed toys, coloring books, and other "comfort" items to a local hospital.

The EMSC Program wishes to congratulate and thank all of the award recipients.

Statistic of the Quarter

The average annual incidence and mortality of children and adolescents under the age of 17 involved in traffic accidents in Northern Manhattan during preintervention (1983-1988) and intervention (1989-1995) periods. Numbers shown are incidents per 100,000 children.

	<5 Years 1983-1988	<5 Years 1989-1995	5-16 Years 1983-1988	5-16 Years 1989-1995
Pedestrian				
Incidence	40.5	29.1	127.2	76.5
Mortality	.6	1.3	3.4	1.7
Bicycle				
Incidence	3.9	3.0	37.4	19.8
Mortality	0	0	0	0
Motor Vehicle Occupant				
Incidence	5.6	11.7	25.5	19.3
Mortality	0	.9	.3	.6
Other and unspecified traffic				
Incidence	1.7	3.5	2.1	8.1
Mortality	0	0	0	.4
All Traffic Injuries				
Incidence	51.5	47.3	192.2	123.7
Mortality	.6	2.2	3.4	2.8

Source: Barlow, B; Durkin, MS; Laraque, D; and Lubman, I. "Epidemiology and Prevention of Traffic Injuries to Urban Children and Adolescents." Pediatrics 103:6 (June 6, 1999).

of lines generally are only used by companies conducting business that is built around the Internet or needing to transfer massive amounts of data.

A low-earth-orbit (LEO) satellite system is comprised of a fleet of specialized wireless receiver/transmitters that are placed in orbit around the earth at a constant altitude of a few hundred miles. The entire system operates like a cellular telephone network except these wireless receiver/transmitters move in space rather than on the earth. A well-designed LEO system can wirelessly access the Internet from any point on the planet using an antenna that is no more sophisticated than old-fashioned television "rabbit ears."

Microwaves transmit and receive information-bearing signals without wires in a specific radio frequency range. This technology is widely available, however, it has one major disadvantage. Signals are unable to penetrate dead zones, such as behind tall buildings and in rural or remote areas.

Telemedicine vs. Telehealth

"Telemedicine" is the provision of clinical care and consultation (including teleradiology, teledermatology, telerehab, etc.). "Telehealth" is the broader concept incorporating educational and conferencing opportunities for health care providers and the general public.

Telehealth uses communication technologies to overcome barriers to quality health care, such as distance and time. At its most basic level, telehealth includes the use of telephones and faxes for consultation and medical control. Web sites, 1-800 hotlines, and public television programs addressing specific health concerns are all examples of a broader concept of telehealth.

Emerging Telehealth Technologies

Many federally funded projects are demonstrating the value of "store and forward" technologies, where digital images and video clips of patients are e-mailed to a specialist for consultation. This practice is becoming increasingly common in radiology, dermatology, and ophthalmology.

Another opportunity may exist with the evolution of the hand-held or "palm pilot" computer, which combines the portability of the traditional day planner with the connectivity of a desktop computer. Once the hand-held computer is fully integrated with cellular technologies it may provide a portable, inexpensive way for prehospital providers to exchange information from the field.

State Telehealth Activities

Several states have tested telehealth delivery systems to cut costs. Alaska, North Dakota, and South Dakota are establishing links between rural health clinics and urban specialists utilizing one or more of the previously mentioned technologies. Georgia and North Carolina are testing large-scale hospital and university-based systems, while Texas is utilizing telehealth for prison health care delivery.

Duke University in Durham, North Carolina, is currently working to integrate color-coding concepts and tools into a palm pilot system with 3Com Corporation, a technology firm that helps individuals and organizations worldwide to communicate through voice, video, and data.

Trippler Army Medical Center in Honolulu, Hawaii, is using its web site to facilitate communications between physicians and nurses practicing in the Pacific Islands and specialists in

Hawaii. Any provider with access to the web can link to the Center's online patient record database. The database can include doctor's notes, X-rays, magnetic resonance imaging, digital images of a patient, and much more.

In San Antonio, Texas a private corporation is teaming up with a local ambulance service to research, develop, and potentially implement a system that provides high quality, bi-directional video and audio linkages between the prehospital care provider and the receiving emergency department. This technology allows the emergency room physician to see the patient and, with the help of the paramedic, assess and treat the patient despite the fact that they may be miles apart. At an estimated cost of \$100,000 per ambulance, this type of technology is still in the futuristic category.

It is too early to know when and how the "magic telehealth bullet" will be found. There are numerous issues that can only be resolved through legislation and additional demonstration and evaluation. In the meantime, NRC will continue to track and report on emerging telehealth trends. Specifically, NRC will continue its work with the Maternal and Child Health Bureau's Office for the Advancement of Telehealth and the Association of Telehealth Services Providers to stay abreast of telehealth advances and progress and to encourage continued federal attention to and investment in EMSC-related activities. NRC will also continue to update the telehealth section of its web site and monitor the major innovations in low orbit, cellular, and palm pilot technologies. Workshops on telehealth and telemedicine will be featured at the Annual EMSC Grantees Meeting and the National Congress on Childhood Emergencies.

EMSC Addresses the Injury Prevention Needs of Children with Special Health Concerns

According to data from the National Pediatric Trauma Registry:

- Children with pre-existing chronic illness like asthma, diabetes, and seizure disorders are at the same risk of injury as children without chronic illness;
- Children with pre-existing physical limitations appear to have some special issues related to injury; and
- Children with pre-existing cognitive, social, and emotional limitations had a significantly higher rate of injury than their peers without limitations.

Although this data is not population-based, when coupled with information from teachers and injury prevention specialists, it indicates that children and adolescents with special health care needs are at a greater risk of injury.

Despite the increased risk, parents of special needs children rarely receive general injury prevention information. Prevention messages are written primarily for parents of healthy children.

To address this lack of information, the Emergency Medical Services for Children (EMSC) Program organized the Injury Prevention for Children with Special Health Care Needs Work Group.

To date, the group has produced two fact sheets, *Injury Prevention Information For Children With Special Health Care Needs* and *Children With Special Health Care Needs: Information For The Injury Prevention Community*. To obtain copies of the fact sheets or to share additional information, contact Ms. Wayne Neal at (301) 650-8281 or via e-mail at wneal@emscnrc.com.

••• LATEST LIBRARY ADDITIONS •••

Notable EMSC-Related Articles:

- Alessandrini, Evaline; Lavelle, Jane; Grenfall, Stephanie; and Shaw, Kathy. (1999). "Return Visits Within 48 Hours to A Pediatric Emergency Department (PED)." *Academic Emergency Medicine*, 6(5), 464.
- Andazola, John and Sapien, Robert. "The Choking Child: What Happens Before the Ambulance Arrives?" *Prehospital Emergency Care*, 3(1), 7-10.
- Atkins, Dianne; Hartley, Lori; and York, Douglas. (1998). "Accurate Recognition and Effective Treatment of Ventricular Fibrillation by Automated External Defibrillators in Adolescents." *Pediatrics*, 101(3), 393-97.
- Baker, Chris; Kadish, Howard; and Schunk, Jeff. (1999). "Evaluation of Pediatric Cervical Spine Injuries." *American Journal of Emergency Medicine*, 17(3), 230-234.
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- Hostetler, Mark and Davis, Colleen. (1999). "Research Training in Pediatric Emergency Medicine Fellowships: A National Survey." *Academic Emergency Medicine*, 6(5), 411.
- Knight, Stacey; Vernon, Donald; Fines, Robert; and Dean, J. (1999). "Prehospital Emergency Care for Children at School and Nonschool Locations." *Pediatrics*, 103(6), 1276-77.
- Mulligan-Smith, Deborah; Puranik, Subhash; and Coffman, Sherrilyn. (1998). "Parental Perception of Injury Prevention Practices in a Multi-cultural Metropolitan Area." *Pediatric Emergency Care*, 14(1), 10-14.
- Neely, Keith and Norton, Robert. "Survey of Health Maintenance Organization Instructions to Members Concerning Emergency Department and 911 Use." *Annals of Emergency Medicine*, 31(1), 19-24.
- Rivara, Frederick. (1999). "Pediatric Injury Control in 1999: Where Do We Go From Here?" *Pediatrics*, 103(4), 883-88.
- Sacchetti, Alfred; Brennan, John; and Kelly-Goodstein, Nancy. (1999). "Pre-Hospital Destinations for Critically Ill Children." *Academic Emergency Medicine*, 6(5), 503-4.
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- Wolfram, R; Timmel, Daniel; Doyle, Cindy; Ackerman, Alice; and Lebet, Ruth. (1998). "Incorporation of a 'Coping with the Death of a Child' Module into the Pediatric Advanced Life Support (PALS) Curriculum." *Academic Emergency Medicine*, 5(3), 242-46.

If an interesting publication or product (written or produced within the last 18 months) has crossed your desk, please contact the EMSC National Resource Center Librarian Linda Pierce at (301) 650-8015 or via e-mail at lpierce@emscnrc.com. Notices or copies of journal articles, books, videos, and reports on EMSC-related topics should be mailed to: EMSC National Resource Center, Linda Pierce, 111 Michigan Avenue, NW, Washington, DC 20010-2970.

IMPORTANT DATES TO REMEMBER

October

Child Health Month
Contact: American Academy
of Pediatrics at
(847) 228-5005

October 9-11

American Academy of Pediatrics
Annual Meeting
Washington, DC
Contact: Marisa Goldberg
(847) 981-4321

October 11-14

American College of Emergency
Physicians Scientific Assembly
Las Vegas, NV
Contact: Dana Bellantone at
(972) 550-0911, Ext 3273

October 13

Emergency Nurses Day
Contact: Emergency Nurses Association
at (800) 243-8362

October 15-17

Region II EMS Annual Conference
Las Cruces, NM
Contact: (505) 528-5059

October 28-30

American School Health
Association Conference
Kansas City, MO
Contact: Robert Synovitz at
(504) 429-8787

November 7-11

American Public Health Association
Annual Meeting
Chicago, IL
Contact: Lynn Schoen at
(202) 777-2742

November 21-27

National Family Caregivers Week
Contact: Angela McArdell or
Suzanne Mintz at
(800) 896-3650

December 2-4

1st Annual Federal Interagency
Conference on Traumatic Brain Injury
Bethesda, MD
Contact: Cynthia Harrison at
(313) 745-1188

January 6-8

National Association of EMS
Physicians Annual Meeting
Dana Point, CA
Contact: (800) 228-3677

January 17-20

American College of Emergency
Physicians Winter Symposium
Kauai, HI
Contact: (800) 798-1822

March 12-14

Lifesavers 18 National Conference
on Highway Safety Priorities
Atlanta, GA
Contact: Mary Magnini at
mmagnini@bellatlantic.net

March 26

EMSC Annual Grantee Meeting
Baltimore, MD
Contact: EMSC National Resource
Center at (202) 884-4927

March 27-29

2000 National Congress on
Childhood Emergencies
Baltimore, MD
Contact: EMSC National Resource
Center at (202) 884-4927

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