MCHB/EMSC WEBCAST

State of Emergency Department Preparedness for Children:

Release of Joint Policy Statement –

A Consensus on the Essentials

February 23, 2010

DAN KAVANAUGH: Good afternoon, my name is Dan Kavanaugh and I will be your moderator for today's webcast on “State of Emergency Department Preparedness for Children: Release of Joint Policy Statement - A Consensus on the Essentials". And we have a very exciting webcast planned for today and are very fortunate to have national experts in the field of pediatric emergency care as part of this webcast. And the webcast is being sponsored by HRSA's Emergency Medical Services for Children program. Before we get into the webcast I want to go through a few housekeeping notes with everybody who is on the webcast.

The slides will appear in the central window and should advance automatically. The slide changes are synchronized with the speakers' presentations. You don't need to do anything to advance the slides. You may need to adjust the timing of the slide changes to match the audio by using the slide delay control at the top of the messaging window.

We encourage you to ask the speakers questions at any time during the presentation. Simply type your question in the white message window on the right of the interface, select question for speaker from the dropdown menu and then hit send. Please include

your state or organization in your message so we know where you're participating from. The questions will be answered at the end of the webcast and if we don't have the opportunity to respond to all the questions during the broadcast, we will be able to do that via email afterwards. So we encourage you to submit questions at any time during the broadcast.

On the left of the interface is the video window. You can adjust the volume of the audio using the volume control slider which you can access by clicking on the loudspeaker icon. Those of you who selected accessibility features when you registered will see text captioning underneath the video window. At the end of the broadcast, the interface will close automatically and you will have a opportunity to fill out an online evaluation. Please take a couple of minutes to do so. Your response will help us to plan future broadcasts in the series and improve our technical support.

Now I would like to introduce our presenters in the order that they will be speaking for today's webcast. Our first presenter is Dr. Marianne Gausche-Hill.

Next slide, please. Our next presenter will be Sally Snow.

Next slide, please. And Sally will be followed by Dr. Robert Wiebe. Next slide, please. And then by Dr. Joseph Wright. And now I with like to turn it over to Dr. Gausche-Hill to take us through the agenda and for her presentation.

DAN KAVANAUGH: Dr. Gausche-Hill, is your phone on mute?

MARIANNE GAUSCHE-HILL: Okay.

DAN KAVANAUGH: I hear you now.

MARIANNE GAUSCHE-HILL: Thank you, Dan, I wanted to take the opportunity to thank the American Academy of Pediatrics for their support of this webcast. In this first section I'm going to outline the development of the American Academy of Pediatrics American College of Emergency Physicians and Emergency Nurses Association policy statement entitled guidelines for care of children in the emergency department. I will provide an overview of the State of pediatric preparedness of our nation's emergency departments. If you could see that the agenda includes a number of things including a discussion on the role of physician coordinator and the role of nursing coordinator, as well as the interface with national initiatives.

Next slide. In regards to these guidelines, we are going to be discussing several aspects. One is essentially the requirements that are outlined in the guidelines as well as what you can do as a nurse and a physician to implement these guidelines within your emergency department.

Next slide. There are approximately 119 million emergency department visits in the United States of which 23 million are children. These patients are seen in the 3,833 emergency departments in our country and as documented in the 2006 Institute of

Medicine report on the future of emergency care in the United States health system, this number has declined by 26% over the last ten years. Most of these hospitals have general emergency departments with limited pediatric inpatient resources. In addition, there are approximately 188 free-standing Children's Hospitals or university or academic centers which care for children with critical illness or injury in 49 states. With these data as a back drop, let's ask some critical questions about pediatric readiness.

Next slide. Are you aware that there are national guidelines for pediatric readiness in emergency departments that care for children? The purpose of this webcast is to build awareness that these guidelines exist. Does your emergency department have staffing, policies and procedures of quality improvement plan and equipment and medications to care for children of all ages? Do you have a mat small enough to ventilate a neonate and do you have forceps. This critical equipment for the care of children may be missing in many emergency departments. Does your emergency department have a nurse and a physician coordinator for pediatric emergency care? If this answer is yes, recent data suggests that preparedness or readiness will be significantly improved.

Next slide. In 2001, the American College of Emergency Physicians and the American Academy of Pediatrics joined together for the first time to public a joint policy statement called care of guidelines -- care of children, guidelines for preparedness. This policy was reviewed and supported in concept by 17 different organizations.

Next slide. There was media attention upon release of these guidelines and it was anticipated that the joint policy statement would serve as an important resource for emergency department managers looking for ways to improve pediatric prepareedness.

Next slide. In 2006 Dr. Middleton and colleagues at the Center for Disease Control published the emergency pediatric services and equipment supplement which was a self-administered questionnaire added to the national hospital ambulatory medical care survey. The purpose of the survey was to assess the pediatric readiness of a representative sample of emergency departments in the United States.

Next slide. The national hospital ambulatory medical care surveyed non-Federal short stay general hospitals in the U.S. based on content from the 2001 AAP and ACEP guidelines. Their findings were somewhat remarkable in that 53% of the respondents admitted pediatric patients to the hospital but did not have a specialized inpatient pediatric ward and only 6% of emergency departments had all the equipment as listed in the 2001 guidelines.

Next slide. In 2007, myself and my colleagues published some pediatrics a survey of emergency departments in the United States. Emergency department medical directors and nursing directors were the respondents of this survey.

Next slide. What we found was very similar to the CDC publication but with other notable differences. We noted that 51% of the emergency departments were located in rural or remote areas of the United States and saw approximately 26% of all the children in emergency department settings.

Next slide. We also found that at least 50% of the hospitals were general emergency departments, which had an emergency department which children and adults are seen together and the hospital had a pediatric ward with and without a neonatal intensive care unit. Over 1/3 of the hospitals had emergency departments but had no inpatient pediatric resources.

Next slide. In this article, we also demonstrated that 89% of children are seen in non-Children's Hospital E.D.s and 50% of the U.S. emergency departments see less than 10 pediatric patients a day. In terms of the equipment, this study found that 90% of the emergency departments had at least 80% of the equipment as specified in the 2001 guidelines but the specific items were often missing. And these included the smallest sizes of airway equipment for neonates or small infants and 17% of emergency departments reported missing pediatric Mcgill forceps which are vital to the removable of airway foreign bodies in children. Max airways were often missing but present in adult sizes. Lastly only 59% of emergency department managers were aware of the published guidelines which really is the first step to getting prepared.

Next slide. This study concluded that overall preparedness of emergency departments based on the 2001 guidelines is low and also that hospitals that tended to be more prepared are URBAN, high volume and have a coordinator. This study was the first to support the Institute of Medicine recommendations for physician and nursing coordinator for pediatric emergency care in the emergency department. Let's fast forward to today and the latest release of the guidelines.

Next slide. In 2009 the American Academy of Pediatrics. The American College of Emergency Physicians and the Emergency Nurses Association jointly released the latest guidelines for emergency departments that care for children.

Next slide. These guidelines entitled guidelines for children in the emergency department were also sported by 22 professional organizations including the American Medical Association, the American heart association and the joint commission.

Next slide. So what is new in these guidelines? The latest guidelines have updated content including sections on patient safety. We have expanded the family centered care recommendations and added a section on care of children in disasters.

Next slide. The guidelines delineate the resources necessary to prepare hospital emergency departments to serve the pediatric patients within their communities. The philosophy really of these guidelines is that all emergency departments can be prepared to care for children. There are seven major sections of the guidelines. You

see them on the slide before you and these include administration coordination, staffing of the E.D. including physician, nurses and other healthcare providers. Quality improvement and performance improvement, improving pediatric patient safety, policies, procedures and protocols, support services for the E.D. including radiology and laboratory services and then finally equipment supplies and medication for the care of patients within the emergency department.

Next slide. In regards to the administration, coordination within the emergency department, these guidelines establish the role of the physician and nursing coordinator for pediatric emergency care. These coordinators are vital in the implementation of the guidelines.

Next slide. In regards to who staffs the E.D. Physicians, nurses and other healthcare providers staffing the emergency department should have the necessary skills, knowledge and training in emergency evaluation and treatment of children of all ages. The guidelines for the first time specify the need for baseline and periodic competency evaluations for all E.D. staff which are age specific and include neonates, children, adolescents and children with special healthcare needs.

Next slide. In regards to quality improvement and performance improvement, the guidelines specify that a pediatric review process should be integrated into the emergency department quality improvement plan and the minimum components of this

process should include data on variances in care, a plan for improvement and measures that are outcome based and age specific.

Next slide. Components of the quality of performance improvement process should interface without a hospital emergency department trauma, in patient pediatric, pediatric critical care and hospital-wide quality improvement or performance improvement activities. The plan should include specific pediatric indicators.

Next slide. Pediatric clinical competency evaluations are standard for nurses but are now becoming part of the credentialing process for emergency physicians. Each hospital establishes its own credentialing process but what the guidelines specify is that these evaluations should involve issues that are relevant to children of all ages.

Next slide. The competency evaluation should be age specific and include neonates, infants, children and adolescents. Some examples of these competencies should include participation in local educational programs or professional organization conferences. Certification for successful come -- of successful completion of life support programs and mock codes in the E.D. or patient simulations. Participation in team training exercises or other experiences in clinical settings such as intubate e baiting a patient in the operating room.

Next slide. In regards to improve pediatric patient safety, care in the emergency department should reflect an awareness of unique pediatric patient safety concerns.

For example. Children should be weighed in kilograms only. We know that this particular calculation is fraught with error. Some other standard way of estimating weight in kill owe grams for children who require resuscitation should be established.

Next slide. As you can see, there are a number of patient safety recommendations most of which have been outlined previously by the joint commission and others and indeed the guidelines specify that these processes should meet joint commission standards.

Next slide. The next section of the guidelines involves policies, procedures and protocols. There are a number of policies such as those listed on this slide which should be developed specifically for the care of children. These include things like pediatric patient triage, assessment and reassessment, documentation of vital signs, immunization of the child in the E.D. and sedation and analgesic procedures.

Next slide. Other policies may be integrated within the general policies and procedures of the emergency department but should include specific information or direction relative to the care of children. It is suggested that emergency department have policies for consent of minors, protocols for child maltreatment and a plan for families when a child dies in the E.D.

Next slide. A focus on family centered care is also an important -- important and specific areas are outlined in the new guidelines. Such things as family involvement in

patient decision making and medication safety processes. We know that if families are involved, it serves as an additional check and balance for the delivery of medications especially to children who are pre-verbal and unable to make decisions regarding their own care. Family presence has been shown to be of benefit in terms of the patient's family grieving process and the guidelines outline additional family-centered care activities such as discharge planning and bereavement counseling. The guidelines also place emphasis on communication with the patient's medical home or primary healthcare provider to help integrate medical care for the child. The guidelines also specify development of medical imaging policies that address dosing for children and studies that impart radiation. These policies serve to reduce the risk of radiation-induced cancers in children.

Next slide. there are recommendations for all disaster preparedness for children. There is an emphasis on pre-planning with pediatric expertise and plans must include pediatric surge and disaster drills which involve a pediatric mass casualty incident every two years.

Next slide. Interfacility procedures are outlined and the guidelines specify a process be in place for patient transfer with communication from physicians to physician as well as communication of nursing staff and a process for return of transfer of these patients to the referring facility.

Next slide. In the next section, there is a recommendation for support services such as radiology and for laboratory. Simply stated, these support services must have the capability to meet the needs of children in the community they serve. In addition, there should be a process in place to ensure timely reading of radiological studies and as stated earlier a process in place to reduce radiation exposure that are age and size specific.

Next slide. In regards to laboratory, the laboratory should also have the skills and capability to perform lab tests for children of all ages. This will include micro techniques for smaller or limited sample size.

Next slide. The final section of the guidelines includes recommendations for equipment, supplies and medications. Overall, the pediatric equipment, supplies and medication should be appropriate for children accessible, clearly labeled and organized. The emergency department staff should be educated on the location of these items and many hospitals have chosen to have a resuscitation cart or bags which can be mobile and easily transferable to the site of a pediatric resuscitation.

Next slide. Now I would like to transition to a discussion on the role of the physician coordinator. Obviously a very important part of these guidelines and the previous guidelines.

Next slide. The physician coordinator for pediatric emergency care should be appointed by the medical director for the emergency department and this will be a physician who has the role of overseeing pediatric energy care activities in the department. This pediatric emergency care coordinator is, in fact, a thought leader or one who will ensure that pediatric issues are addressed in emergency department activities.

Next slide. The qualifications of this coordinator include being a specialist in emergency medicine or pediatric emergency medicine. This coordinator also has to meet the qualifications for credentialing by their local hospital. If emergency medicine or pediatric emergency medicine specialists are not available, this physician coordinator can be a specialist in pediatrics or family medicine but in addition, must also demonstrate through experience or continuing education competence in the care of children in emergency settings, including resuscitation. Overall, the physician coordinator should have a special interest, knowledge and skill in the emergency medical care of children. This can be demonstrated by either initial training, clinical experience or focused continuing medical education.

Next slide. The physician coordinator may be a staff physician who is currently assigned other roles in the emergency department. This coordinator may be shared through formal consultation agreements with other professional resources from a hospital capable of providing definitive care or a local regional pediatric center.

Next slide. The responsibility the physician coordinator is to oversee pediatric emergency care activities in the department and includes review of quality, improvement processes and pediatric emergency education of staff.

Next slide. The physician coordinator promotes and verifies adequate skill and knowledge of emergency department staff members. They assist with the development of policies, ensure equipment and medications are available for the care of children and serve as a liaison to appropriate in-hospital and out of hospital pediatric care committees in the community.

Next slide. Other activities and responsibilities of the physician coordinator may include working with hospital administration and others on an emergency preparedness plan. The physician coordinator should work side-by-side with the nursing coordinator to ensure adequate staffing, medication supplies and to ensure appropriate resources are available for children within the E.D.

Next slide. Why is the physician coordinator important? Well, data suggests that hospitals who assign a physician and a nursing coordinator are significantly more likely to be compliant with national guidelines for preparedness. In addition, the staff is more likely to be satisfied and confident in their care of children if there is a specific -- if there is a pediatric-specific quality or performance process in place. Finally, the Institute of Medicine Committee on the future of emergency care in the United States health

system recommends that emergency departments assign two coordinators for pediatric emergency care, one of whom is a physician.

Next slide. The bottom line is that the physician coordinator for emergency care should work with the nurses and other healthcare providers in the department as a team. Emergency physicians recognize that emergency nurses are a vital resource and promote a safe and efficient emergency department. With that in mind, I would now like to introduce our next speaker who is Sally Snow. She will discuss the role of the nursing coordinator.

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SALLY SNOW: Thank you, Marianne. I, too, want to thank the National Resource Center and the American Academy of Pediatrics for their sport of the webinar and allowing me to talk about the role of the nurse coordinator. I've been privileged to work with Dr. Hill, Dr. Wiebe and Dr. Wright to implement the guidelines. I've represented the Emergency Nurses Association as liaison to the American Academy of Pediatrics Committee on emergency medicine since 2005 and it was through that relationship that the opportunity for ENA to become a partner and co-author of the revision of the original guidelines happened. As most of you would agree administrative responsibility for the day-to-day operation of an emergency department falls to the nurse leader. Today we'll talk about the role of the pediatric nurse coordinator.

Next slide, please. As Dr. Gausche-Hill discussed the guidelines were first released in 2001. The current revision was jointly released by the American Academy of

Pediatrics, the American College of Emergency Physicians and the Emergency Nurses Association. The guidelines call for the appointment of a nursing coordinator for pediatric emergency care. The pediatric nurse coordinator may be a staff nurse, a clinical nurse specialist or a nurse that is shared through formal consultation agreement with professional resources from a hospital that is capable of providing definitive pediatric care. Children's Hospitals are a wonderful resource for sharing and often have outreach programs designed to provide this service for their referral facilities. The most important qualification is the desire to serve as a pediatric champion and advocate for the care of children.

Next slide, please. The ENA defines the standards of care for emergency nursing and the American nurses association society of pediatric nurses describes the scope and standards of pediatric nursing practice. The pediatric nursing coordinator should have knowledge of the standards. The coordinator should have demonstrated clinical experience in the care of ill or injured children and have evidence of continuing education related to the emergency nursing care of children. The coordinator should be credentialed by the hospital to care for ill or injured children.

Next slide, please. The ENA developed its internationally recognized emergency nursing pediatric course in 1993 and is currently in the process of the fourth edition revision. This course is considered the minimum standard of emergency nursing education for nurses caring for ill or injured children in any emergency setting. The course is comprehensive and combines education and psycho motor skills training. A

written exam and scenario-driven skills demonstration is required to achieve provider status. The course is organized around a systematic process for the initial assessment of every ill or injured pediatric patient that is necessary for recognizing life-threatening conditions, identifying indicators of illness and injury and determining priorities of care placed on the assessment findings. The pediatric coordinator would certainly have demonstrated competency in the care of ill or injured children by taking and passing the EMTC course. Go to the ENA website shown on this slide for more information and to find a course in your area. Many hospitals have adopted that as their education standards for E.D. nurses. The coordinator should serve as a liaison to in hospital and out of hospital committees. Liaison relationships are important within hospital units. The operating room, intensive care units. Inpatient units and rehabilitation. Liaison relationships with regional referral hospitals, trauma centers and EMS agencies are equally important. Primary care providers in the community should be considered a valuable resource for services across the continuum of care for the pediatric patient.

Next slide, please. The ENA is again an excellent resource for physician statements and white papers on a variety of subjects, including care of the pediatric patient in the emergency setting which addresses standards for training, skills and experience needed to deliver appropriate emergency nursing care to children. The website on this slide will take you to all the ENA position statements and I encourage you to take the time to review those. These documents can serve as a resource for justifying your needs with hospital administration.

Next slide, please. The pediatric nurse coordinator should assure that pediatric-specific elements are included in the orientation of new staff. The initial and ongoing competency evaluations for all staff should include these pediatric-specific elements. Whether you conduct annual skills check-off or require completion of a computer-based education program. Each nurse should demonstrate annual come pen ten sees that are age specifics.

Next slide. The ENA offers an online emergency nursing orientation program that include the elements that should be addressed when care for children in the E.D. And the online emergency nursing triage program is also available and includes triage considerations for the pediatric patient.

Next slide. The nurse coordinator should participate in the overall hospital and regional disaster plan development to advocate for children in disasters. Issues that should be addressed include decontamination facilities that are specifically addressing unique pediatric risks along with plans for pediatric surge of injured and non-injured children, including those with special healthcare needs. The plan should address the issue of children that are separated from their families and how to reunite those families. Supply list must include formulas, diapers, medication, pediatric equipment and child-friendly facilities. Policies and procedures should address all hazard preparedness including interfacility transfer of the pediatric patient and the patient tracking system.

Next slide. Collaboration between the physician coordinator and nurse coordinator is imperative to developing and organized approach for the care of children. Equipment should be available in all sizes and organized around kilogram weight-based groups. The staff should have the appropriate tools to determine a patient's weight. Actual weight or an estimated weight in kilograms using a length-based measurement is required. At a minimum, pre-printed code drug sheets calculated in incremental kilogram weight groups are important. All efforts to eliminate drug calculations at the bedside during resuscitation should be emotion employed to reduce the risk of medication errors. Quality indicators should be defined and monitors. Minimum components should include correcting and analyzing data to discover variances, defining a plan for improvement and evaluating the success of the plan with measures that are outcome based.

Next slide. The ENA has an unprecedented amount of resources available to the nurse coordinator. The pediatric committee was reestablished in 2008 and they have active participated in the development of resources for the emergency nurse coordinator. They are currently developing a position statement addressing the role of the emergency nurse in pediatric procedural pain management and a resource for implementation of these guidelines. The board of certification for emergency nursing in collaboration with the pediatric nursing certification board developed and administered the first certification exam for pediatric emergency nurses just over a year ago. For information on this exam follow the information on the slide to the BCEN webpage.

Next slide. The ENA holds two excellent education conferences each year. In the fall of 2010 the annual meeting will occur in San Antonio, Texas and the winter leadership conferences takes place as well. Go to the ENA webpage for more information. The course curriculum for pediatric emergency nursing is available for developing policies, procedures and education programs. The guidelines recommend those policies and procedures that the E.D. should have in place to guide the care of children. Those policies and procedures include but are certainly not limited to triage, assessment and reassessment. Pediatric patient. Vital signs and actions to be taken when vital signs are not within normal limits. Caring for the victim of physical and sexual abuse and death of a child in E.D. among those recommended.

Next slide, please. Evidence-based practice resources are available on the ENA website as well. The white paper and position statement on family presence during invasive procedures and resuscitation in the E.D. is an especially valuable resource that can be found on that website. I encourage you to follow the web link on this slide to locate those evidence-based resources.

Next slide. Safety and injury prevention information are available through ENA injury prevention institute. Access to the pediatric special interest group which meets every year at annual meeting can be found on the website as well. ENA members can subscribe to the pediatric listserv which is a very valuable resource. The nurse coordinator can ask for examples including sample policies, performance improvement

plans and orientation and competency checklists. E.D. nurses are a wealth of information and love to share.

Next slide, please. In closing, allow me to share some tips from my colleague, Deb, from Farmerville, Louisiana, who found herself challenged with implementing the guidelines in her E.D. She held a mandatory meeting for all her staff. This meeting was for one purpose only. To bring everyone to the same point in the process. To continue working in the department, the staff had to literally sign off on the agreement. That agreement said A, we will have pediatric patients whether we're the appropriate hospital for them or not. They will come. B, we will prepare to the best of our ability. And C, we will build contingency plans for those patients that are too ill or injured to be cared for in our hospital when they arrive. Deb shared that she and her staff knew by virtue of the hospital size, location and available funding that they would be forever unable to attain the level of service that every child demands and deserves. So they looked at what they could do. They were determined to reach that level and beyond. They settled on four things. One, they could get the equipment on the list without a problem. Two, they could assure that core courses were taken by all the staff for both physicians, nurses and ENPC for RNs and they could require a minimum of 10 hours per year of pediatric oriented continuing education, more was strongly encouraged and Deb was committed to finding courses for them. Many online and/or web-based courses and finally she initiated a peer review process wherever chart was reviewed concentrating on specific points. It's like a champion like Deb in Farmerville, Louisiana that can make this concept work anywhere. As Herbert Hoover said children are our

most valuable natural resource. Prepare your E.D. as if a child you love is the next one to roll through the doors and need of emergency care. Good luck to all you pediatric champions out there.

Next slide, please. Now here to discuss the role of the pediatrician in implementing the guidelines is my colleague, Dr. Robert Wiebe, take it away, Bob.

ROBERT WIEBE: Thank you, Sally. Thanks to HRSA again and the EMSC program and the AAP for making this whole thing happen. This EMSC stuff has nothing to do with me. I don't see emergencies in my practice. I send them to the E.D. What I would like to do for the next ten minutes is dispel the myth and give you a feel for the role of the medical home as part of the EMSC continuum. We'll discuss the importance of preparing families about how and when to use the EMS system for children with special healthcare needs especially. The role of the pediatrician as an advocate for children in crisis and how to make the interface between the medical home and the E.D. and EMS transport system more seamless. Finally we'll review briefly the importance of an office that is prepared for emergencies.

Next slide. This figure depicts the various components of an ideal EMS system that meets the needs of children and includes everything from prevention of both illness and injury events as well as public advocacy, both of which are everyone's responsibility. Then there is the more well-recognized components. Family preparation for emergencies. Stabilizing care, E.D. stabilization in the community hospital.

Transport to definitive care when necessary and appropriate and rehab care and repatriation to the community. The center of the wheel and important components of each cog in the wheel is the medical home. You have the power to make the rest of the system work right.

Next slide. This little infant is very bright. Letting his parents know he aspirated a toy and has an obstructed airway using the universal sign for obstructed airway. Most kids aren't that smart. They need prepared parents and physicians as their advocates in time of crisis. With few exceptions every family and every medical home will experience the need to manage a medical emergency. Nobody plans an emergency, but physicians can help families plan what to do should a crisis occur. Who to call, how to respond, when to access EMS verses when to call the medical home for advice. Unnecessary E.D. visits overburden the system and often interfere with needed care for true emergencies. Conversely, when a child is truly in need of emergency care, delays in access or in choosing the wrong source when seeking care can result in disaster. These decisions are based on available community resources but should take into consideration the difference between a patient needing emergency care and stabilization, which is what EMSC is all about, and the patient needing a definitive work-up for a chronic or ongoing problem best done in a specialists office. Lastly and most important the EMS system needs access to information. Especially children with special healthcare needs.

Next slide. With electronic medical records becoming more widespread, hopefully in a few years the problem of unavailable access to information may be of historical interest only. Until that time exists, there are several options that make critical information available and vitally needed. The slide show is one example. The joint American College of Emergency Physicians and American Academy of Pediatrics emergency information form for children with special healthcare needs. Programmable forms can be downloaded to your office computer from the AAP or websites. Filled out and electronically filed in appropriate E.D. and EMS systems or given to the parents or patients to carry in case of an emergency. It provides demographic information, access to the medical home and critical subspecialty care resources, immunization records, diagnosis, past procedure, physical exam findings and management data, allergies, presented expecting problems and suggested studies and treatment considerations.

Next slide. More special needs children are surviving, living longer in a variety of hi-tech gear which is ever changing may be used to provide sustained life. These new

technologies are not without problems and new changes occur daily to challenge the skills of EMS and E.D. personnel. Ventricular peritoneal shunts, gastrostomy tubes . Central lines, tracheostomy. Non-invasive technology are a few examples. We're identifying and treating rare metabolic disorders that used to die in infancy and recognized now in newborn screening. These children may have rare but very predictable and treatable complications if that information is available at the time of crisis. Emergency physicians cannot be expected the know all these special management needs without access to information. Plan for the expected and help EMS personnel and E.D. to help with special needs children in a crisis. Prepare or a central line from a kit, replacement of a gastrostomy tube can be learned by nursing staff in 15 minutes.

Next slide. Let's take a few minutes to look at the role of the medical home in the provision of office emergency care when needed and the interface with EMS care. Data from surveys that have -- we've taken and from prior AAP periodic surveys of membership have known that nearly 75% of offices are seeing one patient or more per week needing emergent care. The most common emergent encounters include asthma, other respiratory distress, dehydration, seizures and apnea. Over half of the offices describe using the EMS transport system at least once per year and 20% describe calling EMS to the office three or more times per year. Time needed to access EMS will certainly impact how prepared your office must be. 60% of offices in our series were able to get help from EMS in less than ten minutes while 15% required

30 minutes before help arrived. A good understanding of your EMS system and their capabilities is a critical part of preparation for emergencies.

Next slide. You cannot expect to have the same out of hospital transport system in rural U.S. Communities as we find in urban metropolitan centers. The role of the pediatrician assistant as an advocate and the need for preparation varies. Volunteer EMS system in a small community could use the help of a physician advocate to assist with education and training and appropriate klution, supplies and equipment are available to care for children in transport vehicles and in the community emergency departments. Offer your support and time. You'll have fun. You'll be loved for it.

Next slide. So in summary, a quick review about what is important between the medical home and the EMSC interface. First know your system. The capabilities and limitations. Know the time to access help when needed. Know what skills the out of hospital providers possess. Is it basic life support, do they have advanced life support skills and special pediatric skills? Know where your patients will be taken by protocols and the capabilities of receiving hospital. Know the time it takes to get to definitive care. And when you find a place you can assist, be an advocate for kids.

Next slide. What can you do to prepare your own office? First and foremost, is to get your staff prepared. Particularly your receptionist or the first person to encounter new patients to assure they can recognize an emergency. The simple visual tool you see on the right has become a component of all life support courses, ENPC, the pep

course, it looks in appearance, which is essentially mental status, effort to breathe, the work of breathing, circulation to the skin. All quick visual cues that can easily be used the train personnel to recognize most emergencies in kids. Someone with BLS training should be in the office when it's open and one member of the staff should have advanced life support skills. Staff should know and practice the roles of team members and know how to quickly access and use emergency drugs, equipment and supplies. Mock codes scheduled periodically over the lunch hour are a great way the prepare and give your staff the security that they're ready when an emergency arises.

Next slide. I hope you're convinced that the medical home is a vital and integral part of the EMS continuum. Like it or not emergencies can and will occur unexpectedly and unplanned in the busy office practice. Preparation pays. Preparing families to deal with emergency events before they occur is time well spent. Finally, your skills and expertise in caring for children are needed in EMS. Next slide. Now it's my pleasure to turn the podium over to Dr. Joseph Wright who will discuss the interface with the national initiatives. Joe.

JOSEPH WRIGHT: Thank you, Bob. I would like now to shift gears a little bit and talk about the interface of the joint guidelines with other initiatives nationally that are aimed at improving the care for children in the emergency care settings.

Next slide, please. There is significant and purposeful overlap of the joint guideline recommendations with the recommendations of the 2006 Institute of Medicine report

on the future of emergency care in the United States health system and the Emergency Medical Services for Children state level performance measures.

Next slide, please. To that end I will focus our discussion this afternoon on specific areas of cross linkage with the IOM report and the state partnership performance measures areas and issues about we not only need to be aware but which we also need to be actively engaged from an advocacy perspective.

Next slide. The Institute of Medicine report on the future emergency care was published as a series of volumes in 2006 and all of the previous speakers have referenced the report you see here the three volumes, one focused on hospital-based care, one focused on emergency medical services or pre-hospital care and the final one there on the emergency care for children. Next slide, please. The universal or global recommendation that emerged from the report was the need to establish and develop a coordinated, accountable and regionalized system of care and the language is there on the left-hand side of the slide with an effort to develop standards for performance measurement. Categorization of facilities and development of protocols for treatment, triage and transport in the pre-hospital setting. Care for children is typically more regionalized than for adults. What you see on the right side of the slide is a prototype arrangement of care for children in an emergency medical services system. It characterizes this model and the continue of care that Dr. Wiebe referenced with children moving from scene through pre-hospital transport in some cases to interfacility transport on their way to definitive care. And I show this slide as prelude to

the more specific pediatric recommendations that emerge from the IOM report and that are finding their way into implementation activities such as the guidelines -- the joint guidelines.

Next slide, please. When we drill down into the emergency care for children's volume entitled grow pains, one characterizing quote that is important to bear in mind appears on page 33 of that volume. There is one word to describe the current State of pediatric emergency care in 2006. It is uneven. And it is leveling the playing field and establishing at a minimum a uniform floor of readiness for the care of children that these collaborative efforts are all aimed at achieving.

Next slide, please. With regard to pediatric-specific recommendations, this one relating to personnel we see here the verbatim language on the left. The IOM report is largely based on the research of Dr. Gausche-Hill's partnership for children project with the AAP, which she referenced in her presentation earlier. It cross linked on the right as a specific implementation recommendation in the joint policy statement. And the point here is to really emphasize the fact that the IOM report recommendations need to have opportunities for implementation and certainly the joint policy statement guidelines is just such a place for implementation.

Next slide, please. Here is the pediatric-specific recommendation having to do with disaster preparedness emphasizing the need to minimize parent/child separation and the image there on the right is decontamination unit here in Washington and what you

see there is an approach to family-centered decontamination where the equipment is designed such that a family can move through the decontamination process while as a single unit parents and child. And these are some of the specific concerns that emerge out of the Institute of Medicine report. In addition, addressing surge capacity, which we all have had very recent experience with related to H1N1 is another important feature of this recommendation. This issue is characterized in the guidelines under all hazard readiness which has been previously mentioned. And you see there on the right-hand side that the Institute of Medicine has continued on with a more granular recommendation emerging from the 2006 report. This one a proceedings of a workshop held last fall focused on medical surge capacity. The report has just been released a couple weeks ago and I commend it to your reading. There are recommendations and implementation recommendations for the care of children in the context of medical surge capacity.

Next slide, please. Okay, let's talk a little bit about the EMSC performance measures. The government performance results act is designed to establish performance measures of effectiveness of supported programs and there are ten such performance measures that apply to the EMSC program specifically for grantees in the state partnership category. For the purposes of today's presentation, I will focus on the two performance measures related to the categorization of emergency department care appropriate for children and regionalization models that support effective pediatric emergency care.

Next slide, please. So in the current nomenclature EMSC state partnership performance measures 75 and 75 address system categorization and you see there the performance measure itself to establish the existence of a statewide, territorial or regional standardized system that recognizes hospitals that are able to stabilize medical emergencies and trauma. To put it into context you see a map of the State of Maryland where I serve as an EMS medical director for pediatrics and the 46 hospitals, 11 trauma centers including two pediatric trauma centers that comprise our system function in the context of an exclusive system of care for trauma patients. In other words, patients are -- pediatric patients, injured pediatric patients are moved to designated centers based on the level of injury for appropriate care.

Next slide, please. Now there are several states that have begun to implement statewide readiness programs at a system level that include not only injured patients, trauma care, but also for medical patients. Among them is the State of Illinois and in the August issue, last August issue of the Annals of Emergency Medicine their experience was published and again I commend this manuscript to your reading. It is the first such description of a voluntary statewide system implementation.

Next slide, please. So from the Illinois experience the question is raised so does this really make a difference? The establishment of emergency departments appropriate for pediatrics? This slide represents data collected on the outcome of pediatric trauma patients pre and post the establishment of the Illinois hospitals participating in the emergency department appropriate for pediatric system. The bar graph that you see

contrasts mortality rates per 100,000 injured inpatient admissions for children 0 to 15 years of age pre and post which was established in 2005. The data demonstrates the hospitals have seen significant reductions in mortality. 22% for lower severity injured children and 18% for high injury severity groups. And these outcomes actually exceed the overall national mortality reduction trends during that period of time. So this experience in Illinois from the standpoint of injury mortality seems to suggest that an impact, a positive impact of establishing just such a categorization system.

But the question remains, next slide, please. The question remains that when we parse out the regionalization and categorization question to focus on non-trauma medical emergencies, the evidence is still quite sparse. I would like to bring your attention to work out of the Children's Hospital Pittsburgh originally funded by the EMSC program that was presented as a hot topic at the section on emergency medicine program of the AAP a few years back.

Next slide, please. In this work, the establishment of community hospitals with readiness to care for shock, pediatric shock, non-traumatic shock, was assessed based on the skill set for the administration of life support and life-sustaining techniques at community hospitals by emergency department physicians. And this study was published, again, in August in the -- in pediatrics and demonstrated that for not only trauma patients, but for non-trauma shock patients that mortality and neurological morbidity rates were reduced commensurate with the ability of community hospitals to use pals and apples to resuscitate and stabilize patients and this study

was the first coordinated attempt cohort study to really examine the role of categorization and transport destination relative to the medical care of children in extremist.

Next slide, please. So these performance measures relative to regionalization and categorization are critically important as we move forward with the implementation of the guidelines. Now, the performance measures are not limited to the ten performance measures that I mentioned at the outset, the EMSC program is currently exploring a developmental performance measure in the domain of disaster preparedness. For those of you who will be attending the pediatric academic society's meetings in May I invite you to stop by and see our progress with that particular performance measure under development.

Next slide, please. Lastly before I throw it back to Dr. Gausche-Hill I would like to make mention of national advocacy efforts within organized medicine related to awareness, promotion and endorsement of the emergency department readiness guidelines. Both the American Academy of Pediatrics annual leadership forum and the American Medical Association house of delegates in 2009 adopted resolutions that specifically reference the guidelines and invoke the EMSC program. And it's just such -- this kind of national level awareness and engagement at the national organizational level that is necessary for us to be able to truly implement the guidelines that you heard about this afternoon. Next slide, please. With that I would like to throw it back to Dr. Gausche-Hill.

I thank you for your attention this afternoon and really look forward to the discussion that we'll engage in at the end of the webcast. Thank you.

>> Thank you, Joe for highlighting the national initiative. As you can see it's a national effort. I would like to finish this webcast with a discussion of various benefits and the cost of the implementation of these guidelines. Next slide, please. In the emergency department, readiness as an impact on the lives of children presenting to the E.D. Often these visits are completely unannounced and of a serious nature. E.D. preparedness and readiness includes appropriate staff that is trained to care for children. Policies in place to insure and efficient care and the presence of equipment and medications that are ready to care for children of all ages. Studies have shown that hospitals that make the commitment to assign the role of physician and nursing coordinators for pediatric energy care are significantly more likely to be compliant with these national guidelines.

Next slide. Overall, approximately 18% of emergency departments have either a physician or nursing coordinator for pediatric emergency care. So we have a long way to go. Those that do may show increase in the satisfaction of staff working in the E.D. to care for children. Additional benefits include things such as achieving accreditation goals. Reducing medical liability and improvement in patient outcomes. There are a number of perceived barriers to the implementation of national guidelines. Some of these have to do with awareness of those guidelines and identifying needed staff and equipment to become compliant with the national standards. Some of the hospitals

also have challenges in obtaining pediatric emergency expertise to assist in the implementation of the guidelines and a number of emergency department medical directors have outlined cost barriers to the purchase of equipment, medication and supplies. Let me address some of these issues now.

Next slide. First of all, pediatric emergency care coordinators can be a shared role and I encourage hospitals to assess the resources in their communities and consider partnering with other hospitals. As Sally mentioned, there are a number of pediatric emergency care resources that are available in communities or regions and you can use these to help you reach your pediatric preparedness goals. Hospitals may have assigned a quality improvement director or clinical nurse specialist who can serve as a physician or nursing coordinator for pediatric emergency care and additional personnel don't need to be hired in order to meet the guidelines. Furthermore other hospitals have assigned a trauma coordinator to assist in pediatric readiness. The bottom line is be creative. See what resources you have within your hospital and in your community and tap into those resources and utilize them to their fullest to help improve pediatric preparedness. What additional resources are available to you?

Next slide. In association with this webcast we have provided copies of the recent guidelines, additional other useful policies on topics such as office preparedness for the pediatrician and what I think each hospital will find useful, a checklist to see if your emergency department has all the items outlined in the preparedness guidelines. In addition, there is a wealth of resources through the various professional organizations.

I know Sally has outlined a number of those through the Emergency Nurses Association. But there is a great deal of resources available either via the ACEP or AAP websites and also the EMSC website.

Next slide. What about cost issues? A recent study has shown that the median cost to achieve compliance with equipment recommendations within the guidelines is extremely low. It is really only about $200 per E.D. To maintain that equipment over time is even lower. Only $68 a year. We estimated that it would cost less than $5 million to ensure that all 3,833 emergency departments in the country had appropriate pediatric equipment as outlined in the guidelines. This translates to only about 18 cents per pediatric visit. This is a relatively inexpensive when you consider the cost of other national initiatives.

Next slide. When we looked at the cost for hospitals to become fully compliant with the guidelines including assigning staff, the number of hours to create all recommended policies, it is still less than $6,000 per hospital overall we feel that cost is not a barrier. Next slide. Let's ask ourselves as physicians and nurses what is the role -- what is our role in ensuring emergency department preparedness to receive children with emergent conditions?

Next slide. Emergency department managers must take action to ensure that the staff has the appropriate equipment, medications and competencies to care for children. This is our role. So how can you help?

Next slide. Become a physician or nursing coordinator for pediatric emergency care. You can become a coordinator within your hospital and E.D. or within your emergency medical services system. You can also provide pediatric emergency care, expertise and regional committees and disaster planning. We would like to end this presentation with a video featuring Noah Wyle from the television show "ER". It was produced in 2005 and supported a 2001 joint policy statement as we outlined earlier. These guidelines as discussed in this webcast were revised in 2009 to include the Emergency Nurses Association and were endorsed by 22 national organizations. This video is still 100% relative today in promoting the importance of preparedness for the emergency care of children. Noah Wyle is an advocate. Take it away and let's see the video roll.

VIDEO: Each year in the United States more than 30 million children will be treated in an emergency department. When I played Dr. John Carter on TV's "ER" I came to realize doctors and nurses must be prepared to treat any emergency that comes through the door. As emergency department nurses and physicians on the front lines you're the strongest advocates for our smallest patient. Become part of a national effort to improve the preparedness of emergency departments. Together, we can care more effectively for the most precious lives we serve, the children.
>> The American Academy of pediatric, American College of Emergency Physicians and 17 other national organizations support preparedness guidelines for children seen in the emergency departments. These guidelines make valuable recommendations in staffing, administration, equipment, supplies and medications unique to the care of

children. In the emergency department, we have to expect the unexpected. When a frantic mother walks in with a 3-month-old baby in shock. Are you ready? When an ambulance rolls in a limp 5-year-old presenting with respiratory address after choking on a small rubber ball, are you ready? Does your emergency department have the equipment, medications and a prepared and trained staff equipped with the tools they need to handle these pediatric emergencies? The reason we need to be prepared is simple. It can mean the difference between the life or death of a child. By being prepared as outlined in the guidelines your emergency department can expect to improve patient outcomes, increase satisfaction of patients and their families, create a more positive working environment for staff, help to achieve your hospital's accreditation goals and decrease liability. We hope you've been inspired by the reasons to become better prepared.

>> Now that you see the importance of being prepared join the thousands of emergency professional around the country doing all they can for the nation's children. Begin the process that will improve the care for children in your emergency departments and the lives of children everywhere.

>> As the credits are rolling on the video I want to remind everybody that handouts are available at mchcom.com and also this webcast will be archived so if colleagues of yours were not able to view the webcast live, it will be available at mchcom.com as archive and people can watch it at their convenience. Also I want to take a moment to thank Sue at AAP and the staff at the national Medical Center for the work they've

done in getting everything organized and especially want to thank our presenters. And now I want to go to some questions to our presenters that you all have sent in. And the first question is not to any specific presenter but just to be thrown out there for general discussion whoever would like to handle it or chime in. That is, to assess the guidelines' impact upon patient outcomes, what are some of the primary aspects of the recommendations that could benefit from further research or further study?
>> This is Marianne. I think there is really relative little, I guess, data available on outcomes as it relates to implementation of guidelines in general. I think there are a number of things just the presence of quality improvement plans and policies and procedures, do those make a difference in terms of outcome? We did look at -- or tried to look at a number of different outcomes based on common conditions that occur in emergency departments and these included things like long bone fracture. Seizures, diarrhea, dehydration and what we wanted to assess is that if a hospital was prepared are they more likely to perform well on an evidence-based chart review tool that we developed as part of a national research effort, and what we found, which was very interesting, is that obviously hospitals that are very prepared tend to score very, very well on these. In addition, readiness may be somewhat of a different measure than quality. However, everybody recognizes that you both need readiness and you need quality. Children's Hospitals who are -- they're designed to care for children only tend to score very, very well on those. Community hospitals don't do as well. However, even a hospital -- even a community hospital that doesn't have a lot of inpatient resources can do quite well not only on readiness but on quality.

>> Did any of our other speakers want to add anything to Dr. Gausche-Hill's answer?

>> This is Joe Wright. I think from a systems perspective obviously I focused on the performance measures that the EMSC program is attempting to look at. Certainly from the standpoint of how the guidelines are addressing preparedness of personnel in terms of training and education, I think that we're very much in need of projects that look at the impact of readiness at the community level, the community emergency department level with regard to outcomes of medical patients. I think that there is a growing literature and a literature that is a little bit more defined relative to readiness and system readiness for trauma and injured pediatric patients but there is a paucity of data that really speaks to outcomes for medical patients when the guidelines -- the type of recommendations and the guidelines are applied at a system level. So I think that's an area that is ripe for investigation.

>> Okay. Thank you. Another question is -- I think I can answer this but I'll also ask you, Dr. Gausche-Hill to add in. The question was is there a date for implementation of these guidelines? And I don't think there is a specific date for implementation. I mean, they have been released. They have been published and it is up to healthcare systems in our country to decide how they will implement them, would that be correct?

>> Yes, they've been released in 2009 so they're available. Really implementation. The time line is now. The future is now in the present. And for those who participate in this webcast we do have that checklist so you can basically take the guidelines

checklist and go to your own emergency department and see how compliant you are with the national guidelines and especially as it relates to the equipment that should be pretty easy for most people. And then as Sally outlined, the professional organizations have a number of resources available to help with the implementation of the last set of guidelines in 2001, ACEP and AAP put together an implementation kit which is available on the two websites that include things like model policies, resuscitation calculator and copies of some relevant policies that might be helpful for emergency departments to get themselves prepared. So the bottom line is we're ready to implement now and really that's one of the reasons we're having this webcast, to try to encourage people to look at -- you know, look at their own hospitals and figure out how they can get better prepared.

>> Thank you. And actually this next question is for Sally. The question is that the role of the nursing coordinator that you described has many components that may also be identified with the role of the trauma program manager. Could you please share any thoughts you have on any differences between these roles as it relates to how that role is described as part of the guidelines?

>> I think I can comment on that. I am a trauma program manager so I think that there are a lot of crossovers. The role of the pediatric nurse coordinator is one that can be shared. It depends on the volume in terms of competency check-off. Once all those things are put in place, the competency, the education standards, it's a matter of maintaining them at that point. But yes, there are lots of components of the pediatric

nursing coordinator role that could be rolled into other job descriptions and the trauma coordinator is one that is obvious.

>> Thank you. The other question is for Dr. Gausche-Hill. And the person says that they have been asked to help create or implement emergency disaster preparedness planning for many non-pediatric facilities in their state. What are the areas -- I guess for lack of a better word, these are my own words I'm saying the low-hanging fruit that a person, healthcare professional should start with when they are engaging -- starting this effort about working with multiple hospitals to im-- multiple non-pediatric facilities to improve their emergency disaster preparedness. What are the key areas to start to focus on?

>> I think a few things. One is that working with the hospitals, I would identify kind of a point person in each of the hospitals for disaster planning. Similar to what we've just discussed in this webcast relative to assigning a role. I think identifying those -- the critical personnel in the hospitals that are the go-to people that you can discuss. And then meet together to talk, I think specifically about kind of best practices between the hospitals. What they have available, what -- some hospitals probably have a greater capacity and you might be able to share information instead of reinventing the wheel, there are probably hospitals that have a more mature all hazards disaster plan for children in mind. I think there is now a wealth of information available for pediatric disaster planning. One of those resources is at the Center for pediatric emergency medicine which is in New York and you can go to that via the web and get information relative to disaster planning. The AAP also and ACEP also have significant resources

relative to disaster planning and specifically for children. So I think there is a wealth of resources available via the net and I think starting to look at that. I think probably when you're planning within a system, again, identify point people and then begin to look at what is available and what are the best practices within your system and kind of build from there.

>> Would any of the other presenters like to add to anything that Dr. Gausche-Hill has said about emergency disaster preparedness planning for non-pediatric facilities? Okay.

>> Can I pipe in one more time. In March, on March 24th, there will be another webcast and which is going to go through, you know, the whole issue of disaster planning for children that is going to be pretty comprehensive so those who are interested may want to tune in on that webcast as well because we'll present a number of issues relative to the care of children in disasters.

>> That one is going to be March 24th from 1:00 to 2:30 eastern. Preparedness for children partnerships and models for merging emergency department and disaster efforts nationwide. In case it wasn't on the handouts, the website for the Center for pediatric emergency medicine that you mentioned is www.cpem.org. At this point I would like to wrap up our questioning and offer our presenters a final time to say any additional thoughts before we close out here.

>> Just a word. Get prepared. I think we all -- my feeling is that everybody in emergency departments want to do the best job possible. Everybody is motivated and

interested in caring for children in the best way they can. And I think, you know, the goal of these guidelines is to try to provide additional resources so that you can do the job that you want to do. So I think beginning to look at it is kind of the first step. Anyway, thanks again to everyone.

>> Marianne, I would like to add to that. Keep it simple. Do the things that you can do. Tackle the things that you know you can make a difference doing and remember my friend Deb in Farmerville, Louisiana, get people and just remember that you're doing it for the kids.

>> Okay. Well, I would like to again thank our presenters very much and I would again for those who are on now, please feel free to let your colleagues know that this presentation and the information and the handouts will be archived at mchcom.com and also at the end of this webcast you will be able to complete an evaluation and please take time to do that. It just takes a few minutes and that helps us in terms of planning for future webcasts. So again I would like to thank everybody. Especially the presenters and the organizers and thank you all for participating and for your questions. Thank you.