

Joint Report to the  
Health and Welfare Committee  
Of the Senate and  
Health Committee  
Of the House of Representatives

## Report On the Status of Emergency Medical Services for Children

A Report to the 110<sup>th</sup> Tennessee General Assembly

Tennessee Department of Health  
July 2018



July 1, 2018

The Honorable Rusty Crowe, Chair  
Senate Health and Welfare Committee  
425 5<sup>th</sup> Avenue North  
Suite 720, Cordell Hull Building  
Nashville, TN 37243

Dear Senator Crowe:

As required by Tennessee Code Ann. §68-11-251 and §68-140-321(e), we are pleased to submit the annual report on the Emergency Medical Services for Children (EMSC) program; the Board for Licensing Health Care Facilities and the Emergency Medical Services Board collaborated with the Committee on Pediatric Emergency Care (CoPEC) in preparation of the report. The TN EMSC program focuses primarily on enhancing access to quality pediatric pre-hospital and hospital care, with consideration for injury prevention, disaster preparedness, and patient safety. This report reflects activities and accomplishments of the Board for Licensing Health Care Facilities and the Emergency Medical Services Board in meeting national EMSC objectives.

Improving the availability and quality of children's health care is a major goal for the state of Tennessee and the Department of Health. Our boards help coordinate the role of Tennessee's medical facilities and emergency medical services in providing appropriate pediatric emergency care.

Respectfully submitted,

Rene Saunders, M.D., Chair  
Board for Licensing Health Care Facilities

Sullivan K. Smith, MD, Chair  
Emergency Medical Services Board

C: John J. Dreyzehner, MD, MPH, Commissioner  
Tennessee Department of Health

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July 1, 2018

The Honorable Cameron Sexton, Chairman  
House Health Committee  
425 5<sup>th</sup> Avenue North  
Suite 646 Cordell Hull Building  
Nashville, TN 37243

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Joint Annual Report of  
The Board for Licensing Health Care Facilities  
And the  
Emergency Medical Services Board  
To the  
Tennessee General Assembly  
General Welfare Committee of the Senate  
Health and Human Resources Committee of the House of Representatives  
On the Status of  
Emergency Medical Services for Children

July 1, 2018

**I. Requirement of the Report**

Tennessee Code Annotated § 68-140-321(e) and 68-11-251 requires that the Board for Licensing Health Care Facilities and the Emergency Medical Services Board in collaboration with the Committee on Pediatric Emergency Care (CoPEC) shall jointly prepare an annual report on the current status of emergency medical services for children (EMSC) and on continuing efforts to improve such services beginning July 1, 1999.

The mission is “to ensure that every child in Tennessee receives the best pediatric emergency care in order to eliminate the effects of severe illness and injury.”

The vision statement is “to be the foremost advocate for children throughout the continuum of care in Tennessee and the nation.”

**II. Executive Summary**

The Committee on Pediatric Emergency Care (CoPEC) in partnership with the Tennessee Department of Health created access to quality pediatric emergency care through establishing regional networks of care to ill and injured children 24 hours a day, 365 days a year. Emergency medical and trauma care services are defined as the immediate health care services needed as a result of an injury or sudden illness, particularly when there is a threat to life or long-term functional abilities.

Prior to the establishment of CoPEC there were significant barriers to access quality emergency care for children. It is important to understand that the delivery of healthcare to children is much different than adult care. “Children are not small adults,” and these differences place children at a disproportionate risk of harm. Examples include:

- Rescuers and other health care providers may have little experience in treating pediatric patients and may have emotional difficulty dealing with severely ill or injured infants and children.
- Providers not familiar with many of the unique anatomic and physiologic aspects of pediatric trauma, such as unique patterns of chest injury, head injury, cervical spine injury, and abdominal injuries, may make assessment and treatment errors.
- Medication dosing for children is based on weight and/or body surface area whereas with adults there is typically a standard dose for a medication regardless of age or weight. Children are therefore more prone to medication dosing errors by inexperienced health care providers who do not take weight based dosing into account. They many times do not fully understand the dangers inherent with metric conversion when weight is reported or documented in pounds. Children also require equipment specifically designed to meet their anatomic and physiologic requirements.
- Children can change rapidly from a stable to life-threatening condition because they have less blood and fluid reserves. Assessment of these patients can be challenging to inexperienced providers.
- Children have a smaller circulating blood volume than adults making them more vulnerable to irreversible shock or death. Children are particularly vulnerable to aerosolized biological or chemical agents because their more rapid respiratory rate may lead to increased uptake of an inhaled toxin. Also some agents (i.e. sarin and chlorine) are heavier than air and accumulate close to the ground – right in the breathing zone of smaller children.

A child's outcome depends on factors including:

- Access to appropriately trained health care providers including physicians, nurses and EMS professionals
- Access to properly equipped ambulances and hospital facilities
- Location of comprehensive regional pediatric centers and other specialized health care facilities capable of treating critically ill and injured children

CoPEC has spent two decades ensuring access to quality emergency care for all children in our state. This has been achieved through the institutionalization of pediatric specific rules and regulations that govern hospital facilities and EMS services. These rules and regulations now require different size equipment specific for children and personnel training. The rules and regulations for hospitals can be found at <http://share.tn.gov/sos/rules/1200/1200-08/1200-08-30.20150625.pdf> and EMS services at <http://share.tn.gov/sos/rules/1200/1200-12/1200-12-01.20150401.pdf>.

Approximately 3 out of 4 children less than 18 years of age were seen in Tennessee's emergency departments with approximately 23% being seen at one of the four Comprehensive Regional Pediatric Centers (CRPCs). These CRPCs include Le Bonheur Children's Hospital in Memphis, Monroe Carell Jr. Children's Hospital at Vanderbilt in Nashville, Children's Hospital at Erlanger in Chattanooga, and East Tennessee Children's Hospital in Knoxville.

Within each CRPC is a coordinator (or coordinators) charged with going out into the community to offer pediatric education opportunities to prehospital and hospital providers. These opportunities can be classified as simulation/mock codes, lectures, courses, hospital site visits and community engagement events. Throughout the last year, thousands of providers from across the state have been directly impacted by the efforts of the CRPC Coordinators. Coordinators play an integral role in ensuring the system of care of children is exceptional. Every child deserves to receive the best care possible, no matter where they live in the state. Below is a breakdown of how many opportunities for each type of engagement have occurred in Tennessee (May 1, 2017 to April 30, 2018):

- Simulation/Mock Codes – 125
- Lectures – 98
- Courses – 55
- Hospital Site Visits – 47

A key role for CoPEC is to support the implementation of clinically appropriate evidence-based care for all children in Tennessee, regardless of what facility, EMS service or physician provider delivers that care. This is accomplished through the standardization of rules and regulations, education to all providers and continuous quality improvement activities. Additionally, this year a number of the new national performance measures for EMS were measured in Tennessee. These national performance measures work to improve the care children received across Tennessee and the country.

TN EMSC is playing a vital role in offering feedback and input regarding the measures demonstrating that our state's program is highly regarded for its status as a leader in pediatric emergency care. Data collection as a quality improvement initiative is a key piece of enhancing the emergency medical services for children system in Tennessee. Each child whose care necessitates greater subspecialty pediatric care than their local community can provide, is transferred to one of the four CRPCs. Since 2011, the CRPC coordinators at each of the four locations review the patient's chart and records to identify opportunities for quality improvement. To address the needs of providers across the state, the coordinators use this information to offer educational outreach and trainings that cater to the various needs identified.

One of the most significant strengths of CoPEC is the involvement and participation of various stakeholders from across the state that advises the Tennessee Department of Health. These volunteers include EMS providers, doctors, nurses, parents of children with special needs, and professional organizations (Appendix 1).

## **Key Accomplishments in Fiscal Year (May 1, 2017 to April 30, 2018)**

### **A. 2015-2018 Strategic Plan**

**Data Goal: TN EMSC will utilize data to assess outcomes of pediatric emergency care, identify gaps in outcomes and/or care delivery processes, plan appropriate improvement interventions and evaluate the effectiveness of TN EMSC programs and services.**

EMS services that respond to 911 responses were invited to participate in a nationwide assessment to help better understand how pediatric emergency care is integrated into their respective agency. Below is capture the results for the two new HRSA EMS Performance measures, once again Tennessee EMSC is ahead of the nation.

**Findings**

## Tennessee EMS for Children Program 2017-18 EMS Agency Survey Results

Data gathered October through December 2017

Number of Respondents: **114**  
 Number Surveyed: **114**  
 Response Rate: **100.0%**

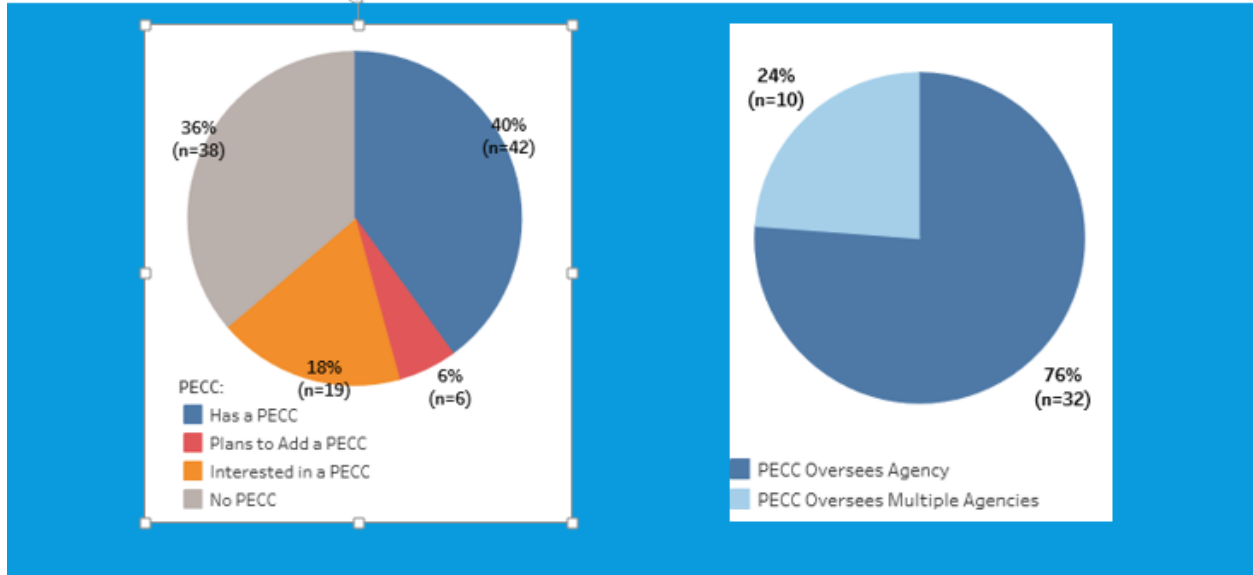
### NUMBER OF PEDIATRIC AGENCIES BY ANNUAL 911 PEDIATRIC CALL VOLUME

Annual 911 Pediatric Call Volume	Num Agencies	% of Agencies
None - Zero pediatric calls in the last year	1	1%
Low - Twelve (12) or fewer pediatric calls in the last year (1 or fewer pediatric calls per month)	10	10%
Medium - Between 13-100 pediatric calls in the last year (1 - 8 pediatric calls per month)	51	49%
Medium High - Between 101-600 pediatric calls in the last year (8 - 50 pediatric calls per month)	29	28%
High - More than 600 pediatric calls in the last year (more than 50 pediatric calls per month)	12	11%
Pediatric Call Volume Not Reported	2	2%
<b>Grand Total</b>	<b>105</b>	<b>100%</b>

\*NOTE: not all agencies may have reported; question not required.

39% have at least 8 pediatric calls a month

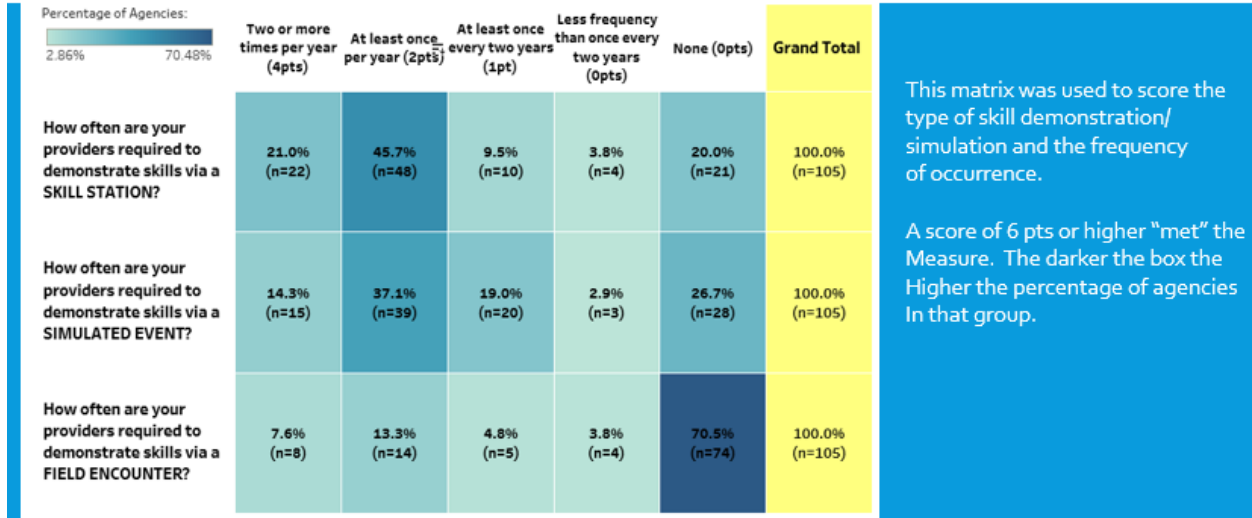
# EMS PEDIATRIC EMERGENCY CARE COORDINATOR (PECC)



Roles of EMS Pediatric Care Coordinator (PECC)	PECC Oversees Agency	PECC Oversees Multiple Agencies
Promotes pediatric continuing education opportunities	100%	100%
Ensures that fellow providers pediatric clinical practice guidelines and/or protocols	97%	100%
Oversees pediatric process improvement initiatives	97%	90%
Ensures that the pediatric perspective is included in the development of protocols	97%	100%
Ensures the availability of pediatric medications, equipment and supplies	91%	80%
Promotes agency participation in pediatric prevention programs	66%	50%
Coordinates with the emergency department pediatric emergency care coordinator	66%	80%
Promotes agency participation in pediatric research efforts	56%	40%
Promotes family-centered care	63%	60%
Other activities	44%	50%



USE OF PEDIATRIC SPECIFIC EQUIPEMENT MATRIX:



**Membership Goal: To develop and sustain membership quality and support to achieve optimal organizational mission delivery.**

Findings	Action
New members unclear of history, organization relationship, goals and objectives for EMSC in Tennessee	Orientation provided twice in past year. Picture directory updated Member attendance tracking system implemented. In process of revising the operating rules for CoPEC

**Standardization Goal: Best evidence-based pediatric emergency care for every patient in every location of Tennessee.**

Findings	Action
EMS protocols update with most recent evidence based pediatric practice	Worked with EMS medical director to review and update all EMS protocols; spring 2018
Lack of accurate pediatric dosing tool.	Worked with Disaster Healthcare Coalitions from across the state to secure funding pediatric dosing tool. Funding has been secured for Regions 3, 5, and 6 and an additional sites from across Tennessee. The survey that was sent to all EMS agencies in the state had a question regarding their

	<p>interest in receiving a grant to have a pediatric dosing tool for their ambulances. All EMS services that met the criteria as very interested will receive the tool at the beginning of next fiscal year. Additional funding will be sought for EMS agencies that have become interested since the project began.</p>
<p>Lack of updated pediatric resuscitation tool for emergency departments.</p>	<p>Created wall chart with updated pediatric resuscitation and common diagnosis algorithms. Wall chart funding provided by Southeast Healthcare Coalition for one chart per hospital with an emergency department.</p>
<p>Lack of knowledge regarding pediatric needs during a disaster</p>	<p>FEMA Pediatric Disaster Response and Emergency Preparedness Course provided in in all eight regions since the start of strategic plan.</p> <p>Topics at the 2018 Update in Acute and Emergency Care Pediatric Conference. Funding provided by the State Office of Hospital Preparedness included:</p> <p>Moving the Needle Forward on Pediatric Emergency Medicine</p> <p>Chattanooga Bus Crash</p> <p>Twisting Your Disaster Plan: Lessons Learned from the 2011 Tornadoes</p>
<p>Need to exercise the infrastructure of disaster response for the pediatric population.</p>	<p>Pediatric patients included in each of the eight healthcare coalition disaster drills.</p>
<p>Maintaining the National EMSC Performance Measures including</p> <ul style="list-style-type: none"> <li>• Percent of hospitals recognized through a statewide, territorial or regional system that are able to stabilize and/or manage pediatric Medical and trauma emergencies.</li> <li>• Percent of hospitals that have written interfacility transfer agreements and guideline components</li> </ul>	<p>Standards for Pediatric Emergency Care Facilities are in the process of being updated and revised to reflect current evidenced based care. This work involves CoPEC members and pediatric content experts who meet regularly to discuss and collaborate on the proposed updates. This work requires committed and dedicated individuals across our state who devote their time and talent to this important work to reach our goal for completion in the fall of 2018.</p>

**Funding goal: Increase revenue base**

<b>Findings</b>	<b>Action</b>
President Trump’s budget eliminates the federal EMSC program	HRSA received a 2 million dollar increase this budget year. How this will be allocated has not been determined.
Funding needed for tool to address pediatric drug dosing errors	Funding secured through the State Hospital Preparedness program and Regions 3, 5 & 6 Healthcare Coalitions for 911 ambulances services.

**B. All TN EMSC stakeholders will recognize the TN EMSC program as a resource and authority for providing the best emergency care information and guidance for caring for critically ill or injured children in Tennessee.**

Continuation of the TN EMSC website ([www.cecatn.org](http://www.cecatn.org)) which contains content to enhance access to quality pediatric emergency care, has recently been launched.

**C. National Performance Measures**

Tennessee has demonstrated achievement with all previous HRSA/MCHB Performance Measures. These included:

- By 2022, 25 percent of hospitals are recognized as part of a statewide, territorial, or regional standardized program that are able to stabilize and/or manage pediatric medical emergencies. Achieved
- By 2022, 50 percent of hospitals are recognized as part of a statewide, territorial, or regional standardized system that recognizes hospitals that are able to stabilize and/or manage pediatric trauma. Achieved
- By 2021, 90 percent of hospitals in the state or territory have written interfacility transfer guidelines that cover pediatric patients and that include specific components of transfer. Achieved
- Goal: To increase the number of states and territories that have established permanence of EMSC in the state or territory EMS system.
  - Each year: All Components Achieved
    - The EMSC Advisory Committee has the required members as per the implementation manual.
    - The EMSC Advisory Committee meets at least four times a year.

- Pediatric representation incorporated on the state or territory EMS Board.
- The state or territory requires pediatric representation on the EMS Board.
- One full-time EMSC Manager is dedicated solely to the EMSC Program.

Spring 2017 New HRSA Performance Measures were added and a strategic plan to achieve these four measures is being developed and will be achieved by stated year.

- By 2027, EMSC priorities will be integrated into existing EMS, hospital, or healthcare facility statutes or regulations.
- By 2021, 80 percent of EMS agencies in the state or territory will submit NEMSIS version 3.x-compliant patient-care data to the State EMS Office for all 911-initiated EMS activations.
  - Tennessee Department of Health, Division of EMS awarded a contract to ImageTrend and compliance will be met by 2019.

New National Performance Measures for EMS were published last year and a national survey with a 100% response rate from EMS agencies with 911 services. Once again, Tennessee is above the national level.

- By 2026, 90 percent of EMS agencies in the state or territory will have a designated individual who coordinates pediatric emergency care. Preliminary baseline data 38.2% TN and the nation is at 23%.

By 2026, 90 percent of EMS agencies will have a process that requires EMS providers to physically demonstrate the correct use of pediatric specific equipment, which is equal to a score of 6 or more on a 0–12 scale. Preliminary baseline data 28.4% TN and the nation is at 2.53%.

**D. Educational outreach, publications and presentations to promote the goal of deploying the best evidence-based pediatric emergency care for every patient in every location of Tennessee.**

**1. Education**

*17<sup>th</sup> Annual Update in Acute and Emergency Care of Pediatrics Conference* hosted by East Tennessee Children’s Hospital held April 12 & 13, 20108 in Knoxville, TN. (Appendix 2)

This year the conference brought together nearly 200 physicians, nurse practitioners, physician assistants, nurses and EMS providers. The attendees received continuing education in the latest urgent and emergent trends in pediatrics including pediatric disaster management, behavioral emergencies, toxicology and other evidence based lectures.

## **2. TN EMSC Impact to National EMSC program**

This spring, Rhonda Phillippi, executive director concluded her service as a core faculty member for the HRSA “EMSC Medical Facility Recognition Quality Improvement Collaborative.” Rhonda presented on the "Lessons from the Field" panel at the EMSC Medical Facility Recognition Quality Improvement Collaborative in Bethesda, Maryland in May. As a core faculty member, Rhonda serves as a credible expert on facility recognition. She is looked to provide information on facility medical recognition as well as guidance and feedback to participating teams and to serve as an expert on behalf of the National EMSC Program.

This spring a new collaborative was developed by the EMSC Innovation and Improvement Center. It is spearheading a QI collaborative to assist state programs in accelerating their progress in improving the pediatric readiness of EDs and to develop a program to recognize EDs in their state that are ready to care for children with medical emergencies. State improvement teams will benefit by interacting with experts in both pediatric readiness and facility recognition, as well as a cadre of QI specialists.

East Tennessee Children’s Hospital applied to participate in this QI collaborative, demonstrating their leadership to enhance the quality of care for children in their region. East Tennessee Children’s Hospital was one of 16 teams selected. The two affiliate sites participating are Hawkins County Memorial Hospital and Sweetwater Hospital.

Ms. Phillippi also serves on the Board of Directors for the National EMS for Children Data Analysis Resource Center (NEDARC) in Salt Lake City, Utah. She lends her expertise to the initiative which is a national resources center that assists EMSC managers and state EMS offices to develop their capabilities to collect, analyze and utilize EMS data.

## **3. Poster Presentations**

Cooper, C. *“You’ve got to be “Kidding” Me: A coalition’s approach to Pediatric Preparedness.”* National Disaster Healthcare Coalition, San Diego, CA.

Helms, S. *‘Radhika’s Story: Taking an Injury Prevention Internship Experience to the Next Level’* The Bike Tennessee Summit, May 18, 2017, Memphis, TN

Helms, S. *‘Splash Mid-South: One Community’s Solution to Enhance Water Safety and Swimming Participation within Underserved Populations’* Best Practice Poster presented at the Trauma Center Association of America, May 5, 2017, Myrtle Beach, South Carolina

Helms, S. *‘The Treadwell Project’*, Presentation to the Global Networks at the Safe Kids Worldwide PrevCon, July 26, 2017, Washington, D.C.

Helms, S. *“CPS Manufacturer’s Updates” and “Twenty-five Years of CPS in Tennessee”* Presentations at the TN Lifesaver’s Conference in Murfreesboro TN, September 24, 2017

#### 4. Journal Publications

1. Factors that predict instability in pediatric diaphyseal both-bone forearm fractures. Kutsikovitch JI, Hopkins CM, Gannon EW 3rd, Beaty JH, Warner WC Jr, Sawyer JR, Spence DD, Kelly DM. 2017 J Pediatr Orthop B. Aug 2. doi:10.1097/BPB.
2. Pediatric abusive head trauma and stroke. Khan NR, Fraser BD, Nguyen V, Moore K, Boop S, Vaughn BN, Klimo P Jr. 2017 Aug; 20 (2): 183-190.
3. Acute procedural interventions after pediatric blunt abdominal trauma: A prospective multicenter evaluation. Arbra CA, Vogel AM, Zhang J, Mauldin PD, Huang EY, Savoie KB, Santore MT, Tsao K, Ostovar-Kermani TG, Falcone RA, Dassinger MS, Recicar J, Haynes JH, Blakely ML, Russell RT, Naik-Mathuria BJ, St Peter SD, Mooney DP, Onwubiko C, Upperman JS, Streck CJ. 2017 J Trauma Acute Care Surg. Oct; 83 (4):597-602.
4. Pediatric near-drowning events: do they warrant trauma team activation? Chotai PN, Manning L, Eithun B, Ross JC, Eubanks JW 3rd, Hamner C, Gosain A. 2017 J Surg Res. Sep; 217:246.
5. The utility of presacral drainage in penetrating rectal injuries in adult and pediatric patients. Savoie KB, Beazley TM, Cleveland B, Khaneki S, Markel TA, Hammer PM, Savage S, Williams RF. 2017 J Surg Res. Nov; 219: 279-287.
6. The incidence of delayed splenic bleeding in pediatric blunt trauma. Notrica DM, Sayrs LW, Bhatia A, Letton RW, Alder A, St Peter S, Ponsky TA, Eubanks JW 3rd, Lawson KA, Ostlie DJ, Tuggle DW, Garcia NM, Maxson RT, Leys C, Greenwell C. 2018 J Pediatr Surg. Feb; 53 (2):339-343.
7. Characterization of American Football Injuries in Children and Adolescents. Smith PJ, Hollins AM, Sawyer JR, Spence DD, Outlaw S, Kelly DM. 2018 J Pediatr Orthop. Feb; 38 (2):e57-e60.
8. Surgical Treatment of Supracondylar Humeral Fractures in a Freestanding Ambulatory Surgery Center is as Safe as and Faster and More Cost- Effective Than in a Children's Hospital. Rider CM, Hong VY, Westbrook TJ, Wang J, Sheffer BW, Kelly DM, Spence DD, Flynn JM, Sawyer JR. 2018 J Pediatr Orthop. 2018 Apr 16. doi: 10.1097/BPO.
9. Characterization of pediatric golf cart injuries to guide injury prevention efforts"- Joseph R. Starnes, BA, Purnima Unni, MPH , Cherie A. Fathy, MD, MPH , Kelly A. Harms, MD , Shelby R. Payne, , Dai H. Chung, MD – March 2018- American Journal of Emergency Medicine
10. Improving Trauma Care in Africa. Tuggle, Deborah RN; Rasnake, Niki BSN, RN; Day, Theresa MSN, RN. Journal of Trauma Nursing: July/August 2017 - Volume 24 - Issue 4 - p 258–260
11. Consistent head up cardiopulmonary resuscitation haemodynamics are observed across porcine and human cadaver translational models. Moore JC<sup>1</sup>, Holley J<sup>2</sup>, Segal N<sup>3</sup>, Lick MC<sup>4</sup>, Labarère J<sup>5</sup>, Frascione RJ<sup>6</sup>, Dodd KW<sup>7</sup>, Robinson AE<sup>7</sup>, Lick C<sup>8</sup>, Klein L<sup>7</sup>, Ashton A<sup>9</sup>, McArthur A<sup>9</sup>, Tsangaris A<sup>10</sup>, Makaretz A<sup>11</sup>, Makaretz M<sup>12</sup>, Debaty G<sup>13</sup>, Pepe PE<sup>14</sup>, Lurie KG<sup>15</sup> [Resuscitation](#). 2018 Apr 24. pii: S0300-9572(18)30170-9. doi: 10.1016/j.resuscitation.2018.04.009. [Epub ahead of print]
12. Project BRAIN: A Tennessee Model for Student Transition After Brain Injury. Denslow, P, Rayman J, Ellmo W *The Journal of Head Trauma Rehabilitation*: May/June 2018 - Volume 33 - Issue 3 - p E67–E118

## 5. Injury Prevention

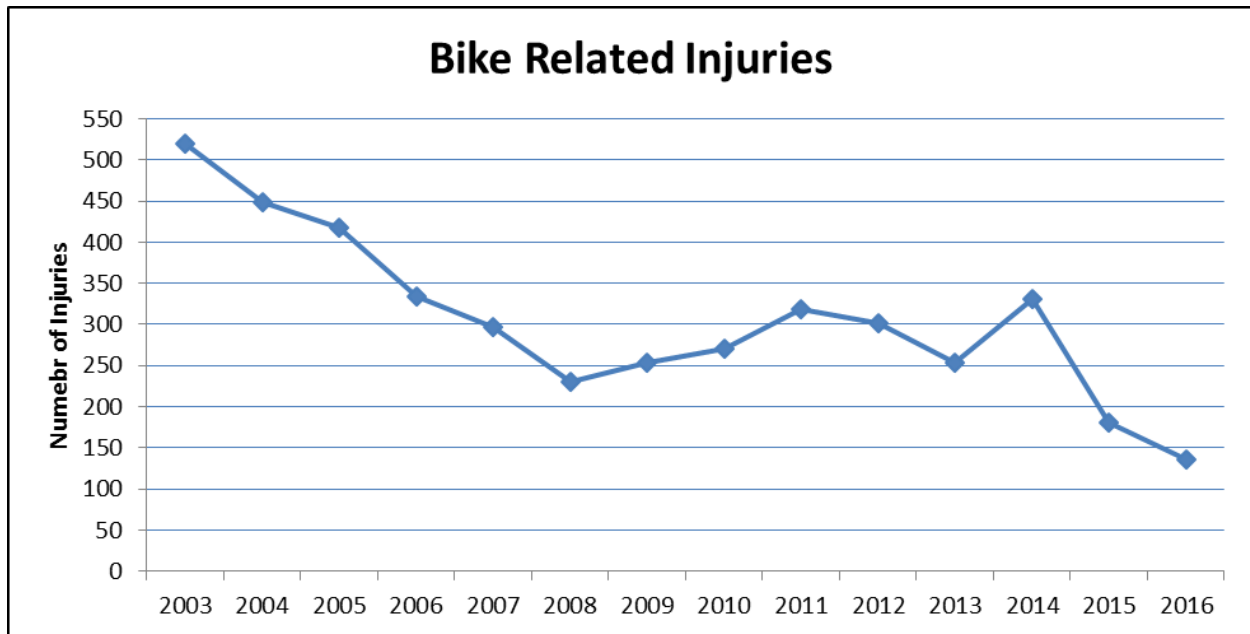
Injury prevention is an integral component of the EMS for children continuum of care. Each of the four comprehensive regional pediatric centers (CRPC) have robust programs. Together, the CRPCs have had over 400 events in Tennessee to keep children safe.

One of the initiatives that each CRPC is actively engaged is Safe Kids. Safe Kids is an international campaign, focusing on preventing the serious injuries-- the leading health risk that children face today. The risk areas the CRPCs address include home safety, firearm, car and road safety, sports and play safety. This year Le Bonheur celebrated a milestone 25<sup>th</sup> anniversary of Safe Kids MidSouth and a new Safe Kids program was launched in Jackson, TN.

To develop injury prevention programs each CRPC reviews their local injury data and develop targeted interventions to keep children safe. One such example is the “*Radhika Takes a Ride!*” at Le Bonheur. This project is a collaboration between Safe Kids Mid-South, a college student intern who suffered a severe head trauma in high school due to a bicycle accident while not wearing a helmet, and local artists. Working together, these individuals designed a coloring and activity book for elementary students (specifically 4<sup>th</sup> graders, the primary focus group based upon local hospital bicycle injury data) which tells Radhika’s journey from her accident to her recovery. She experienced a lengthy stay in a trauma center where she was in a coma for 21 days, and then spent 6 weeks at a rehabilitation center. She had to re-learn how to breathe without the benefit of a ventilator, re-learn activities of daily living (i.e., feeding, showering, and dressing). The book highlights the importance of wearing a helmet to discuss and practice with classmates, siblings and families.

An important component of the injury prevention projects is measuring their impact. The Rakhika project demonstrated that the observations of helmet use in the targeted zip code area had a slightly increased pre- to post- project could mean that this project is having a positive impact.

Le Bonheur’s hospital bicycle related injury data is shown in the graph below. Since 2003, there has been a steady decrease in bicycle related injuries. However, 2014 reveals a slight upward trend; thus, an appropriate time to step up our prevention efforts which were afforded with the *Radhika Takes a Ride!* Project. Overall, there is a 74 percent decrease in bicycle related injuries. These decreasing trends suggest that this project, coupled with other Safe Kids and/ or other safety organization’s efforts may be effective.



**Stop the Bleed** is intended to cultivate grassroots efforts that encourage bystanders to become trained, equipped, and empowered to help in a bleeding emergency before professional help arrives. The four CRPCs and many of the CoPEC members are actively engaged in their communities to teach the Stop the Bleed program.

The **Safe Stars** initiative recognizes youth sports leagues throughout Tennessee for providing the highest level of safety for their young athletes. Safe Stars is a collaboration between the Tennessee Department of Health and the Monroe Carell Jr. Children’s Hospital at Vanderbilt.

Sports leagues should be encouraged to achieve the highest possible safety standards for their young athletes. Safe Stars consists of 3 levels: gold, silver, and bronze, and involves implementation of policies around topics such as concussion education, weather safety and injury prevention. Safe Stars is a free and voluntary initiative in which all youth sports leagues can participate.

Safe Stars’ goal is to provide resources and opportunities for every youth sports league to enhance their safety standards. The criteria for achieving recognition as a Safe Stars league has been developed by a committee of health professionals dedicated to reducing sports-related injuries among youth.

The kick off for Safe Stars occurred on May 2, 2018 and the following organizations that are involved in CoPEC have provided endorsement and support for this program.



## G. Star of Life Awards Ceremony and Dinner

This year was the 10<sup>th</sup> annual Star of Life Awards ceremony held to honor the accomplishments of EMS personnel from all regions of Tennessee who provide exemplary life-saving care to adult and pediatric patients. The emcee for this year's ceremony was Jennifer Kraus of News Channel 5 Nashville and included the presentation of the actual adult or pediatric patient scenarios and reunites the EMS caregivers with the individuals they treated. Recipients were chosen from six of the EMS regions in the state that provided nominations. This is the premier event within the state to recognize and honor our excellent pre-hospital providers.

**Overall State Winner:** Michael G. Carr State Star of Life Award

***Monroe County EMS, Monroe County 911 Dispatch and  
Monroe County Sheriff's Department***

**EMS Region 1:** Bluff City Rescue, Sullivan County EMA Rescue, Bluff City Volunteer Fire Department, Sullivan County Sheriff's Department, Sullivan County EMS and Ballard Health Air Transport

**EMS Region 2:** Grainger County 911, Grainger County Sheriff's Department, and Grainger County EMS

**EMS Region 3:** Bradley County EMS and Bradley County Fire & Rescue

**EMS Region 4:** Van Buren County 911 Central Dispatch, Fall Creek Falls State Park, Piney Volunteer Fire Department, Van Buren EMS and Erlanger Life Force Air Medical

**EMS Region 5:** Montgomery County 911 Dispatch, Montgomery County Sheriff's Department, Woodlawn Volunteer Fire Department, Montgomery County EMS, and Monroe Carell Jr. Children's Hospital at Vanderbilt Pediatric Ground Transport Team

**EMS Region 6:** Metro Moore County Communications, Metro Moore County EMA, Metro Moore County Volunteer Fire Department, Metro Moore County Sheriff's Department, Metro Moore EMS, and Vanderbilt LifeFlight

**EMS Region 7:** No nominations received

**EMS Region 8:** No nominations received

## H. Awards

The TN EMSC Joseph Weinberg, MD, Leadership Award is bestowed upon an individual who displays the attributes of a leader that can bring together diverse stakeholders and organizations to improve the care of critically ill and injured children. This year's award was presented to **Ben Welch, PhD** for his dedication to Tennessee's children and moving forward the system of pediatric care within disaster preparedness. Dr. Welch consistently demonstrates the leadership

skills of Dr. Weinberg including pediatric expertise, advocacy, and civic duty. Dr. Welch demonstrated this through his tireless effort in co-leading the pediatric dosing committee and his diligent research on current best practice for EMS.

The Children’s Emergency Care Alliance Advocate for Children Award is given to an individual(s) who has made an outstanding contribution of major significance to the Tennessee Emergency Medical Services for Children program. This year’s award was presented to **Jennifer Dindo, RN** for their exemplary dedication to the well-being of children. Ms. Dindo was selected for her dedication to the creation and publication of pediatric wall chart with treatment guidelines for emergency rooms in our state.

**Susan Helms**, Director of Injury Prevention and Safe Kids at Le Bonheur Children’s Hospital received the Tennessee Child Passenger Safety Advocate Award as well as “Power of One” for the for Radhika’s Project.

### **III. The Needs of the State Committee on Pediatric Emergency Care met by the Tennessee Department of Health since last year’s annual report.**

- Participation and input from Tennessee Department of Health staff implementing the strategic plan.

### **IV. The Needs of the State Committee on Pediatric Emergency Care**

- Continuation of support to enhance the system of care for ill and injured children
- Statistical support to assist in defining outcomes of emergency care for the ill and injured child

### **V. Conclusion**

The mission of CoPEC is *to ensure that every child in Tennessee receives the best pediatric emergency care in order to eliminate the effects of severe illness and injury*. That mission draws people together, and has brought out the very best in our healthcare system.

The Board for Licensing Health Care Facilities and the Emergency Medical Services Board work cooperatively with other programs of the Tennessee Department of Health to improve the quality of health care and medical services available to the citizens of Tennessee.

We will further describe the impact of the rules on pediatric emergency care by utilizing data collected in our next report on July 1, 2019.

This report was reviewed by the respective boards on \_\_\_\_\_ and \_\_\_\_\_ and approved for presentation to the designated committees of the Tennessee General Assembly.

## **Appendix 1**

Baptist Memorial Hospital for Women	Tennessee Department of Health
Children's Hospital at Erlanger	TN Disability Coalition
Children's Hospital at TriStar Centennial	Tennessee Emergency Nurses Association
East Tennessee Children's Hospital	Tennessee Emergency Services Education Association
Family Voices of Tennessee	TN Hospital Association
Hospital Corporation of America (HCA)	Tennova Healthcare-Cleveland
Jackson-Madison County General Hospital	UT Medical Center
Le Bonheur Children's Hospital	
Monroe Carell, Jr. Children's Hospital at Vanderbilt	
Project B.R.A.I.N.	
Niswonger Children's Hospital	
Rural Health Association of Tennessee	
Sumner Reginal Medical Center	
TN Academy of Family Physicians	
Tennessee Ambulance Service Association	
Tennessee Association of School Nurses	
TN Chapter of the American Academy of Pediatrics	
TN Chapter of the American College of Emergency Physicians	
TN Chapter of the American College of Surgeons	
TN Congress of Parents and Teachers	

## Appendix 2

The poster features the East Tennessee State University logo at the top. Below it, the text reads: "The 17th Annual Update in ACUTE & EMERGENCY CARE PEDIATRICS", "April 13 - April 14, 2018", and "Knoxville Convention Center • Knoxville, Tennessee". The central part of the poster is a collage of four photographs showing healthcare professionals interacting with children in a clinical setting. Below the images, the text "SPONSORED BY:" is followed by logos for Tennessee EASC, East Tennessee Children's Hospital, children's Hospital at Chattanooga, Memorial and Children's Hospital at Vanderbilt, and Le Bonheur Children's Hospital.

**EAST TENNESSEE STATE UNIVERSITY**

The 17th Annual Update in  
**ACUTE & EMERGENCY CARE PEDIATRICS**

April 13 - April 14, 2018  
Knoxville Convention Center • Knoxville, Tennessee

**SPONSORED BY:**

Tennessee EASC  
East Tennessee Children's Hospital  
children's Hospital at Chattanooga  
Memorial and Children's Hospital at Vanderbilt  
Le Bonheur Children's Hospital

## THE 17TH ANNUAL UPDATE ACUTE AND EMERGENCY CARE PEDIATRICS AGENDA

FRIDAY – APRIL 13, 2018			
8:00 a.m. - 8:30 a.m.	Breakfast and Registration		
8:30 a.m. - 8:45 a.m.	Welcome and Opening Remarks		
8:45 a.m. - 9:45 a.m.	<b>Moving the Needle Forward on Pediatric Emergency Care</b> Kate Remick, MD		
9:45 a.m. - 10:45 a.m.	<b>Early Recognition of Sepsis in Your Emergency Department</b> Pete Cathcart, MD and Corrie Berry, RN		
10:45 a.m. - 11:05 a.m.	Break		
11:05 a.m. - 11:50 a.m. Breakout Session #1	<b>GROUP A</b> The Evolution of Neonatal Abstinence Syndrome and Its Impact on the Community E. Kyle Cook, NNP-BC	<b>GROUP B</b> Trauma: First Things First! Glaze Vaughn, MD, FACS, FAAP	<b>GROUP C</b> Simulation including Family Centered Care
11:55 a.m. - 12:40 p.m. Breakout Session #2	<b>GROUP D</b> (Repeat) Trauma: First Things First! Glaze Vaughn, MD, FACS, FAAP	<b>GROUP E</b> (Repeat) It Ain't Easy Being Wheezy Rudy Kink, MD	<b>GROUP F</b> Simulation including Family Centered Care
12:40 p.m. - 1:55 p.m.	Lunch		
1:55 p.m. - 2:40 p.m. Breakout Session #3	<b>GROUP G</b> Sepsis in All Sizes Chad Hollingsworth, CCEMT-P	<b>GROUP H</b> (Repeat) It Ain't Easy Being Wheezy Rudy Kink, MD	<b>GROUP I</b> Simulation including Family Centered Care
2:40 p.m. - 3:00 p.m.	Break		
3:00 p.m. - 4:00 p.m.	<b>Chattanooga Bus Crash Panel</b> Darwin Koller, MD, Marvin Hall, MD, John Combes, PM		
4:00 p.m. - 5:00 p.m.	<b>The Eight Pillars of a Medical Professional – How Solid is Your Foundation</b> Rick Slaven, MPS, NRP		

SATURDAY – APRIL 14, 2018			
7:30 a.m. - 8:00 a.m.	Breakfast, Registration, and Welcome		
8:00 a.m. - 9:00 a.m.	<b>Do It For Drew</b> David Hughes		
9:10 a.m. - 10:00 a.m. Breakout Session #4	<b>GROUP J</b> Traumatic Brain Injuries Cody Penrod, MD	<b>GROUP K</b> Spinal Immobilization in Children Regan Williams, MD	<b>GROUP L</b> It's the Heart, No It's Not the Heart Kevin Brinkmann, MD and Sumeet Sharma, MD
10:10 a.m. - 10:55 a.m. Breakout Session #5	<b>GROUP M</b> (Repeat) Traumatic Brain Injuries Cody Penrod, MD	<b>GROUP N</b> (Repeat) Poison Topic Saralyn Williams, MD	<b>GROUP O</b> Unforgettable Pediatric EMS Cases Seth Brown, MD
10:55 a.m. - 11:10 a.m.	Break		
11:10 a.m. - 11:55 a.m. Breakout Session #6	<b>GROUP P</b> (Repeat) Poison Topic Saralyn Williams, MD	<b>GROUP Q</b> (Repeat) Spinal Immobilization in Children Regan Williams, MD	<b>GROUP R</b> (Repeat Session) Unforgettable Pediatric EMS Cases Seth Brown, MD
12:10 a.m. - 1:10 p.m. General Session	<b>Twisting your Disaster Plan: Lessons Learned from the 2011 Tornadoes</b> Andrew Lee, MSN, RN, CNL, CEN		
1:10 p.m. - 1:15 p.m.	Closing Remarks		



**Sippin' & Singin' with Lawson Bates: A Benefit for Tennessee's Children**  
 Friday, April 13, 2018 | 6:00 p.m. – 9:00 p.m.

Join us at The Southern Railway Station, 306 West Depot Avenue, Knoxville, TN to enjoy dinner, live and silent auctions, and music provided by Lawson Bates. All proceeds go towards making quality pediatric emergency care available for all children in Tennessee and the region.  
 For tickets and information visit [www.tn-emsc.org](http://www.tn-emsc.org)  
 For questions or donations contact [embranson@emsc.com](mailto:embranson@emsc.com) or [estano@emsc.com](mailto:estano@emsc.com)

## OVERVIEW

The 17th Annual Update in Acute and Emergency Care Pediatrics is a result of collaboration between Children's Hospital at Erlanger, East Tennessee Children's Hospital, Le Bonheur Children's Hospital, Monroe Carell Jr. Children's Hospital at Vanderbilt, Tennessee Emergency Medical Services for Children (TN EMS/C), and East Tennessee State University Quillen College of Medicine Office of Continuing Medical Education.

## TARGET AUDIENCE

This conference is designed for pediatricians, nurses, emergency physicians, family practitioners, intensivists, nurse practitioners, physician assistants, respiratory care practitioners, EMS professionals, fellows, residents, health care students and many others involved in the care of pediatric emergencies.

## ACTIVITY DIRECTORS

Chris Slano, DO, MPH, FAAP

Attending Pediatric Emergency Department Physician  
East Tennessee Children's Hospital - Team Health Physician  
Knoxville, TN

Heather Radu, MD

Attending Pediatric Emergency Department Physician  
East Tennessee Children's Hospital - Team Health Physician  
Knoxville, TN

## CONFERENCE OBJECTIVES

As a result of participating in this activity, the attendee should be able to:

- Understand emergency areas and new considerations in acute and pediatric care
- Be better prepared for the complications that caring for pediatric population present in the acute setting
- Standardize systems of acute care so that pediatric patients are experiencing best practices in acute and emergency care

## FACULTY DISCLOSURE

East Tennessee State University's Quillen College of Medicine, Office of Continuing Medical Education (OCME) holds the standard that its continuing medical education programs should be free of commercial bias and conflict of interest. It is the policy of the OCME that each presenter and planning committee member of any CME activity must disclose any financial interest/arrangement or affiliation with corporate organizations whose products or services are being discussed in a presentation. All commercial support of an educational activity must also be disclosed to the learners prior to the start of the activity.

Each individual with influence over content has completed a disclosure form indicating that they or members of their immediate family do not have a financial interest/arrangement or affiliation that could be perceived as a real or apparent conflict of interest related to the content or supporters involved with this activity.

## COURSE ALTERATIONS

The Office of CME reserves the right to change topics/speakers if necessary.

## ACCREDITATION AND DESIGNATION

College of Continuing Medical Education:

This activity has been planned and implemented in accordance with the Essential Areas and Policies of the Accreditation Council for Continuing Medical Education (ACCME) through the joint sponsorship of the Quillen College of Medicine, East Tennessee



## ACCREDITATION AND DESIGNATION CONTINUED

College of Continuing Medical Education continued:

State University and the Tennessee Emergency Medical Services for Children (TN EMS/C), Children's Hospital at Erlanger, East Tennessee Children's Hospital, Le Bonheur Children's Hospital, and Monroe Carell Jr. Children's Hospital. The Quillen College of Medicine, East Tennessee State University is accredited by the ACCME to provide continuing medical education for physicians.

College of Continuing Medical Education:

CME Credit: Quillen College of Medicine, East Tennessee State University designates this live activity for a maximum of 10.0 AMA PRA Category 1 Credits™. Physicians should only claim credit commensurate with the extent of their participation in the activity.



College of Nursing:

CNE Credit: East Tennessee State University College of Nursing is an approved provider of continuing nursing education by the Tennessee Nurses Association, an accredited approver by the American Nurses Credentialing Center's Commission on Accreditation. 8.25 continuing nursing education contact hours (CNE) have been approved for Friday, April 13 and 4.41 CNE hours have been approved for Saturday, April 14 with a maximum time for both days of 10.00 CNE hours. Please email ETSUCNE@etsu.edu if you would like to claim Nursing Contact Hours or you have any questions.

## REGISTRATION

The registration fee for the Update in Acute & Emergency Care Pediatrics Conference includes course materials, continental breakfasts, lunch on Friday and snacks during breaks. Confirmation of your registration will be sent upon receipt of payment.

Registration fees will be refunded, less a \$50.00 administrative fee, for cancellations received in writing a minimum of 14 days prior to the activity date. No refunds will be given when the registration fee is \$50.00 or less, or when a cancellation request is received less than 14 days prior to the start of the activity. ETSU Quillen College of Medicine reserves the right to cancel CME activities. If an activity is cancelled, then a full refund of registration fees will be given.

## FEES

	Early Bird thru 3/23/18*	3/24/18 thru 4/16/18**
Physicians, PA's, and APNs	\$250	\$275
Nurses	\$165	\$190
Fellows/Residents	\$200	\$225
Allied Health***	\$150	\$175
EMS Providers	\$125	\$150
Non-Licensed Students****	\$100	\$125

\*In order to receive the Early Bird rate, registration fee must be paid in full at time of registration.

\*\*Registration closes on April 11, 2018. Pre-registered attendees must pay registration fees in full no later than April 11, 2018, to avoid paying an additional \$25 on-site registration.

\*\*\*Exemptions include RN's, MA's, PT, OT, etc. If you are unsure of your registration type, please contact 423-439-6527 for assistance.

\*\*\*\*Student fee includes medical, nursing, APN, PA, and EMS students from any University/College with no prior certification.

Cancellation Policy: Registration fees will be refunded, less a \$50.00 administrative fee, for cancellations received in writing a minimum of 14 days prior to the activity date. No refunds will be given when the registration fee is \$50.00 or less, or when a cancellation request is received less than 14 days prior to the start of the activity.

ETSU Quillen College of Medicine reserves the right to cancel CME activities. If an activity is cancelled, then a full refund of registration fees paid will be given.

To register, please visit: [http://ajcp.etsu.edu/ajcp/ajcp18page\\_2018.pdf](http://ajcp.etsu.edu/ajcp/ajcp18page_2018.pdf)

## HOTEL ACCOMMODATIONS

**Holiday Inn Knoxville Downtown**  
525 Henley Street Knoxville, TN 37902  
Phone: 865-522-2800

### **Welcome One and All!**

Welcome to Holiday Inn Knoxville Downtown adjacent to the Knoxville Convention Center. Participants can contact the hotel directly by telephone at 1-800-315-2621 to make room reservations and ask for the room rate associated with EMS to receive the conference room rate of \$114.00. All rooms are subject to applicable taxes. Reservations must be received by March 23, 2018. After that date, reservations will be taken on a space available basis and may revert to a higher rate.

## FACULTY

### **Kevin C. Brinkmann, MD**

Pediatric Hospitalist  
East Tennessee Children's Hospital

### **Seth Brown, MD**

Pediatric Emergency Medicine  
Tri-Cities Regional Emergency Physicians, PC

### **John Combes, PM**

Deputy Chief of Operation  
Hamilton County EMS

### **E. Kyle Cook, NNP-BC**

Neonatal-Perinatal Medicine  
Knoxville Neonatal Associates at East Tennessee Children's Hospital

### **Marvin Hall, MD**

Pediatric Critical Care  
Children's Hospital at Erlanger

### **Chad Hollingsworth, CCEMT-P**

Vanderbilt LifeFlight

### **David Hughes**

Founder, Do It for Drew Foundation

### **Rudy Kink, MD**

Pediatric Emergency Specialist  
Le Bonheur Children's Hospital

### **Darwin Koller, MD**

Pediatric Emergency Medicine  
Children's Hospital at Erlanger

### **Andrew Lee, MSN, RN, CNL, CEN**

Flight Nurse  
Air Evac Lifeteam

### **Rebecca O'Connor, BSN, RN, CPEN**

Simulation Center Coordinator  
East Tennessee Children's Hospital

### **Cody Penrod, MD**

Fellow  
Vanderbilt University Medical Center

## FACULTY (CONTINUED...)

### **Kate Remick, MD, FAAP, FACEP, FAEMS**

Medical Director, San Marcos Hays County EMS System  
Executive Lead, National EMS for Children Innovation and Improvement Center  
Associate Medical Director, Austin-Travis County EMS System  
Assistant Professor of Pediatrics, Dell Medical School at the University of Texas at Austin  
EMS Director, Pediatric Emergency Medicine Fellowship, Dell Medical School

### **Sumeet Sharma, MD**

Pediatric Cardiology  
Knoxville Pediatric Cardiology

### **Rick Slaven, MPS, NRP**

Director Student Advancement  
Lincoln Memorial University – DeBusk College of Osteopathic Medicine

### **Lisa Smith, MD**

Pediatric Surgeon  
Children's Hospital at Erlanger

### **W. Glaze Vaughan, MD, FACS, FAAP**

Pediatric Surgeon  
East Tennessee Pediatric Surgery Group

### **Regan Williams, MD**

Assistant Professor of Surgery  
University of Tennessee Health Science

### **Saralyn R. Williams, MD**

Associate Professor of Clinical Toxicology  
Department of Pediatrics  
Vanderbilt University School of Medicine

### **Oseana Bratton, BSN, RN, CPEN, CRPC**

Trauma Coordinator  
East Tennessee Children's Hospital

### **Pete Cathcart, MD**

Emergency Medicine  
Vanderbilt University Medical Center

## HIGHMARKS CE

We are excited to announce our new CME management system will be live March 1, 2018! This new system is user and mobile-friendly, all online, and allows you to manage all your CME needs in one place! Current transcripts with earned CME credit hours will not transfer into this new system. Please go online to verify and print your transcripts in our current system as soon as possible.

