



**FALL
2019**

New PECARN Nodes: SPARC & WPEMR

by the New Node PECARN RNC PIs & Nodal Administrators

PECARN

In a nutshell 

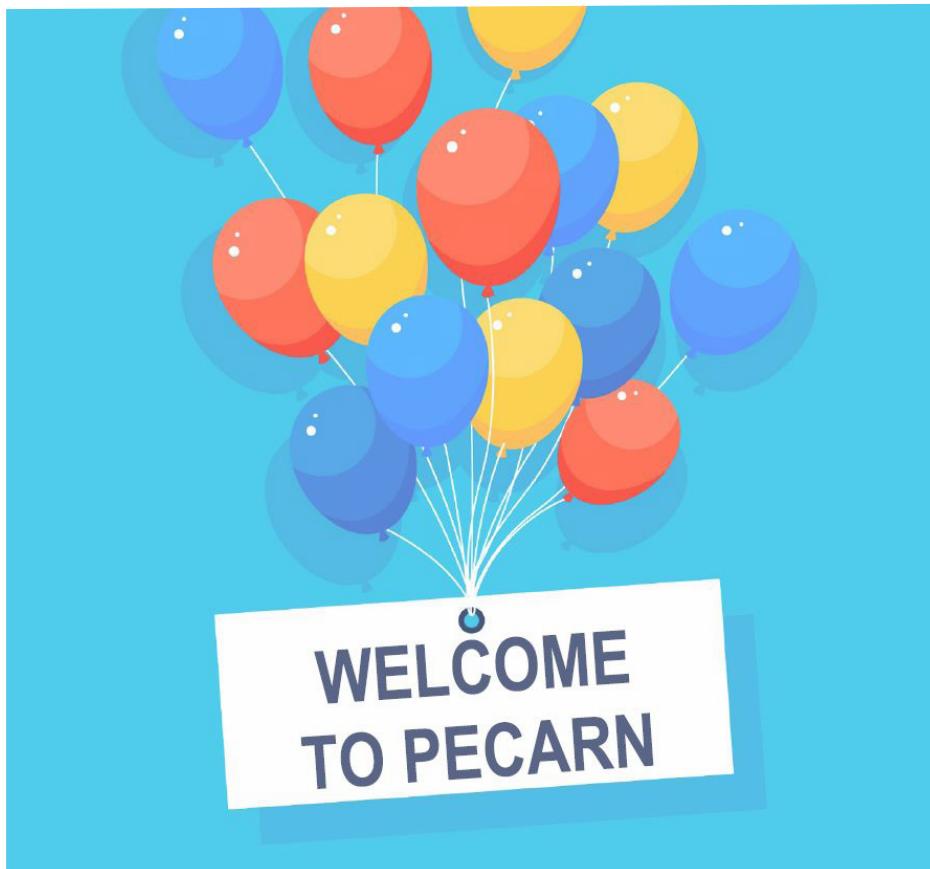
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**PEDIATRIC EMERGENCY CARE
APPLIED RESEARCH NETWORK**

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New PECARN Node:

SPARC: San Francisco-Oakland, Providence, Atlanta Research Collaborative

By Tom Chun, MD, MPH and Erin Ryan, MPH, CCRP, PECARN RNC PI & the Nodal Administrator (SPARC Node)

The San Francisco-Oakland, Providence, Atlanta Research Collaborative (SPARC) is composed of the academic pediatric research centers at Brown University, Emory University School of Medicine, and the University of California, San Francisco. They draw upon the rich clinical and academic resources of six children's hospitals, including Hasbro Children's Hospital (the Research Node Center), Children's Healthcare of Atlanta (Egleston, Hughes Spalding, and Scottish Rite Hospitals), and two UCSF Benioff Children's Hospitals (San Francisco and Oakland).

Hasbro Children's Hospital (HASB)

The Department of Emergency Medicine of Brown University is

one of the largest academic Departments of Emergency Medicine in the US, and ranks among the top-funded departments of EM. The Section of Pediatric Emergency Medicine has a strong history of clinical research.

The RNC PI is Thomas Chun, MD, MPH, a Professor of Emergency Medicine and Pediatrics at Brown University. Tom was a HEDA PI for PRIDENET (2011-15), a co-PI for Project ASSESS, and is the co-PI of APPEND-X. While with PRIDENET, he served on GAPS, QUASI, and the STI Working Group. He is an active member of the IDeA States Pediatric Clinical Trials Network, a component of NIH's ECHO (Environmental Influences of Childhood Health

Outcomes) Program.

Erin Ryan, MPH, CCRP is the Nodal Administrator. Starting as a PECARN RC in 2014, Erin has rapidly ascended through the Department of Emergency Medicine, managing over 30 projects including 6 PECARN studies. During this time, she oversaw a tripling of active studies and managed an infrastructure which included 3 RCs and 12 RAs over 3 EDs.

The HEDA PI is James Linakis, PhD, MD, who is also a Professor of Emergency Medicine and Pediatrics. Jim founded and is the current Director of the PEM research program at Brown. He is the co-PI of Project ASSESS. He also has served on the Rhode Island Hospital IRB for the past 25 years and been its Chair for the last 12 years.

Children's Healthcare of Atlanta (CHOA)

With its 3 affiliated hospitals, and Level I (Egleston) and II (Scottish Rite) Pediatric Trauma Centers, CHOA offers high annual patient volumes, clinical excellence, and multidisciplinary collaborative research experience, including the Departments of Pediatrics and Emergency Medicine, and the Centers for Disease Control.

HEDA PI Claudia Morris, MD is a Professor of Pediatrics and Emergency Medicine at Emory, and is the Research Director for the Division of Pediatric Emergency Medicine. She has been involved in clinical and translational research for over 2 decades. Claudia is an internationally recognized leader and champion for ED-based best practices in treatment of acute pain in SCD, and is the PI of PECARN's Arginine studies (R34 and current UG3 proposal, submitted to NHLBI July 2019).

The Emory co-investigator Harold Simon, MD, MBA, is a Marcus

Hospital	BROWN	EMORY/CHOA			UCSF	
	Hasbro	Egleston	Hughes Spalding	Scottish Rite	Benioff-San Francisco	Benioff-Oakland
STAFFING						
PEM Attendings	28	31*	33*	41	16	16
General Pediatrics	5	19*		17	3	6
Fellows	6	11*		0	6¥	
Research Coordinators/Assistants	12	7	1	1	3	2 (20 RA volunteers)
Hours per day ED RC Coverage	17-24^	16-24+§			16-24§	12
ED CHARACTERISTICS						
Annual ED Volume	57,500	80,500	100,000	64,600	16,300	44,700
Trauma Activations	525	1,404	0	846	0	695
DEMOGRAPHICS						
Female	48%	48%	47%	47%	47%	46%
African-American	14%	52%	88%	26%	16%	24%
Asian	2%	3%	1%	5%	15%	7%
Caucasian	47%	36%	5%	56%	34%	13%
Hispanic/Latino	39%	12%	6%	18%	29%	46%
Other	39%	9%	6%	13%	35%	55%

*Egleston and Hughes Spalding share PEM, Urgent Care (General Pediatrician) and fellow staffing

¥One UCSF fellow is a Pediatric Emergency Medicine Point-of-Care-Ultrasound Fellow

^Hasbro has 24 hour RC coverage 5 days a week, 17 hour RC coverage 2 days a week

+Egleston RC's are on-site 16 hours a day, but also cross cover Hughes Spalding and Scottish Rite

§Emory and UCSF have "on-call" systems for RC coverage, which can enroll participants during overnight hours

	City of San Francisco EMS	Alameda County EMS
Overview and Structure (% of Response Calls)	- SF Fire Department (75%) - King American (15%) - American Medical Response (10%)	- Falk Northern California (90%) starting in July 2019 - 4 Local Fire Departments EMS Companies (10%)
Total Population*	884,363	1,663,190
Total Population Under Age 18*	118,504	352,800
Square Miles Served	47	737
Annual EMS Responses	112,000	125,000
Number % of Pediatric Responses	4,480	17,500
Staff and Levels of Care	580 Paramedics 1,800 EMTs	1,000 Paramedics 3,000 EMTs

SPARC Tables: Demographics and Characteristics of SPARC HEDAs

Professor of Pediatrics and Emergency Medicine, and Vice Chair of the Department of Pediatrics. He brings additional expertise with over 25 years of clinical, administrative and academic experience.

Benioff Children's Hospital – San Francisco and Oakland (UCSF)

For nearly a decade, UCSF has been a top-funded public academic institution by the NIH. In 2014, UCSF Benioff Children's Hospital and Children's Hospital Oakland affiliated, uniting two organizations that are committed to, and recognized for, excellence in children's health. UCSF Benioff Children's Hospital-Oakland is the only Level I Pediatric Trauma Center in the Bay Area.

HEDA PI Jacqueline Grupp-Phelan, MD, MPH, is Chief of the Division of Pediatric Emergency Medicine, Vice Chair of Emergency Medicine, and Professor of Emergency Medicine in the UCSF Department of Emergency Medicine. Between Cincinnati Children's Hospital Medical Center and UCSF, Jackie has overseen a portfolio of over 50 Pediatric ED studies. She is the co-PI of ED-STARS and one of the foremost experts in pediatric mental health issues in the ED.

EMSA

The Emergency Medical Services Affiliate will be directed by EMS faculty within the UCSF Department of Emergency Medicine. This includes the Alameda County EMS,

the City of San Francisco Bureau of EMS, and the major ambulance services within San Francisco. Two EMSA co-advisors, Karl Sporer, MD and Nicolaus Glomb, MD, MPH, will work together to provide oversight, direction and coordination of the EMSA. Karl is a Professor of Emergency Medicine in the Department of Emergency Medicine at UCSF and the medical director for Alameda County EMS. Nick is an Assistant Professor in the Department of Emergency Medicine, Division of Pediatric Emergency Medicine at UCSF Benioff Children's Hospital.

Conducting High Priority, High-Quality Research in Pediatric Emergency Care

New PECARN Node:

WPEMR: West/SW Pediatric Emergency Medicine Research

By Eileen Klein, MD, MPH and Bonnie Strelitz, MPH PECARN HEDA and RNC PI & the Nodal Administrator (WPEMR Node)

The WPEMR stands for **West/SW Pediatric Emergency Medicine Research**. We are very excited to join PECARN and our group is ready and willing to be an active and productive contributor to the Network. Thanks so much to everyone for being so welcoming during this time of transition.

Our node is a collaboration between teams in Seattle, Dallas, and Los Angeles. Seattle Children's Hospital is the Research Node Center, with most studies projected to enroll through the Seattle Children's ED, and multi-system trauma projects enrolling through the Harborview Medical Center ED. Harborview Medical Center is part of the University of Washington and is the only Level I adult and pediatric trauma center in the four-state WAMI (Washington, Alaska, Montana, Idaho)

region. Our affiliate EMSA is located in Seattle through Seattle Fire/Medic One, and we are collaborating with EMS sites in Dallas and Los Angeles. The nodal partner's are Children's Medical Center Dallas at the University of Texas, Southwestern and Children's Hospital of Los Angeles affiliated with the University of Southern California. These centers both have large medical and trauma patient populations and are already enrolling in PECARN studies. The structure of our node includes mentorship of junior faculty members at each center who are designated Lead Co-investigators.

You have likely worked with many from our node already on PECARN and other projects. We look forward to getting to know everyone in the Network and are grateful for the connections we have already made regarding on-

going projects or with advice about how to get up and running!

There are many stakeholders in addition to the ones we list, but you can expect to see the following folks at in-person meetings and hear their voices on the calls on a regular basis.

Seattle Children's Hospital:

Eileen Klein, MD, MPH (HEDA and RNC PI), Bonnie Strelitz, MPH (NA), Neil Uspal, MD (Lead Co-Investigator), Ariundari Tsogoo (Research Coordinator), Emily Walter (Research Coordinator)

University of Texas, Southwestern:

Halim Hennes, MD (HEDA PI), Mohamad Badawy, MD (Lead Co-Investigator), Katelyn Lee (Research Coordinator)

Children's Hospital Los Angeles:

Todd Chang, MD, MAcM (HEDA PI), Pradip Chaudhari, MD (Lead Co-Investigator), Sofronia Ringold (Research Coordinator)

Seattle Fire/Medic One: Michael Sayre, MD (EMSA SA), Catherine Counts, PhD, MHA (Research Manager/Coordinator)



	<i>Seattle Children's Hospital</i>	<i>UT Southwestern/ Children's Health Dallas</i>	<i>Children's Hospital Los Angeles</i>
ED Volume	50,684	126,898	93,337
ED Admits	9,625 (19%)	11,951 (9%)	7,842 (8%)
Trauma Volume	8,831*	20,081	12,948
Trauma Admits	555*	1372	729
Number of beds	38	52	40
EMS transported	4499	8969	795
Race/Ethnicity %			
White	45%	55.5%	5.5%
Black	12%	25.4%	6.6%
Asian/Pacific Is.	11%	1.07%	4%
Native American	1%	0.17%	0.03%
Other/Mixed	32%	17.9%	83.8%
Ethnicity %			
Hispanic	21%	59.5%	75.6%
Non-Hispanic	75%	39.0%	21.8%
Unknown	4%	1.5%	2.63%
* The UW affiliated Harborview Medical Center (HMC) is the only level 1 trauma center in WA state. SCH is a level 1 trauma rehab center. HMC sees 1300 pediatric trauma cases annually (650 admitted and 160 major trauma). For studies involving multisystem/penetrating trauma, enrollment will occur at HMC (See letter of support). All other trauma studies will take place at SCH ED due to the high volume of trauma patients seen.			

WPEMR Table 1: Characteristics of Emergency Department Patients 2018

Captabilities of HEDA Sites	<i>Seattle Children's Hospital</i>	<i>UT Southwestern/ Children's Health Dallas</i>	<i>Children's Hospital Los Angeles</i>
Current Research Personnel Staffing			
Number of FTEs	5	5.8	3.5
Hours per day covered, average	14	15	15
Days per week covered	7	7	6
Trained in Human Subjects protection	Yes	Yes	Yes
Good clinical research practice training	Yes	Yes	Yes
Trauma Center Designation			
Trauma center	No*	Yes	Yes
Academics & Training			
University Affiliation	UW	UTSW	USC
Number of Faculty	34	31	22
Pediatric Emergency Medicine Fellows	9 (3 per year)	10 (ranging from 3/yr. to 4/yr.)	9 (ranging from 3/yr. to 4/yr)
Emergency Medicine Residents	48 residents	66 residents	54 residents
Resident Trainees in ED	Ped, FP, EM	Ped, FP, EM	Ped, FP, EM
* SCH ED is the regional pediatric center and HMC ED is the level 1 trauma center for WA state			

WPEMR Table 2: Research support infrastructure of HEDA sites that facilitate research

PECARN Study Updates

Registry

The PECARN Registry is an emergency care visit registry with automated transmission from the electronic health record data for pediatric patients at participating sites. The Registry currently contains data from all ED visits from nine sites spanning calendar years 2012 through mid-2019. Each site transmits data to the DCC monthly. Comprehensive data quality assurance rules have been automated to assess data quality and validation of the transmitted data.

The Registry is currently being used to directly populate pediatric emergency medicine quality-of-care performance measure report cards and has derived benchmarks for each of the measures. The Registry has data on over 3.9 M visits and 1.5 M unique patients. Data is also used for health services research, comparative effectiveness research, hypothesis generation and grant planning for the network. The Registry is utilized in four other funded PECARN grants.

C-SPINE

To date, the Round I sites for the Development and Testing of a Pediatric CSI Risk Assessment Tool have enrolled 4,651 children into the prospective observational cohort that will be used to derive a clinical prediction rule for cervical spine injury after blunt trauma. The user-centered design (UCD) portion of the study launched and activities have been conducted in Ohio, Pennsylvania, and Utah. We plan to visit the remaining Round I sites before the end of the year. We have received positive feedback from the trauma care providers who have participated in the UCD activities. We are also happy to welcome the University of Michigan to the Round I enrolling sites!

STI

Sexually transmitted infections (STIs) are highly prevalent among adolescents. Despite established principles for STI control, clinical practices related to screening, diagnosis, treatment and prevention of STIs among adolescents are suboptimal. This study aims to determine the most clinically efficient and cost-effective ED STI screening method among adolescents who would otherwise not receive preventive healthcare. This study has the potential to improve diagnosis of asymptomatic STIs and decrease the time interval to treatment, consequently decreasing reinfection rates as well as decreasing healthcare costs. The STI study currently has lead site IRB approval and started with phase one (workflow analysis) and IT development in January, 2019, and expects implementation of the pragmatic trial in late 2019.

ED-STARs

The PIs and DCC team are currently working on ED-STARs Manuscripts. To date we have had two manuscripts accepted for publication and two additional submitted for publication.

FLUID

The FLUID study enrolled ~1,800 children with diabetes: ~1,400 with DKA and 400 without DKA. The primary objective was to evaluate the effect of different fluid regimens on neurological outcomes in DKA. The main analysis was published in the NEJM last year and demonstrated no significant differences between fast and slower fluid rates on neurological outcomes; in fact, point estimates were in the direction of better outcomes with faster fluid (but not statistically significant). This liberates clinicians to use their clinical judgment when hydrating children with DKA, and not be bound by misguided fluid restriction protocols. There are multiple secondary analyses and manuscripts ongoing. A secondary analysis of the effects of fluid rehydration strategy on correction of acidosis and electrolyte abnormalities in children with DKA was presented at the American Diabetes Association's Scientific Sessions in San Francisco on June 7, 2019. A supplemental chart review is also underway at all 13 FLUID sites to support two supplemental analyses evaluating (1) the epidemiology of pediatric DKA and (2) cerebral injury or edema at ED presentation. We want to thank the research teams at these 13 sites for their prompt and attentive effort in conducting these supplemental chart reviews!

TIC-TOC (TXA)

TIC-TOC is a pilot and feasibility trial of TXA for severely injured children. TXA has the potential to safely reduce blood transfusions, morbidity, and mortality in injured children. In March, UC Davis resumed enrollment after receiving FDA and CIRB approval to enroll children using EFIC. Including one child enrolled prior to EFIC approval, UC Davis has enrolled 14 children to date. Enrollment at CHOP, PCMC, and NWCH remains on hold while these participating sites complete their community consultation activities. We anticipate that community consultations will be completed, with results reported, by the end of September.

After-ED Fracture Outcomes (IMPROVE)

This is a multi-center, longitudinal comparative effectiveness study combining Registry data with prospective outcomes data, which are collected via text messages. IMPROVE stands for "Improving Measured Pain Related Outcomes via Electronic Messaging"; very fitting considering this study aims to provide evidence to inform optimal pain treatment for a long bone fracture. Enrollment began at the lead site, MWCI, on July 8, 2019. The five participating sites followed quickly after, with enrollment open at all centers by August 8. By the end of August 165 subjects have been enrolled. Our target enrollment is 14,000 children over 4 yrs.

Biosignatures I & II

The Biosignature I/II studies are evaluating the ability of the "RNA Biosignature" to distinguish febrile infants <60 days-old with viral versus bacterial infections. This technology has the potential for rapid and accurate diagnosis of febrile infants. Biosignatures II is assessing the stability of the RNA signature via sequential sampling. Enrollment has closed for the bacteremia, bacterial meningitis, and UTIs cohorts. We are still enrolling in the healthy control cohort. To date 2,612 infants have been enrolled, with 306 sequential samples! We are now focusing the majority of our efforts on the manuscripts for the Biosignature II studies. For Biosignatures I, our main manuscript on The Accuracy of Biosignatures is expected to be submitted to JAMA this fall. For Biosignatures II, our focus is to move forward with as many manuscripts as feasible in the remaining grant funding period. Prioritization is being made for the validation of the Biosignature I prediction rule, and predictors of radiographic pneumonia. To follow will be several Biosignature manuscripts, as well as a manuscript looking at the risk of meningitis given a positive UA.

Arginine

A UG3 grant, titled the STAR-T Trial, was re-submitted to the NHLBI prior to the July 13, 2019, deadline. It is scheduled to be reviewed by the Special Emphasis Panel on November 6, 2019. The Arginine manuscript on Normal Saline bolus was published in Am Journal Hematology in June 2019. Two additional manuscripts on use of intranasal Fentanyl and ED adherence to the 2014 NHLBI guidelines are in the works.

PED SCREEN

PED SCREEN addresses the critical need to improve pediatric sepsis outcomes by developing methods to accurately identify at-risk children presenting for emergency care. The project will capture electronic health record (EHR) data to create a multi-center registry with the ultimate goal of improving the detection and treatment of pediatric sepsis in the emergency department (ED) setting. To accomplish this, we will automate the determination of organ dysfunction in children with sepsis directly from structured and narrative data in an expanded multicenter EHR patient registry. That data will be used to derive and validate a prediction model of pediatric sepsis that predicts subsequent organ dysfunction within 48 hours using ED EHR data from the first 4 hours of care. Innovative deliverables from this project include the existence of a broad and rich EHR registry, an automated process of outcome determination, and a prediction model of risk of sepsis.

ASSESS

ASSESS is currently working on its last three publications. To date, the team has had eight publications and has one additional manuscript under review.

SCIENCE

The SCIENCE study, designed to prepare PECARN Registry sites for participation in a large implementation trial improving guideline adherent care for children with sickle cell disease presenting with pain, continues to make excellent progress. Baseline timeliness of opioid administration has been measured and the processes for both opioid and hydroxyurea usage have been mapped. We will now roll those maps out to all participating sites and determine barriers and facilitators to delivering guideline adherent care from the family and provider perspectives.

ED-SAMS

ED-SAMS began enrollment September 3rd, 2019. We are recruiting subjects 6-12 years old who present to the ED with an acute asthma attack over a 90 day recruitment period. Subjects will be followed for 120 days. This preliminary study will be evaluating whether or not it is feasible to conduct, and if it will be acceptable to providers, schools and families to dispense medication in the ED and supervise its use in a school setting.

Probiotics

Since the publication of the main manuscript "Lactobacillus rhamnosus GG versus Placebo for Acute Gastroenteritis in Children," in the New England Journal of Medicine last year, the Probiotics investigators and the DCC have continued to analyze data and write additional manuscripts. Most recently, the age weight/dose manuscript is under review at a journal, the adherence and IV hydration manuscripts are being reviewed by GAPS. Ten additional manuscripts are in various stages of completion, from preparation of results to editing. Stools are being analyzed at Dr. Tarr's lab at WashU in St. Louis for pathogen clearance and microbiome restoration analyses.

SPEED

Creation of a EHR-based CDS for antibiotic prescribing will eventually lead to generalizable methods to implement antimicrobial stewardship in the ED, reduce inappropriate and unnecessary antibiotic prescribing, and lessen the negative health consequences from antibiotic-resistant bacterial infections. Year 1 of the grant was completed in June 2019. Phase 1 of the project, which includes guideline adaptations, workflow analysis, and EHR trigger development, is nearly complete. We plan to start phase 2, EHR-CDS build, this Fall (2019).

Summaries of Recent PECARN Publications

SUMMARY

This manuscript assessed the variability in use of intravenous fluids, the association of normal saline bolus on pain, and other clinical outcomes in children with Sickle Cell Anemia (SCA) who presented to the pediatric emergency department with a vaso-occlusive episode (VOE). 400 medical records of children, ages 3-21 years old with SCA/VOE who received parenteral opioids, were reviewed regarding the type and amount of intravenous fluids that were used. The association of normal saline bolus use on change in pain scores and admission rates was evaluated. It was found that intravenous fluids were used in 84% of patients. Eight different types of intravenous fluids were utilized and the volume given varied. Pain scores were similar between those who received normal saline bolus and those who did not; however, improvement in pain scores from presentation to ED disposition was smaller in the group who received normal saline bolus and admission rates were higher. In summary, use of normal saline bolus remained associated with poorer final pain scores and worse change in pain scores; however it was acknowledged that a controlled prospective trial would be valuable to determine causality.

Carden MA, Brousseau DC, Ahmad FA, Bennett J, Bhatt S, Bogie A, Brown K, Casper TC, Chapman LL, Chumpitazi CE, Cohen D, Dampier C, Ellison AM, Grasemann H, Hickey RW, Hsu LL, Leibovich S, Powell E, Richards R, Sarnaik S, Weiner DL, Morris CR; Sickle Cell Disease Arginine Study Group and the Pediatric Emergency Care Applied Research Network (PECARN). Normal saline bolus use in pediatric emergency departments is associated with poorer pain control in children with sickle cell anemia and vaso-occlusive pain. *Am J Hematol*. 2019 Jun;94(6):689-696. doi: 10.1002/ajh.25471. Epub 2019 Apr 29. PMID:30916794

SUMMARY

This manuscript aimed to determine the feasibility of conducting a pragmatic randomized trial to compare balanced (lactated Ringer's [LR]) with 0.9% normal saline (NS) fluid resuscitation in children with suspected septic shock.

The trial was conducted at a single children's hospital from January to August 2018. Eligible patients were >6 months to <18 years old who were treated in the emergency department for suspected septic shock, operationalized as blood culture, parenteral antibiotics, and fluid resuscitation for abnormal perfusion. Patients were randomized to receive either LR or NS for up to 48 hours following randomization. Other than fluid type, all treatment decisions were at the clinical team's discretion.

Of 59 eligible patients, 50 (85%) were enrolled and randomized. Only one (2%) of 44 patients enrolled using EFIC withdrew before study completion.

A pragmatic study design proved feasible to study comparative effectiveness of LR versus NS fluid resuscitation for pediatric septic shock.

Pragmatic Pediatric Trial of Balanced Versus Normal Saline Fluid in Sepsis: The PRO-MPT BOLUS Randomized Controlled Trial Pilot Feasibility Study. Balamuth F, Kittick M, McBride P, Woodford AL, Vestal N, Casper TC, Metheny M, Smith K, Atkin NJ, Baren JM, Dean JM, Kuppermann N, Weiss SL. *Acad Emerg Med*. 2019 Jun 10. doi: 10.1111/acem.13815. [Epub ahead of print] PMID: 31183919

SUMMARY

The aim of this study was to examine whether the NIAAA two-question alcohol screen was positively associated with cannabis use disorder (CUD), cigarette smoking, or lifetime use of other drugs. Sixteen PECARN sites administered an assessment battery that included the NIAAA two-question screen to 4834 youth, ages 12-17, who were being seen in the ED for a non-life threatening injury, illness, or mental health condition. If any alcohol use was reported among middle school respondents, they were categorized as moderate or high risk. High school users were categorized as lower, moderate, or high risk based on their frequency of use. The study found that the NIAAA screen risk category was significantly associated with CUD diagnosis, cigarette smoking, and use of most other drugs. Endorsement of any drinking in the past year was found to be positively associated with a CUD, lifetime tobacco use, and lifetime use of other drugs. This association was found for both males and females, youth of Hispanic and non-Hispanic ethnicity, and all races.

Anthony Spirito, Julie R. Bromberg, T. Charles Casper, Thomas Chun, Michael J. Mello, Colette C. Mull, Rohit P. Sheno, Cheryl Vance, Fahd Ahmad, Lalit Bajaj, Kathleen M. Brown, Lauren S. Chernick, Daniel M. Cohen, Joel Fein, Timothy Horeczko, Michael N. Levas, B McAninch, Michael C. Monuteaux, Jackie Grupp-Phelan, Elizabeth C. Powell, Alexander Rogers, Brian Suffoletto, James G. Linakis & for the Pediatric Emergency Care Research Network (PECARN) (2019) Screening for Adolescent Alcohol Use in the Emergency Department: What Does It Tell Us About Cannabis, Tobacco, and Other Drug Use?, *Substance Use & Misuse*, 54:6, 1007-1016, DOI: 10.1080/10826084.2018.1558251

SUMMARY

This study is a randomized trial that enrolled 4778 non-critically ill infants <60 days old presenting with a fever to the ED. The infants were divided into two groups, 0-28 days and 29-60 days to analyze any differences in the various diagnostic testing and hospitalizations between these two groups. It was found that testing and hospitalization was highly variable for the 29-60 day old group. This finding presents an opportunity to make modifications to diagnostic testing so that invasive testing and hospitalization may be safely decreased.

Rogers AJ, Kuppermann N, Anders J, Roosevelt G, Hoyle JD Jr, Ruddy RM, Bennett JE, Borgialli DA, Dayan PS, Powell EC, Casper TC, Ramilo O, Mahajan P. Practice Variation in the Evaluation and Disposition of Febrile Infants < 60 days. *Febrile Infant Working Group of the Pediatric Emergency Care Applied Research Network (PECARN)*. *J Emerg Med*. 2019 Jun;56(6):583-591. doi: 10.1016/j.jemermed.2019.03.003. Epub 2019 Apr 20.

Federal Corner

Emergency Medical Services for Children (EMSC) Program Updates

Great News- EMSC Program Reauthorized!

The federal reauthorization of the EMSC program for four years was signed into law August 22, 2019 (Public Law No: 116-49). <https://www.congress.gov/bill/116th-congress/house-bill/776>



Welcome to the

PEDIATRIC EMERGENCY CARE APPLIED RESEARCH NETWORK

Welcome to Seattle and Rhode Island research nodes

The EMSC program is excited to welcome the two new nodes to the PECARN network for the 2019-2022 grant cycle and looking forward to working together over the next four years. Congratulations to Dr. Eileen Klein and Dr. Thomas Chun and their teams for their successful applications.

Critical Crossroads Toolkit Available

The Critical Crossroads toolkit is a new resource to help hospital emergency departments better manage and coordinate care for children and adolescents in mental health crisis. Critical Crossroads is a product of a partnership between HRSA's Maternal and Child Health Bureau, Emergency Medical Services for Children Program and HRSA's Federal Office of Rural Health Policy. The toolkit was developed to help guide the development of care pathways and allows hospitals to tailor the resources to their specific needs, patient population, and community. You can view a webinar and download the toolkit at: <https://www.hrsa.gov/critical-crossroads>.



Targeted Issues Grant Program announces five new awards

The EMSC Targeted Issues grant program has awarded five new grants for the 2019-2022 grant cycle. The focus of these grants is building the evidence chain between pediatric readiness and improved pediatric clinical care and outcomes. Two grants will assess the impact of Emergency Department pediatric readiness and three grants will assess the impact of the presence of a Pediatric Emergency Care Coordinator in prehospital EMS agencies. Details about the awards are available here: <https://emscimprovement.center/programs/issues/>

Prehospital Pediatric Readiness Initiative

The EMSC Innovation and Improvement Center (EIIC) is convening a Prehospital Pediatric Readiness Steering Committee co-chaired by Dr. Kathy Brown and the EIIC's Sam Vance to help plan and guide next steps for improving pediatric readiness in the prehospital setting. The focus of this Initiative is improvement of pediatric emergency care outcomes and patient safety within the prehospital environment by identifying gaps and priority areas and coordinating complimentary public relations activities among national partners. The first in-person meeting will be held in Rockville, Maryland September 5-6, with representatives from 16 national EMS focused organizations and three federal EMS focused agencies. Project goals include development of deliverables such as:

- An EMS Pediatric Readiness Toolkit
- A nationwide assessment of pediatric readiness within EMS Systems
- Outcome and Improvement metrics and measurement tools

Pediatric Emergency Care Coordinator (PECC) Learning Collaborative and Community of Practice

The EMSC Prehospital Pediatric Emergency Care Coordinator Learning Collaborative (PECCLC) started in October 2018 with the selection of nine states (CT, KY, OH, MT, NM, NY, OH, PA, RI, & WI). The purpose of the collaborative was to increase the number of PECCs within those states, as well as to gain information such as who serves in the PECC role, what are their responsibilities, and what are the benefits of having a PECC. Each state was required to create a target number of EMS agencies to establish new PECCs across the project duration. At a minimum, this target had to include a majority of state EMS agencies that reported not having a PECC, but indicated an interest in adding this role on the 2017-18 National EMSC Assessment. The goal submitted by the nine participating states was to add 369 new PECCs. At the end of the collaborative on March 31, 2019 a total of 340 new PECCs were recruited and many states have continued to recruit PECCs.

Resources developed from this collaborative will be shared with all states and US territories. Additionally, the EMSC program in collaboration with the EIIC are developing a Prehospital PECC Community of Practice, open to all 58 EMSC State Partnership grantees. For more information on the PECC Learning Collaborative, please visit: <https://emscimprovement.center/collaboratives/pecclc/>



EMSC | IIC



Quality Improvement in Emergency Medical Services for Children White Paper

A new white paper on quality improvement and emergency medicine, produced by Atlas Research for the EMSC program with input from both the EIIC and the National EMSC Data Analysis Resource Center (NEDARC), is now available. Quality Improvement in Emergency Medical Services for Children (EMSC) describes for EMSC grantees and stakeholders how quality improvement (QI) is an effective method for testing and spreading the delivery of optimal, effective pediatric emergency medicine. This paper gives a brief overview of the QI approach, explores QI measures and the potential approaches to measurement in emergency care, discusses how EMSC actively applies QI to advance its mission, highlights successful examples of QI as applied to improving pediatric emergency care, and discusses opportunities for EMSC stakeholders to actively engage in existing and future QI efforts. Examples of successful efforts include participating in QI collaboratives, integrating QI into research priorities and disseminating evidence to stakeholders, the broader field and the public. This paper is available at: <https://emscimprovement.center/news/new-white-paper-quality-improvement-emergency-medical-services-children-emsc/>



NHTSA

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Health Resources & Services Administration

Prehospital Care Webinar

The EMSC Program sponsored a Webinar on “Prehospital Care of Children: Review of Evidence Based Guidelines” which focused on pre-hospital pediatric evidence-based guidelines for the management of asthma, seizures, pain, and cardiac arrest. The webinar is archived on the EIIC website at: <https://emscimprovement.center/education-and-resources/webinars/>.

Updates from the National Highway Traffic Safety Administration Office of Emergency Medical Services (OEMS)

Revision of the National EMS Education Standards

For a decade, the National EMS Education Standards have helped educators, certification bodies and regulators ensure EMS providers receive an education that prepares them to effectively perform their roles. This initiative, led by the National Association of EMS Educators and supported by NHTSA and HRSA, will revise the National EMS Education Standards to align them with the recently completed revision to the National EMS Scope of Practice Model and will update the standards to reflect the latest evidence and current EMS practice. For more information, visit: <https://www.ems.gov/projects/ems-education-standards.html>

National EMS Quality Alliance

NHTSA and HRSA have supported the creation of the National EMS Quality Alliance (NEMSQA) to continue the work started several years ago by the EMS Compass project. Led by the American College of Emergency Physicians, NEMSQA is a collaborative effort of dozens of EMS organizations to develop and endorse evidence-based quality measures that will help EMS systems improve patient outcomes.

Building upon the process developed by the EMS Compass initiative, NEMSQA expects to be releasing its first set of measures soon. Find out more and follow the process at <http://www.nemsqa.org/>.

CPR Lifelinks

CPR LifeLinks is a national initiative supported by NHTSA and HRSA, to help communities save more lives through the implementation of high-performance CPR and 911 dispatcher assisted CPR programs. According to the American Heart Association, only 46% of the 250,000 people who experience out-of-hospital cardiac arrest in the U.S. each year get immediate help before a professional arrives. In response to a recommendation by the National Academies, EMS and 911 stakeholders created a comprehensive CPR program implementation toolkit for every 911 and EMS agency in the country to work collaboratively to improve cardiac arrest survival rates. For more information, go to: <https://www.ems.gov/projects/cpr-lifelinks.html>.



CPR LifeLinks

Naloxone Evidence Based Guidelines (EBG)

The National Association of State Emergency Medical Services (EMS) Officials (NASEMSO), in collaboration with the National Association of EMS Physicians (NAEMSP) and the American College of Emergency Physicians (ACEP), recently released the first evidence-based guideline for EMS administration of naloxone for suspected opioid overdoses. An enhanced version of the Naloxone EBG Training Module with narration is available on the project website. The voice-over provides explanation of the slides, which makes it ideal for a training program. You can find the link on the project webpage at <https://nasemso.org/projects/naloxone-evidence-based-guidelines/>

SPARC Node

Welcome SPARC Team!!!



Thomas Chun, MD, MPH
SPARC RNC PI



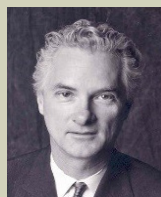
Erin Ryan, MPH, CCRP
SPARC Nodal Admin



Jacqueline Grupp-Phelan, MD, MPH
UCSF HEDA PI



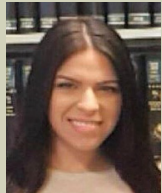
Lisa Lavrisha, RN, PNP
UCSF Research Coordinator



Karl Sporer, MD
EMSA Co-Advisor



James Linakis, PhD, MD
Hasbro HEDA PI



Sierra Irizarry
Hasbro Research Coordinator



Claudia Morris, MD
Emory HEDA PI



Peace Nuwagaba
Emory Research Coordinator



Nicolaus Glomb, MD, MPH
EMSA Co-Advisor

In nodal news - **Claudia Morris, MD** was promoted to Professor of Pediatrics and Emergency Medicine at Emory University School of Medicine on September 1, 2019.

HOMERUN Node



Patricia (Tricia) Cobb, MS, CCRC
is the new co-nodal administrator and will eventually transition into the NA role in full.

PEM-NEWS Node

Raquel Shrager became the new Nodal Administrator for PEM-NEWS. She became a part of PEM-CARN on May 1, 2019.



Raquel Shrager

CHaMP Node



Adrian Hamouda
joined the CHaMP Node on February 11, 2019 as their new Nodal Administrator.

DCC

Lisa Young is the DCC's new IT Director as of Aug 21.

Russ Telford is the new Statistical Director effective Sept. 5.

McKenna Smith and **Monica Harding** joined the Biostatistics team in April and May.



Lisa Young



Russ Telford



McKenna Smith



Monica Harding

NEW FACES & NODAL NEWS

WPEMR Node

Welcome WPEMR Team!!!



Eileen Klein, MD, MPH
WPEMR RNC PI & SEAT HEDA PI



Bonnie Strelitz, MPH
WPEMR Nodal Admin



Ariundari Tsogoo
Seattle Children's Research Coordinator



Emily Walter
Seattle Children's Research Coordinator



Michael Sayre, MD
EMSA Co-Advisor



Halim Hennes, MD
University of Texas/Southwestern HEDA PI



Katelyn Lee
University of Texas/Southwestern Research Coordinator



Todd Chang, MD, MAC
Children's Hospital Los Angeles HEDA PI



Sofronia Ringold
Children's Hospital Los Angeles



Catherine Counts, PhD, MHA
EMSA Research Manager Coordinator

GLEMSCRN Node

New RCs:

Olivia-Marie Groves & Ryan Czarnecki: Nationwide Children's Hospital

Nazila Mirzadjahromi: University of Michigan

Michelle Mazza: Children's Hospital of Pittsburgh

Departures:

Nationwide Children's Hospital: **Cindy Lin, RC**, moved on to Medical School.

University of Michigan: **Ann Sobel, RC**, moved on to Medical School and **Noelle Herzog, RC**, is pursuing her PhD in Psychology.

Children's Hospital of Pittsburgh: **Rose Azrak, RN, MBA**, has taken on a new role at Children's Hospital of Pittsburgh as a Nurse Manager.

PRIME Node

PRIME Node has added **Daniel Nishijima**, as nodal co-PI. **Tiffani Johnson** has taken a faculty position at UC Davis. **Toni Harbour** has been promoted to Research Manager at Primary Children's, Utah and will serve as HEDA Research Coordinator.



Rebecca Haber - CHOP
June 2019 - RC



Jasman Kaur - UC Davis
July 2019 - RC

In April, the **PECARN team at UC Davis** was awarded the **2018 Dean's Team Award for Excellence in Research**. UC Davis PECARN team was recognized for their remarkable track record in leading and conducting high impact research studies and the team's communication, resourcefulness and camaraderie.



Toni Harbour - Primary Children's
July 2019 - HEDA RC