

Our Purpose



Community



EMS



Community ED



Inter-facility
Transport



Pediatric ED



Children's Hospital



Home

Improve the Care for Children through Education



Pediatricians and Pediatric
Specialists



Children



Prehospital Professionals



Hospital Staff



Parents and Family

And more...

PPPN learning ecosystem

An evidence-based, effective approach to education by **using a variety of tools and platforms** to meet learners where they are in terms of:



Knowledge
Skills
Interests



Devices
Platforms



Modalities
Formats

Problem Identification and Needs Assessment

- Health Care Problem
- Current Approach
- Ideal Approach

Evaluation and Feedback

- Individual Learners
- Program

Targeted Needs Assessment

- Learners
- Learning Environment

Implementation

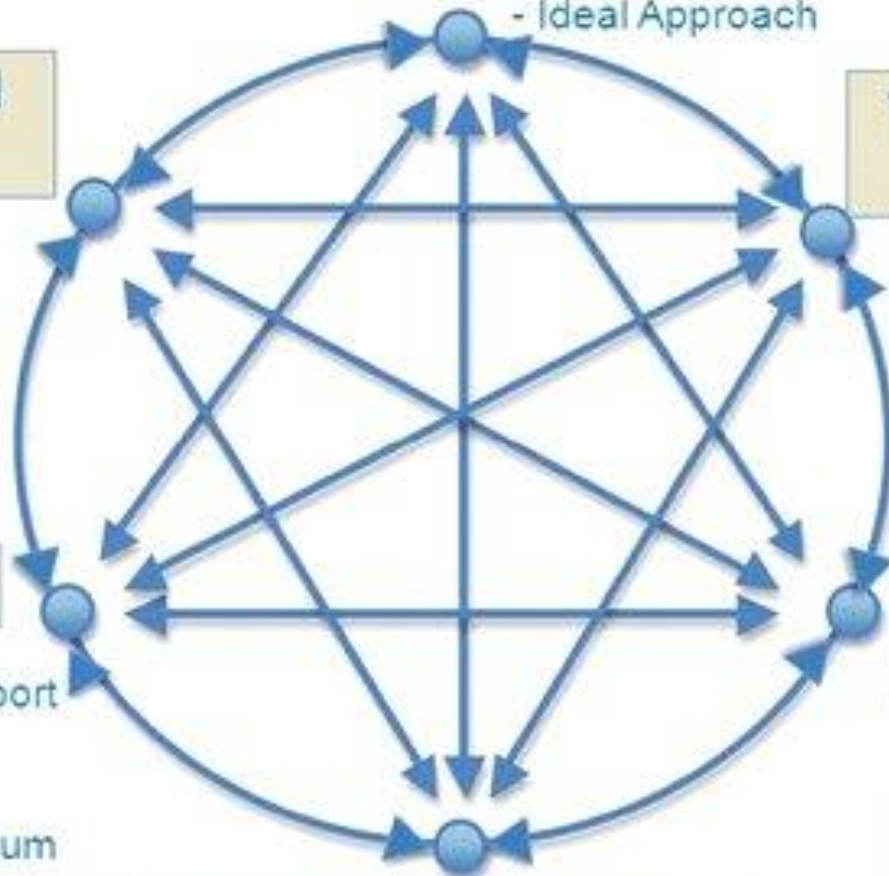
- Obtaining Political Support
- Securing Resources
- Addressing Barriers
- Introducing the Curriculum
- Administering the Curriculum

Goals and Objectives

- Broad Goals
- Specific Measurable Objectives

Educational Strategies

- Content/Method/Simulation





1

Educational Publishing



Leveraging PPN platforms and partner platforms, our domain will help you strategize the best way to publish your resources for broad access and sharing.

2

Expert Consultation



Our design team consists of experts in medical education, instructional design, open access, accessibility, etc. all eager to consult on your project.

3

Resource Enhancement



Our development team consists of instructional designers, videographers, medical illustrators, etc. with the skills to enhance your products.

4

Microlearning Development



From interactive video to branching scenarios, we can help you build short and complete learning experiences that are easily shareable.

5

Macrolearning Development



We are here to help you strategize, design, develop, implement, and evaluate comprehensive learning experiences and distribute them nationally.

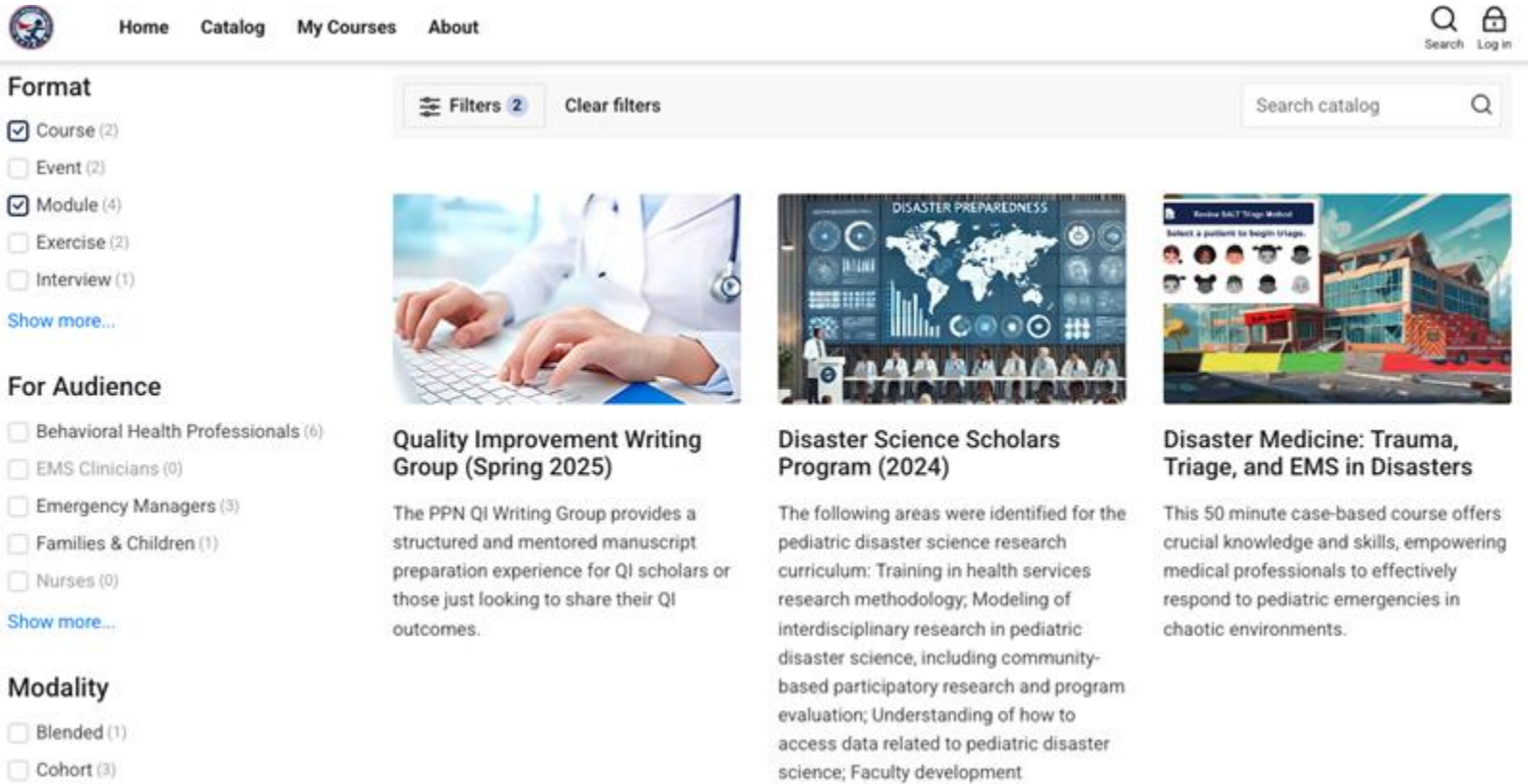
PPN Learning Ecosystem: Platforms

- PPN Learn
- PPN Continuing Education Platform
- PPN Resource Central
- PPN MicroLearn
- PPN Analytics

PPN Learn

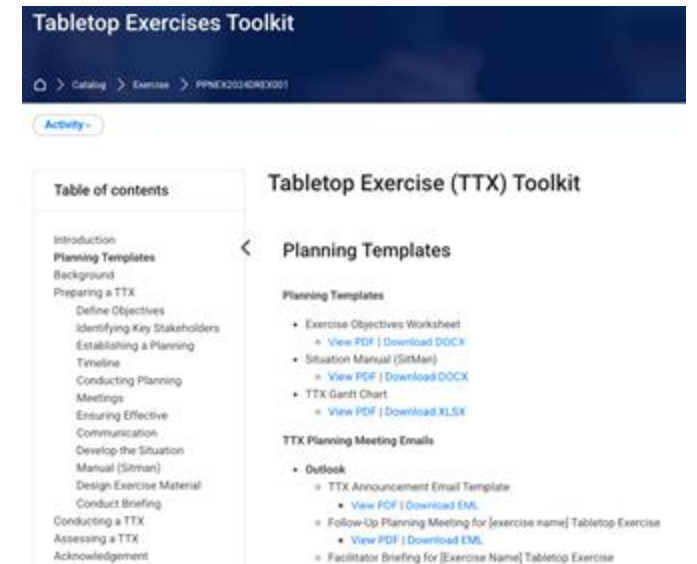
Purpose

A learning management system and catalog where all PPN created learning products are hosted. It allows creation of public or private courses, cohorts, collaboratives, forums, assignments, videos and many other activity types.



The screenshot shows the PPN Learn catalog interface. At the top, there is a navigation bar with 'Home', 'Catalog', 'My Courses', and 'About'. On the right, there are search and login icons. Below the navigation bar, there is a 'Format' section with checkboxes for 'Course (2)', 'Event (2)', 'Module (4)', 'Exercise (2)', and 'Interview (1)'. A 'Filters 2' button and 'Clear filters' link are also present. A search bar labeled 'Search catalog' is on the right. Below the filters, there are three course listings:

- Quality Improvement Writing Group (Spring 2025)**: The PPN QI Writing Group provides a structured and mentored manuscript preparation experience for QI scholars or those just looking to share their QI outcomes.
- Disaster Science Scholars Program (2024)**: The following areas were identified for the pediatric disaster science research curriculum: Training in health services research methodology; Modeling of interdisciplinary research in pediatric disaster science, including community-based participatory research and program evaluation; Understanding of how to access data related to pediatric disaster science; Faculty development
- Disaster Medicine: Trauma, Triage, and EMS in Disasters**: This 50 minute case-based course offers crucial knowledge and skills, empowering medical professionals to effectively respond to pediatric emergencies in chaotic environments.



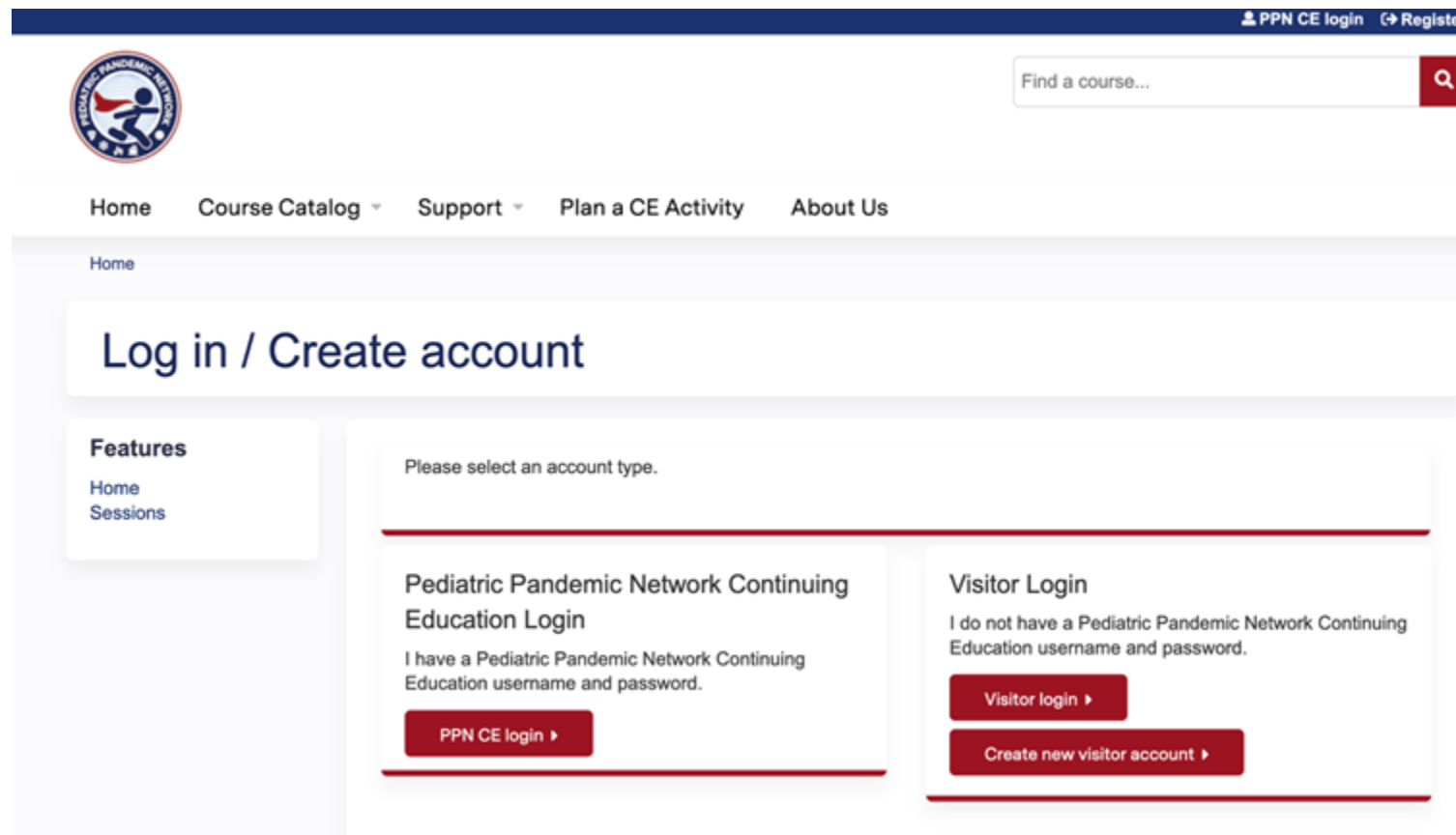
The screenshot shows the 'Tabletop Exercises Toolkit' interface. At the top, there is a dark blue header with the title 'Tabletop Exercises Toolkit'. Below the header, there is a breadcrumb trail: 'Catalog > Exercise > PPNEX2024REX001'. A search bar is also present. The main content area is divided into two columns:

- Table of contents**: A list of sections including Introduction, Planning Templates, Background, Preparing a TTX, Define Objectives, Identifying Key Stakeholders, Establishing a Planning Timeline, Conducting Planning Meetings, Ensuring Effective Communication, Develop the Situation Manual (SitMan), Design Exercise Material, Conduct Briefing, Conducting a TTX, Assessing a TTX, and Acknowledgement.
- Tabletop Exercise (TTX) Toolkit**: A section titled 'Planning Templates' containing a list of resources:
 - Exercise Objectives Worksheet
 - View PDF | Download DOCX
 - Situation Manual (SitMan)
 - View PDF | Download DOCX
 - TTX Gantt Chart
 - View PDF | Download XLSX
 - TTX Planning Meeting Emails
 - Outlook
 - TTX Announcement Email Template
 - View PDF | Download EML
 - Follow-Up Planning Meeting for [exercise name] Tabletop Exercise
 - View PDF | Download EML
 - Facilitator Briefing for [Exercise Name] Tabletop Exercise

PPN Continuing Education

Purpose

A platform for coordinating the application for issuing and earning CE for physicians, nurses, social workers, and EMS professionals.



The screenshot shows the PPN CE website home page. At the top right, there are links for "PPN CE login" and "Register". Below this is a search bar with the placeholder text "Find a course...". The main navigation menu includes "Home", "Course Catalog", "Support", "Plan a CE Activity", and "About Us". The page content features a "Log in / Create account" section with a prompt "Please select an account type." Below this, there are two columns of login options. The left column is for "Pediatric Pandemic Network Continuing Education Login" and includes a "PPN CE login" button. The right column is for "Visitor Login" and includes "Visitor login" and "Create new visitor account" buttons.



The screenshot shows the "Pediatric Behavioral Health in Disasters" curriculum page. It features a navigation menu with "Overview", "Faculty", "Accreditation", and "Register". The main content area includes a welcome message: "Welcome to the Pediatric Behavioral Health in Disasters Curriculum. The content presented will follow the four cycles identified in the disaster management cycle: Preparedness, Response, Recovery, and Mitigation. This curriculum is designed to be a primer in disaster mental health. Learners will receive guidance in providing just-in-time intervention, identifying opportunities for professional growth, and in taking actionable steps to improve everyday readiness." To the right of the text is a circular diagram with four segments: "PREPAREDNESS" (blue), "RESPONSE" (red), "RECOVERY" (red), and "MITIGATION" (blue). A yellow banner at the top of the diagram reads "DISASTER OCCURRED". Below the diagram, there is a publication note: "Published in December 2024 in Pediatrics, A State of the Art Review. Supporting Children's Mental Health Needs in Disasters summarizes the available evidence, integration of behavioral health into the disaster phases, promoting equity in mental health considerations, and strategies and gaps in addressing pediatric mental health in disasters."

PPN Resource Central

Purpose

A resource database aiming to index high quality and trusted resources on PPN platforms and beyond.



Earthquakes happen quickly and can result in significant damage to property and people. PPN's Resource Central has links to information that may be helpful for families to know what to do before, during, and after an earthquake event.

Search the Resource Central website for more resources with the term "Earthquakes" for more information.



- Job Aid**
Earthquake Safety
This website provides comprehensive information on preparing for earthquakes for families, including children, older adults, people with disabilities, and pets.
American Red Cross · 2024
- Job Aid**
Earthquake Preparedness for Pregnant Women and Families With Infants
This fact sheet provides guidance on what to do before, during, and after an earthquake. It includes a checklist of emergency supplies and addresses the signs of preterm labor.
American Public Health Association · None
- Book**
Earthquake Safety Checklist
This booklet helps you and your family plan and survive a major earthquake. Prepare by setting aside supplies and making a plan for home, work, and school.
Federal Emergency Management Agency (FEMA) · 2022
- Summary**
(NCTSN) Trauma Types: Disasters: Earthquake Resources
This resource addresses the emotional needs of children and how to meet them in the event of an earthquake, providing infographics and booklets promoting earthquake safety in 18 languages.
- Summary**
Earthquake Country Alliance (ECA) and ShakeOut Documents in Many Languages
This page provides links to extensive infographics and booklets promoting earthquake safety in 18 languages.
- Demonstration**
Great ShakeOut Earthquake Drills
This YouTube channel from ShakeOut contains videos and PSAs related to the Great ShakeOut Earthquake Drills.



This collection provides resources that offer free continuing education credits for various professions. Each resource page notes the type of continuing education credits offered and any credit expiration date. Where applicable, credits offered directly by the PPN are clearly noted. Through these resources, healthcare professionals can receive credit while preparing to provide high-quality pediatric care in everyday emergencies, disasters, and global health threats. This collection is maintained by the Pediatric Pandemic Network. For questions related to continuing education at the PPN, reach out to ce@pedspandemicnetwork.org.

Search keyword, ex. Norovirus

Sorted by Relevance

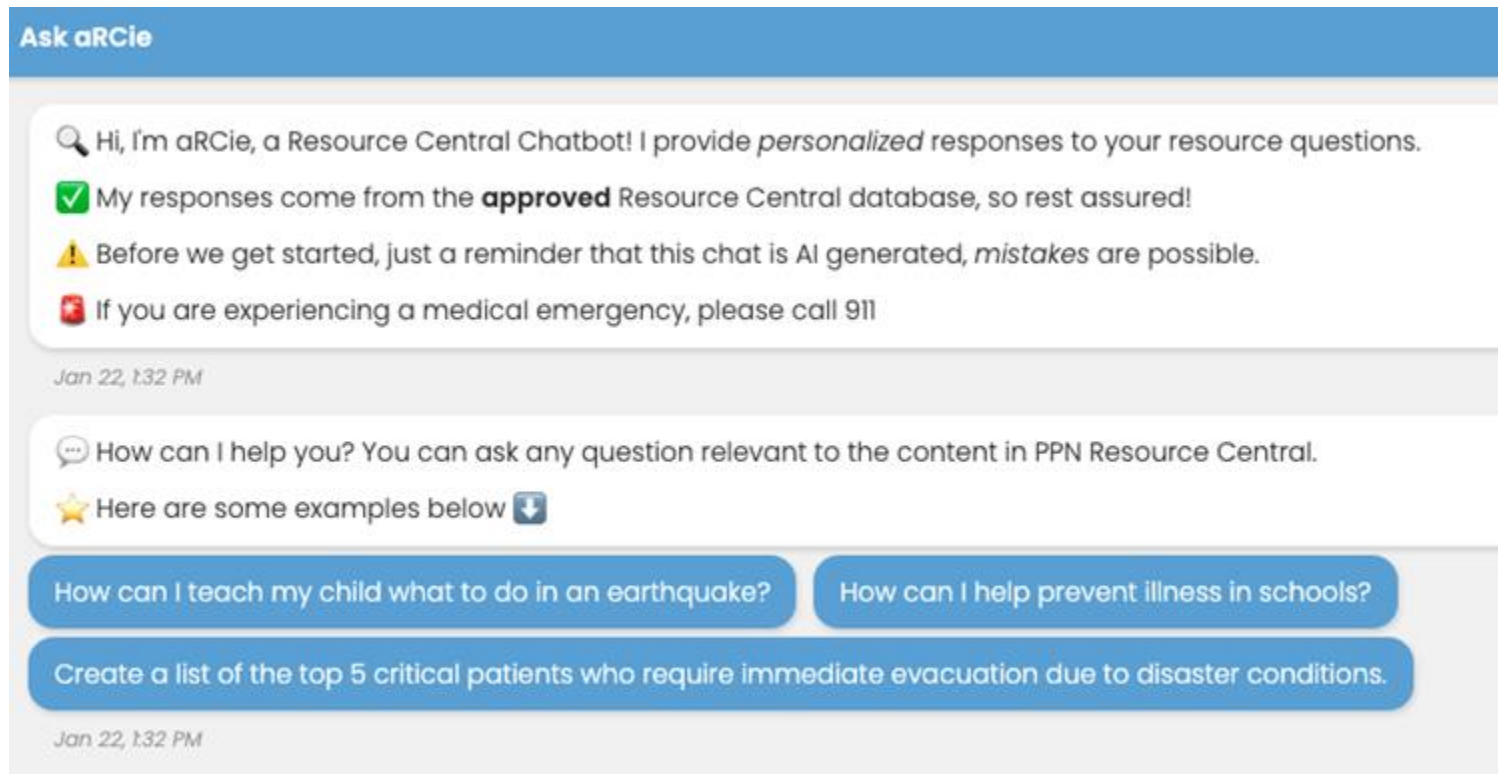
- Search Filters
- 1-10 of over 20 results
- FOCUS AREA**
- Everyday Emergency (13)
 - Natural Disasters (8)
 - Trauma (6)
 - Infectious Disease (3)
 - Severe Weather (5)
 - Violence (3)
 - CBRNE (2)
 - Infrastructure Failure (1)
 - Mental Health (8)
- EMERGENCY MANAGEMENT STAGE**
- Preparedness (Prevention / Protection) (24)
 - Recovery (8)
 - Response (8)
 - Mitigation (3)
- Key Planning Factors and Considerations for Response to and Recovery from a Chemical Incident Continuing Education**
Federal Emergency Management Agency (FEMA)
This FEMA course is about planning for chemical incidents. It describes important steps to respond and recover from such events. The focus is on education ...
 (1)
- Impact of Climate Change on Pediatric Health Care**
2023 · American Board of Pediatrics
The American Board of Pediatrics has partnered with pediatric subject matter experts to provide this maintenance of certification (MOC) part 2 article-based self-assessment, titled "Policy ..."
 (1)
- IS-368.A: Including People With Disabilities in Disaster Operations**
2023 · Federal Emergency Management Agency (FEMA)
The course IS-368.A is about including people with disabilities in disaster operations. It describes how to ensure that emergency plans and responses consider the needs ...

A screenshot of the "Submit a Resource" page. The form is titled "Resource Intake Form" and includes fields for "Title or Name of the Resource", "Primary Contact Email", "Link 1", and "Additional Links". A "Submit" button is at the bottom right.

PPN MicroLearn Platform

Purpose

A flexible authoring platform for creating rules-based chatbots enhanced by generative AI. Chatbots may be programmed to provide an adaptive and personalized curriculum as well as behave as an open ended generative resource assistant. **Web, SMS, WhatsApp, Teams are all available channels.**



The screenshot displays a chatbot interface titled "Ask aRCie". The chatbot's initial message includes a search icon, a green checkmark, a warning icon, and a red first aid icon. Below the chatbot's message, there is a timestamp "Jan 22, 1:32 PM". The user's response includes a speech bubble icon and a star icon. Below the user's message, there are three example questions in blue rounded rectangles. A second timestamp "Jan 22, 1:32 PM" is visible at the bottom of the screenshot.

Ask aRCie

Hi, I'm aRCie, a Resource Central Chatbot! I provide *personalized* responses to your resource questions.

My responses come from the **approved** Resource Central database, so rest assured!

Before we get started, just a reminder that this chat is AI generated, *mistakes* are possible.

If you are experiencing a medical emergency, please call 911

Jan 22, 1:32 PM

How can I help you? You can ask any question relevant to the content in PPN Resource Central.

Here are some examples below ↓

How can I teach my child what to do in an earthquake?

How can I help prevent illness in schools?

Create a list of the top 5 critical patients who require immediate evacuation due to disaster conditions.

Jan 22, 1:32 PM

PPN Learning Analytics

Purpose

A centralized hub for tracking analytics dashboards for learning outcomes and usage integrated with PPN analytics portal to measure behavior change/organizational outcomes.

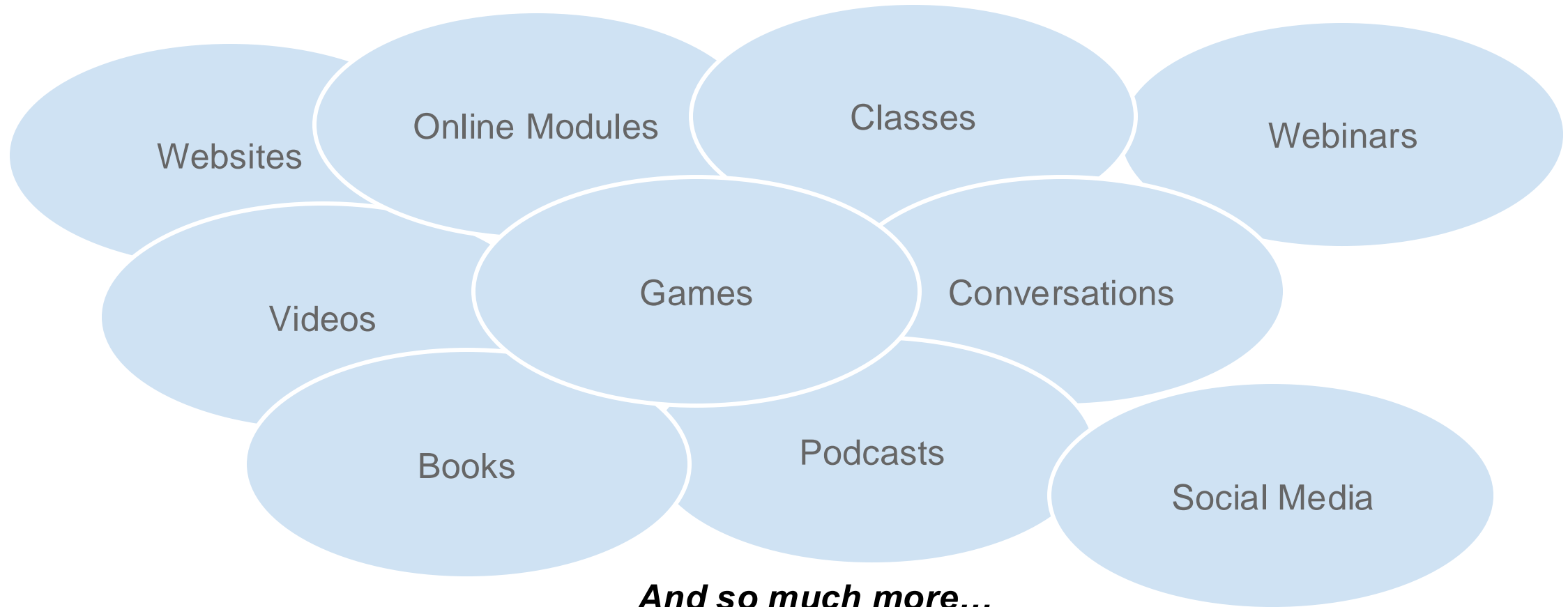
Q :Retrospective pre-/post-module survey

A : Agree, Disagree, Strongly Agree, Strongly Disagree,

Question	Response	Pre	Post
I can describe the epidemiology of pediatric poisonings.	Agree	8	10
	Disagree	6	0
	Strongly Agree	0	4
I can develop a framework to approach the poisoned pediatric patient.	Agree	11	8
	Disagree	3	0
	Strongly Agree	0	6
I can recognize common toxicologic syndromes (toxidromes) associated with specific poison classes.	Agree	12	5
	Disagree	1	0
	Strongly Agree	1	9



PPN Learning Ecosystem: Products



Bookmark this site





Ready. Prep. Go! Podcast

A podcast from the Pediatric Pandemic Network

Apple Podcast

Spotify

Google

Android

Amazon Music

iHeartRadio

Pandora

Podchaser

Deezer

by Email

RSS

**New episodes drop every other week on
Tuesdays.**

Disaster Medicine Modules



Target Learners: Community-based pediatricians and pediatric residents

A screenshot of a video player interface. The top left features the 'PEDIATRIC PANDEMIC NETWORK' logo, which is a circular emblem with a stylized figure and text. Below the logo is a 'MENU' section with a list of items, each with a checkmark: 'Conclusion of Scenario 1: Pediat...', 'Conclusion of Scenario 1: Pediat...', 'Scenario 2: Pediatric Clinic Shut...', 'Scene: Weather Emergencies', 'Question: Weather Emergencies', 'Discussion: Weather Emergenci...', 'Scene: Weather Emergencies C...', 'Question: Weather Emergenci...', and 'Discussion: Weather Emergenci...'. The main video area shows a scene from a medical office. A healthcare provider in a white coat is on the left, facing a woman in a pink shirt and a young girl in a yellow shirt who are seated. A wall-mounted phone is visible in the background. The video player has a dark blue header with the title 'Introduction to Disaster Medicine' and a 'RESOURCES' link. At the bottom, there is a playback progress bar and navigation controls including play/pause, volume, closed captions, full screen, and next/previous buttons.

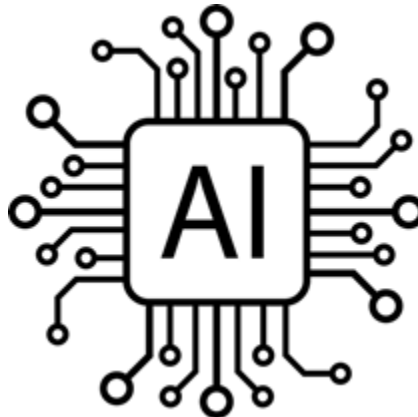
Family-Centered Care Microlearning



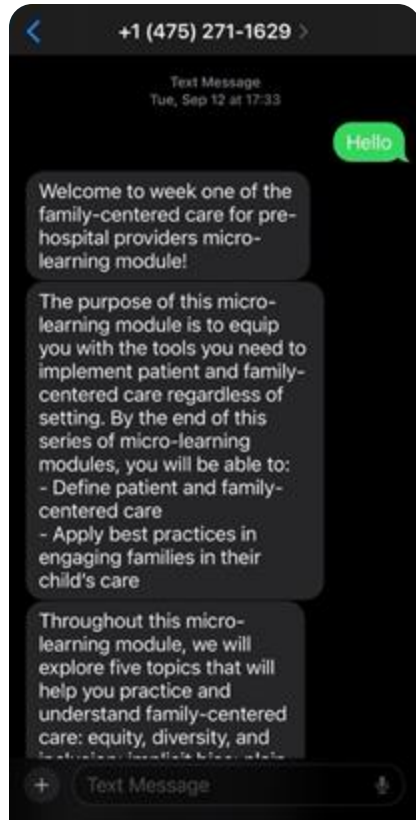
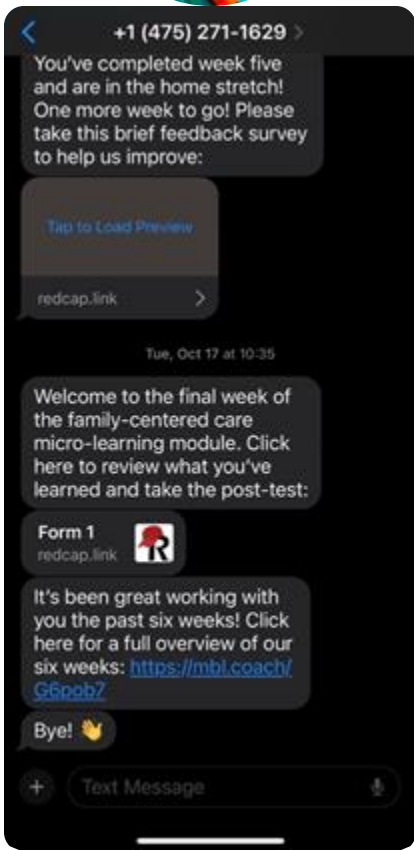
Mobile Coach AI chat bot



Texting a number

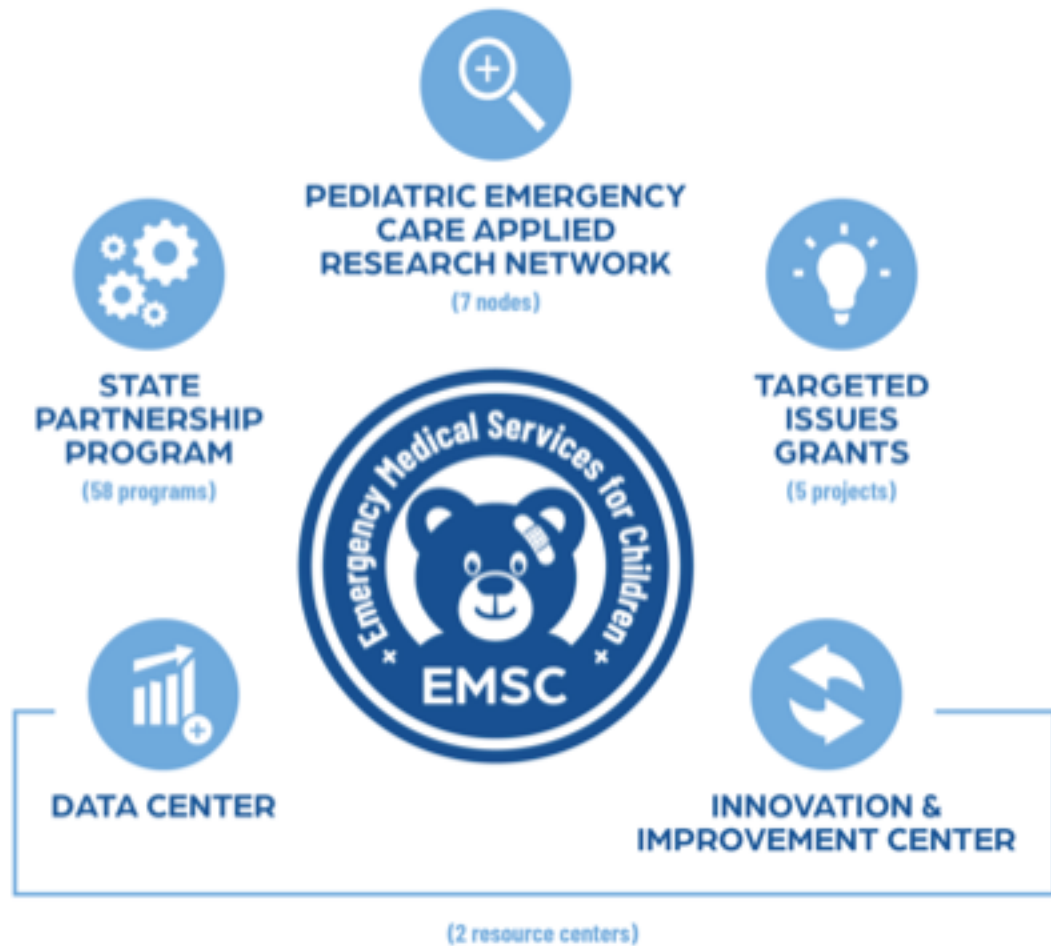


Interaction and survey data stored in database



Interventions That Improve Patient Outcomes





EMSC Mission: to reduce child and youth mortality and morbidity resulting from severe illness or trauma

EMSC Vision: *no matter where a child lives—the health systems in their area will provide quality emergency care services*



Katherine Remick, MD
University of Texas at Austin
Dell Medical School
Lead Co-Principal Investigator



Charles Macias, MD, MPH
University Hospitals Rainbow Babies
& Children's Hospital
Lead Co-Principal Investigator



Emily Lemiska
Communications Director



Corrie Chumpitazi, MD, MS
Baylor College of Medicine
Texas Children's Hospital
Center Lead - Texas



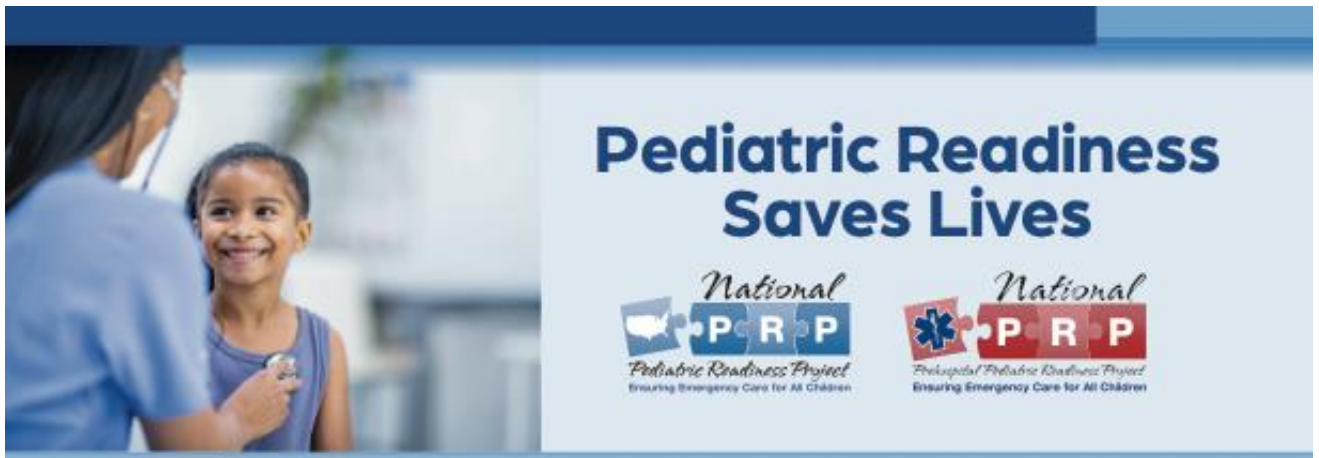
Marc Auerbach, MD, MSci
Yale University School of Medicine
Yale New Haven Children's Hospital
Center Lead- Connecticut



Mohsen Saidinejad, MD, MBA
The Lundquist Institute for Biomedical
Innovation at Harbor UCLA
Center Lead- California



Robin Goodman, RN
KM Project manager



High levels of Pediatric Readiness in EDs are associated with the potential for:

76%
lower mortality risk in children^{1,2}

2,143
children's lives saved across the U.S. each year³

3-FOLD
reduction in racial and ethnic disparities in mortality⁴

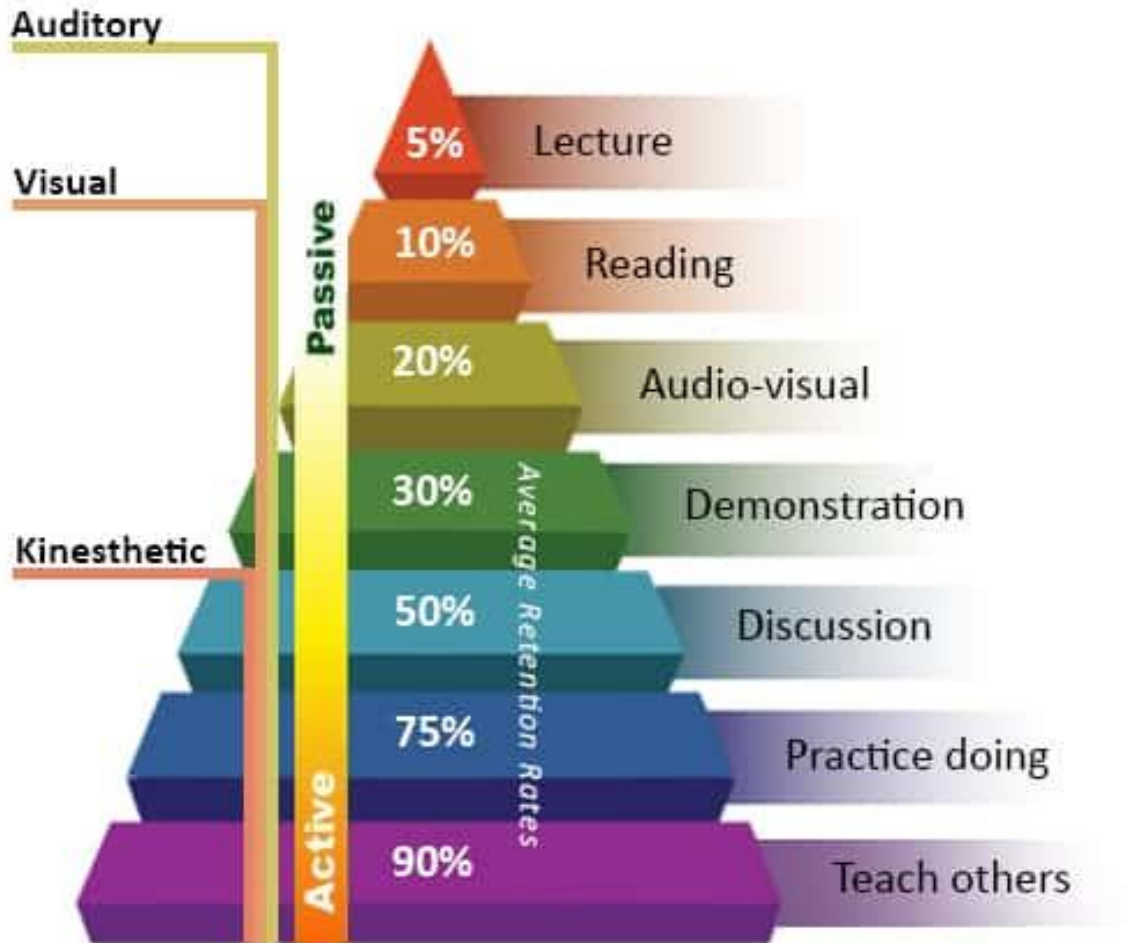
and only cost between \$4–48 per patient.⁵



The Power of PECCs:
Designating individuals as pediatric emergency care coordinators (PECCs), or pediatric champions, in EMS agencies and EDs is the best way to increase readiness.

90% of 35 million visits to GEDs < 10 children per day, alongside adults

Educational Strategies: Retention



Adapted from the NTL Institute of Applied Behavioral Science Learning Pyramid





EMSC RELATED ACRONYMS

Listed here are acronyms you may see in reference to EMSC-related projects, publications, and resources.

Last Updated: August 5, 2024

A | B | C | D | E | F | G | H | I | J | K | M | N | O | P | R |
S | T | U | V | W



A

AAA: American Ambulance Association [↗](#)

AAFP: American Academy of Family Physicians [↗](#)

AAMS: Association of Air Medical Services [↗](#)

AAP: American Academy of Pediatrics [↗](#)



PEAK: Status Epilepticus



PEAK: Suicide



PEAK: Pain



PEAK: Agitation



PEAK: Child Abuse



PEAK: Multisystem Trauma

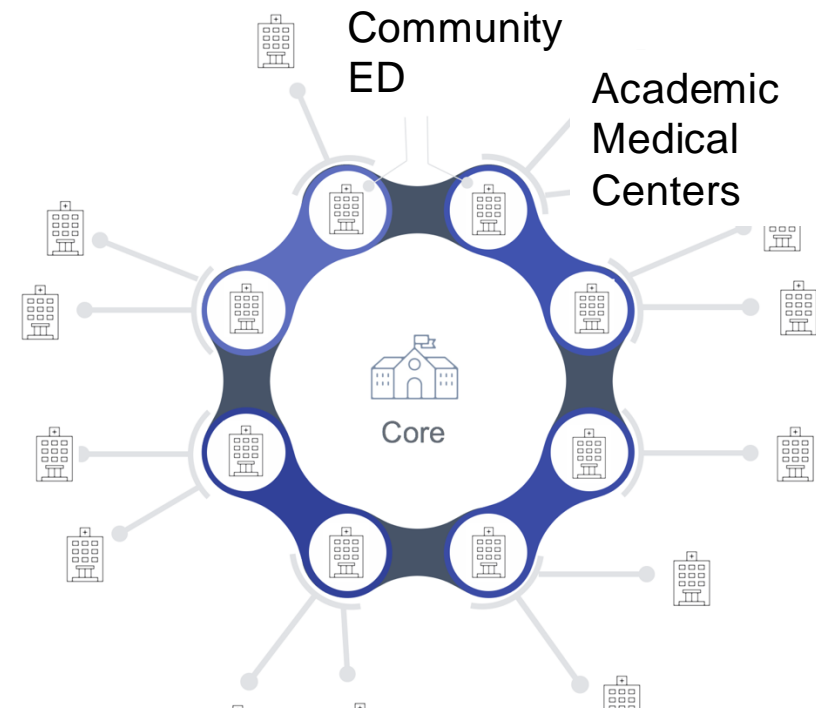
Bookmark this site



2012-2019 *Im*PACTS

IMPROVING PEDIATRIC ACUTE CARE THROUGH SIMULATION

Aim: improve pediatric readiness over 6 months



Outcomes: Readiness + Sim/Clinical improvements

	Pre-PRS	Post-PRS (6 months)	
Connecticut (n= 12 EDs)	64+/-4	77+/-4	p=0.022
Indiana (n=10 EDs)	58 +/-5	75+/-3	p=.009
19 Academic (n=34 EDs)	62+/-2	79+/-2	p < 0.001

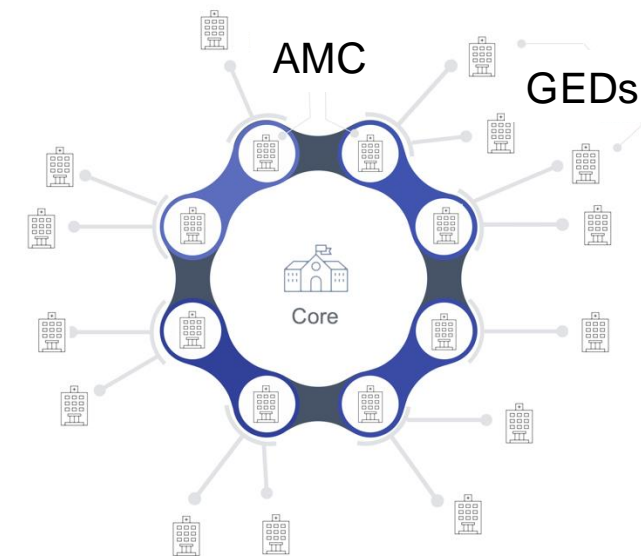


**Effective
BUT...
only 250 of 5500 EDs
Expensive**

2012-2019 *Im*PACTS

IMPROVING PEDIATRIC ACUTE CARE THROUGH SIMULATION

Aim: improve pediatric readiness over 6 months



ImPACTS

IMPROVING PEDIATRIC ACUTE CARE THROUGH SIMULATION



Aim: To improve care and reduce disparities in outcomes for critically ill/injured children in underserved communities across the US through a Scalable, Pragmatic, Collaborative, Simulation-based Intervention



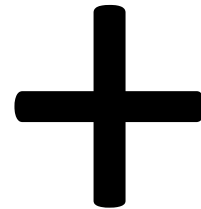
Equipment

Simulators
Monitors/Speakers
Task trainers



Resources

Contact lists
Slide decks
Webinars



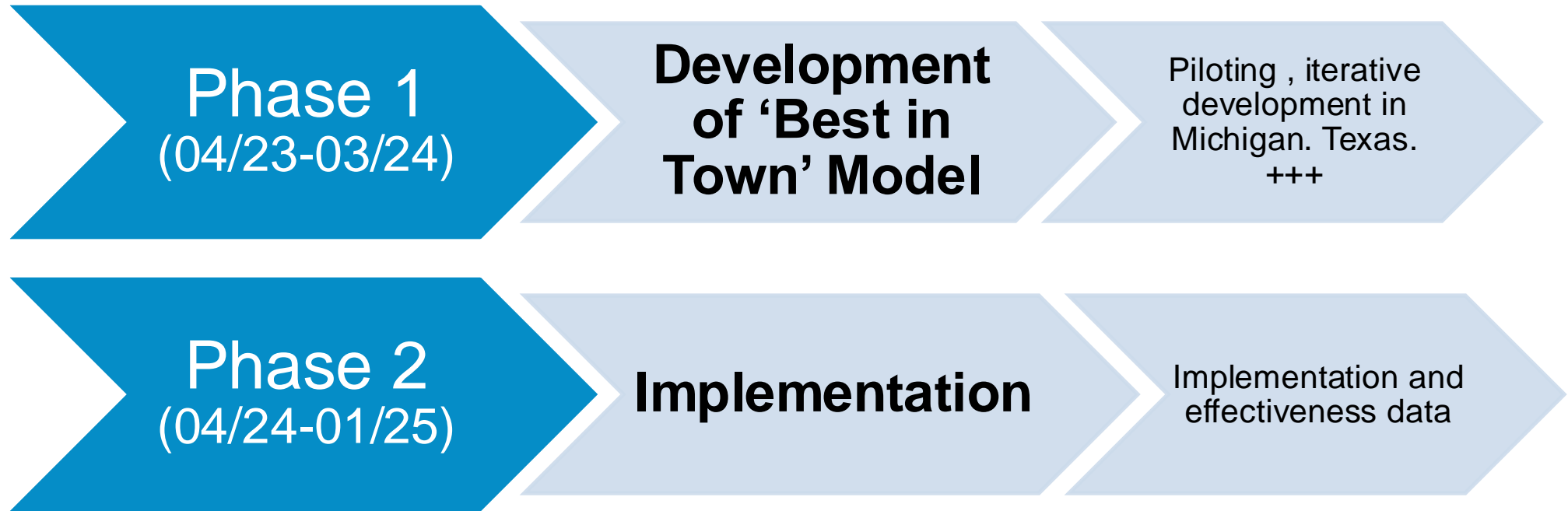
Support

Site Visit
Mentorship
1:1 meetings



Community of Practice

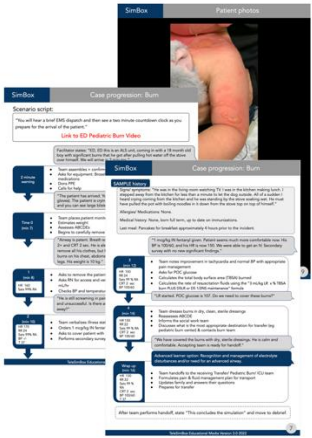
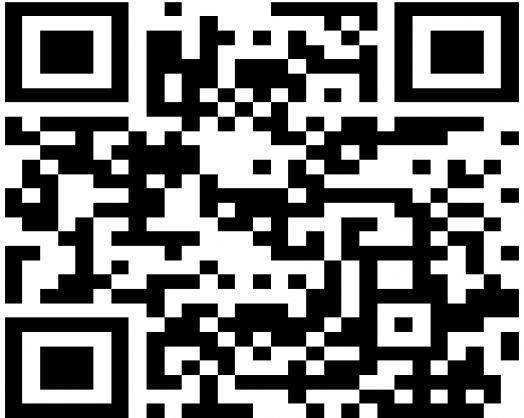
Regional trainings
Weekly meet up
Online Zulip



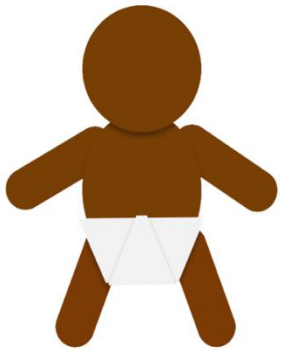
Texas: 29 Regional-PECCs, 264 hospital PECCs, 353 simulations, 2943 frontline healthcare providers

Michigan: 20 Mentors, 89 hospital PECCs, 115 simulations, 433 frontline healthcare providers

Collaborations: ENA, EMSC, PPN, Indian Health Services, SEMPA, Health systems (AK, UT, CA, WA, IN, MO, NY, NC, FL, OH, GA



Booklet



Low technology mannequin



Monitor computer



Equipment

PECC: Pediatric Emergency Care Coordinator

- Nurse +/- Physician
- Responsible for overseeing pediatric specific activities
 1. Provides pediatric perspective to ALL work
 2. Pediatric specific quality improvement
 3. Ensures pediatric skills of staff
 4. Ensures availability of pediatric equipment, supplies, meds
 5. Develops/periodically reviews pediatric policies/procedures

***** ROLE FOR PEDIATRICIANS/PEDIATRIC DEPARTMENTS*****

2020-2022



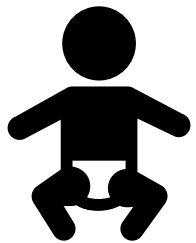
- **Problem:** PECC designation is low, many lost to COVID
- **Gap:** implementing/sustaining PECCs is challenging, virtual sims
- **Hook:** PECCs need support (simulation/education/improvement)

ImPACTS

IMPROVING PEDIATRIC ACUTE CARE THROUGH SIMULATION



Aim: To improve care and reduce disparities in outcomes for critically ill/injured children in underserved communities across the US through a Scalable, Pragmatic, Collaborative, Simulation-based Intervention



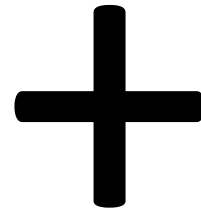
Equipment

Simulators
Monitors/Speakers
Task trainers



Resources

Contact lists
Slide decks
Webinars



Support

Site Visit
Mentorship
1:1 meetings



Community of Practice

Regional trainings
Weekly meet up
Online Zulip



Engage hospital leadership buy-in

Recruit/Engage PECC(s) RN/MD/APP

PRS in person

Simulations increased independence

Improve readiness increased independence

PRS in person

Month 0

1

2

3

4

5

6



Pediatric Emergency Care Coordinator (PECC) Modules



Target Learners: Community hospital-based medical professionals

Emergency Department PECC Module Series



Learn more about pediatric emergency care coordinators(PECCs)/pediatric champions in the ED and how they impact each domain of pediatric readiness. Certificate of completion available for each module.



Module 1: The Pediatric Emergency Care Coordinator [↗](#)

After completing this module, you will be able to identify best practices for pediatric readiness and improve your knowledge on the role of a PECC.



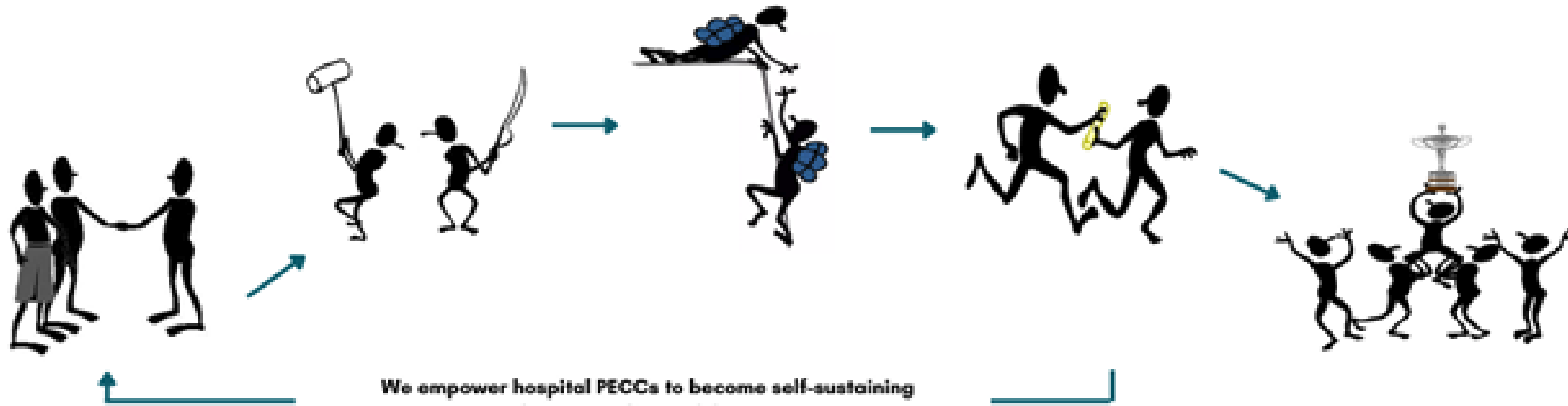
Module 2: The Role of the Pediatric Emergency Care Coordinator and Pediatric Readiness [↗](#)

After completing this module, you will be able to identify the pivotal role of the PECC in assessing Pediatric Readiness, as well as data and research around the impact of PECCs.



Module 3: PECC Models and Best Practices [↗](#)

After completing this module, you will be able to describe PECC models and best practices.



We empower hospital PECCs to become self-sustaining and continue this work long-term

Stage 1 (Forming)

- PECC Designated (Identified)
- PECC Completes Introduction to Pediatric Readiness Modules
- NPRP Assessment Completed (Gap Analysis Reviewed)
- Facilitated 1 Simulation
- Action Plan Created
- PECC joined Zulip

Stage 2 (Storming)

- Stage 1 Completed
- Co-Facilitated 1 Simulation with the PECC
- Identify a Gap Discussed in a Sim Debrief and Complete an Item from the Action Plan
- SMART Aim (for PRS & Sim)

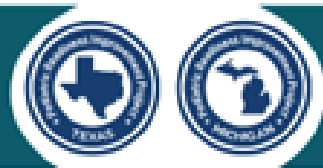
Stage 3 (Norming)

- Stage 2 Completed
- PECC Facilitating Simulations (PRISM Observing Remotely)
- Complete action item with SMART Aim
- PECC Attending (or Reviewing) 75% of Monthly Check-Ins

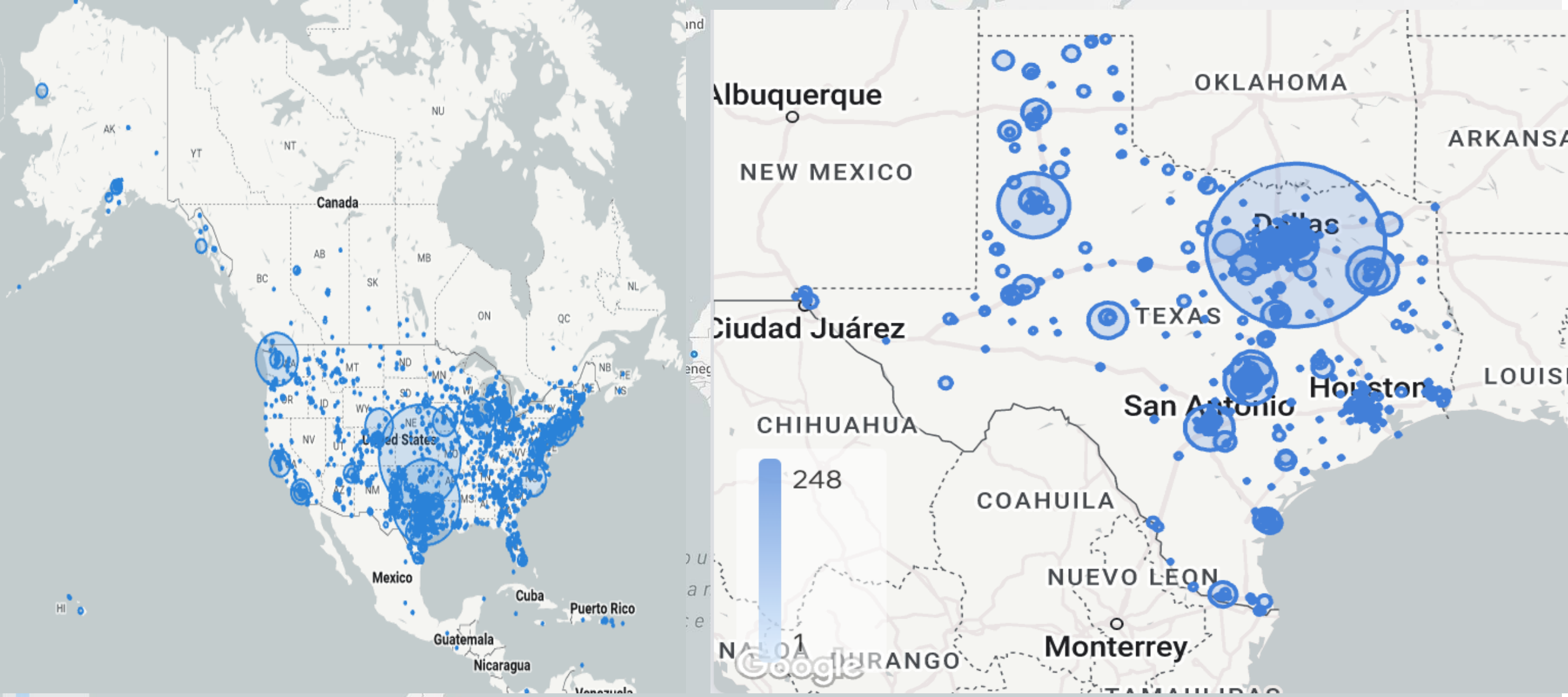
Stage 4 (Performing)

- Stage 3 Completed
- 2 NPRP Assessments Completed (with Improved Score)
- C-Suite Presentation (Self-Efficacy, not as PRS focused)
- Self-Sustaining Action Items with SMART Aims

PRISM



MODEL



SimBox+
Free online simulation for everyone.



Last 365 days 15, 572 (12,866 in US): TX 3,790, MI 928

450 PECCs-- PECC mentors in every TX trauma region



Pediatric Readiness Improvement Project
TEXAS

REGIONAL PEDIATRIC EMERGENCY CARE COORDINATOR (R-PECC)

FIRST

LAST

BSN, RN, CPEN



E: first.last@txena.org

W: <https://txena.org/texas-pediatric-readiness-improvement-project/>

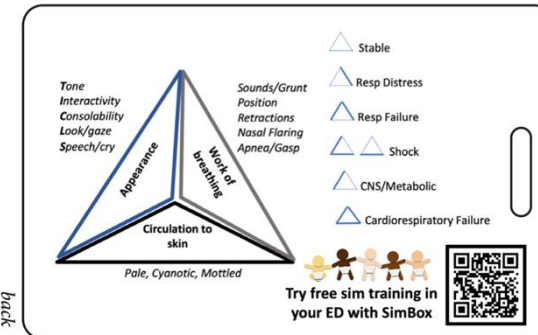


front

Age	Weight (kg)	Pulse	Resp	Systolic BP*
Newborn	3	100 - 180	30 - 60	60 - 70
6mos	7	100 - 160	30 - 60	65 - 80
1 yr	10	100 - 140	24 - 40	72 - 107
2	12	80 - 130	24 - 40	74 - 110
3	15	80 - 130	24 - 40	76 - 113
4	16	80 - 120	22 - 34	78 - 115
5	18	80 - 120	22 - 34	80 - 116
6	20	70 - 110	18 - 30	82 - 117
8	25	70 - 110	18 - 30	86 - 120
10	35	60 - 100	16 - 24	90 - 123
12	40	60 - 100	16 - 24	90 - 127
14	50	60 - 100	16 - 24	90 - 132
15+	55+	60 - 100	14 - 20	90 - 135

* BP in children is a late and unreliable indicator of shock

back





Mission of IHS EMSC Hybrid Simulation Program:

- Optimize the capacity of IHS to provide pediatric emergency care to AI/AN children and youth
 - Create, implement and evaluate hybrid simulation training program for interdisciplinary IHS teams
-

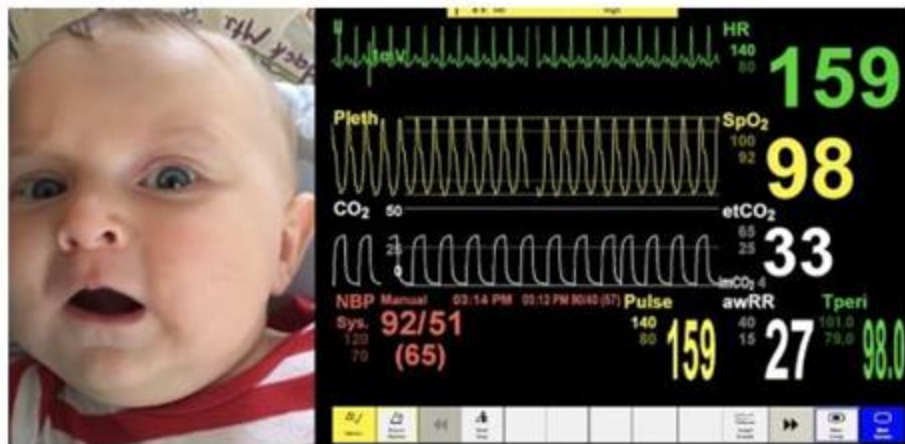




Severe Head Injury



Respiratory Distress



Non-Accidental Trauma



Abdominal Trauma



The Booklet: Teaching Content & Flashcard

SimBox
Flashcard

PEDIATRIC BURN MANAGEMENT

SimBox
Flashcard

Primary Survey

Airway/Breathe!

- Think of airway early
- Assess for CO poisoning
- Use humidified oxygen

Circulation

- Initiate fluids early
- Preferred IV fluid
- Burns <20% TBSA
- Do not bolus unless
- Start IVF during triage

 - <5 y/o: 12
 - 6-13 y/o: 10
 - >14 y/o: 5

Disability

- Altered mental status related cause.

Exposure

- Stop the burning
- Remove all clothing
- Examine for any areas that may mask less apparent burns
- Cover the wound
- Take warming measures
- Topical antibiotic burn center.
- Do not apply ice and cold injury to burn debridement

Secondary Survey (continued)

Perform a thorough physical examination:

- Evaluate for concomitant injury.
- Assess vascular status of extremities and thorax. Circumferential burns may result in vascular compromise and may require escharotomy.

Treat pain and anxiety:

- IN fentanyl, Tylenol suppository, IM Toradol if no IV access.
- Remember nonpharmacologic interventions: reassurance, soothing, distraction, child life specialists.

"AMPLET" Mnemonic:

- Allergies, Medications, Past medical and surgical history, Last intake, Events and Environment, Tetanus (tetanus prophylaxis should be considered for all burns).

Ask for the circumstances of the injury:

- Non accidental scalds are a common form of abuse.
- Is the story consistent with the injury pattern?
- Does the mechanism match the developmental stage of the child?
- Document: photographs are crucial.
- Reporting of child abuse is mandatory in the US. The child's pediatrician is often a valuable source of information.

Labs: CBC, serum electrolytes, CK, UA.

Determine the total body surface area (TBSA) burned.

Estimating Percent Total Body Surface Area in Children Affected by Burns

Rule of 9s: Used in adults but is not very accurate in children as the proportion of body surface area made by anatomic parts, especially the head, varies considerably by age.

Lund-Browder diagrams.

Palm method. (fingertip to wrist equals 1% of TBSA)

Superficial burns are NOT included in TBSA.

Secondary Survey

Fluid Resuscitation

Total fluid volume to be repleted

>30kg: 2 mL/kg LR x %TBSA @

<30kg: 3 mL/kg LR x %TBSA @

- Give half over the first 8 hours
- Give the other half over 16 hours
- Subtract any bolus fluid
- Use LR for resuscitation
- Only for second and third degree
- Titrate based on response

E.g. 30 kg child with 40% TBSA

Total fluid resuscitation in first 24 hours = 3,600 mL / 2 = 1,800 mL to be given in 1,800 mL / 8h = 225 mL/h

Print and distribute to your participants

TeleSim

Content based on the guidelines issued by the American Burn Association

U.S. Department of Health and Human Services, Public domain, via Wikimedia Commons

SimBox 3.0

SimBox
Teaching Content

This page provides possible questions to elicit teaching points during the debrief. These questions are not meant to replace your team's discussion, but can help to steer the debriefing session.

CLASSIFY BURNS BY DEPTH OF INJURY

SUPERFICIAL: Dry, red. Blanches with pressure. Epidermis only.

SUPERFICIAL PARTIAL-THICKNESS: Blisters. Moist, red, weeping. Blanches with pressure. Extends into papillary dermis.

DEEP PARTIAL-THICKNESS: Blisters, easily unroofed. Wet or waxy dry. Variable color. Does not blanch with pressure. Includes more of the dermis.

FULL THICKNESS: Waxy white to gray to charred and black. Dry and inelastic. No blanching with pressure. All of dermis involved.

FOURTH DEGREE: Extends through the subcutaneous fat into the fascia and/or muscle.

HOW ARE BURNS IN CHILDREN DIFFERENT THAN ADULTS?

Infants and young children have a smaller body surface area (BSA) than adults, but are often exposed to the same offending agent (tap water, a hot drink, clothing iron), and thus sustain a proportionately larger TBSA burn than an adult.

A 7 kg child has a tenth of the weight of a 70 kg adult but a third of their TBSA. This relatively large body surface area results in both a greater surface exposure to the environment and a greater evaporative water loss per kg than adults. Therefore, children require more IV fluid per kg during resuscitation.

Infants less than 6 months have limited muscle mass, so cannot generate as much heat by shivering. Temperature regulation in this age group depends much more on environmental temperature control.

Children under age 2 years have thinner skin and are more prone to full thickness burns at lower temperatures or shorter duration of contact than adults.

WHEN TO TRANSFER A CHILD TO A BURN CENTER?

- Partial thickness burns >10% of TBSA.
- Full-thickness burns.
- Burns of the face, hands, feet, genitalia, perineum or major joints.
- Inhalation, electrical or chemical injuries.
- Significant pre-existing medical disorders, concomitant trauma or need for special social, emotional or rehabilitative intervention.
- Burned children in hospitals without qualified personnel or equipment for the care of children.

13

TeleSimBox Educational Media Version 3.0 2022

Suggested teaching content to guide the debriefing



PECC Activity Dashboards

New America Hospital

Alexander Hamilton

[View Your Spreadsheet](#)

Activity Log

Date	Activity	Hours
Jan 8, 2025	Facilitated Simulation with Frontline Staff	1.5
Dec 20, 2024	Reviewed hospital disaster policies	0.75
Dec 8, 2024	Completed PRS assessment	1
Dec 4, 2024	Watched EIIC PECC Module	2
Dec 3, 2024	Discussed Peds Readiness with Nurse Manager	0.5
Nov 22, 2024	Show to NC	1

Total PECC Hours

38.25

Simulations

Date	Simulations	Participants
Jan 8, 2025	Bronchiolitis/Respiratory Distress	5
Nov 22, 2024	Altered Mental Status	4
Nov 19, 2024	Fussy Baby	2
Nov 15, 2024	Seizing Infant	4
Nov 15, 2024	Fussy Baby	4
Nov 15, 2024	Other	5

Total Simulations

11

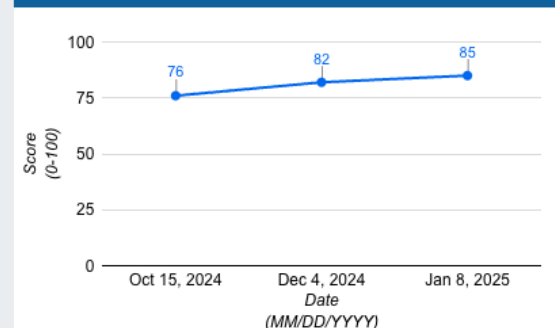
Total Participants

66

Hospital Department Contacts

Department	Contact	Phone	Email
Trauma Coordinator	Marquis De Lafayette	(555) 000-0001	Laugh.ayette@hospital.edu
Chief Nursing Officer	Hercules Mulligan	(555) 555-5555	newcountry@hospital.edu
Chief Medical Officer	Angelica Schuyler	(555) 123-9874	oneandonly@hospital.edu
Pharmacy Director			
PICU Manager			
Emergency Manager(s)			
Peds Social Worker			

Pediatric Readiness Scores



Your PECC Developmental Milestones

[EIIC PECC Modules](#)

[SimBox](#)

[ImPACTS](#)

Shared Resources

[NPRQI](#)

[Pediatric Readiness Assessment](#)

Get involved

- **Contribute**
 - Develop resources
 - Beta-test resources
 - Study resources
- **Implement**
 - With established “hub”
 - As mentor for another “hub”
 - Start a new “hub:



Emergency Departments

Empowering staff to learn, develop, and take steps toward making their ED pediatric ready. By leveraging a network of Regional & Hospital Pediatric Emergency Care Coordinators, every ED can implement the best practices and policies to support a long-term commitment to child care.



Free Open Access Medical Simulations

Utilizing virtual, hybrid, screen-based, and hybrid learning methods, pediatric care trainings take place through a variety of platforms.



Outpatient

The goal of ImPACTS is to improve the quality of care delivered to acutely ill and injured children whenever and wherever it is needed. Outpatient offices and general pediatricians are often a vital link in the continuum of pediatric acute care required to achieve this goal.



Transport

The ImPACTS Transport project aims to describe, measure and compare pediatric specialty transport teams. Pediatric transport teams from academic medical centers will complete three in situ sims of a decompensating child in their own transport vehicles.



Inpatient

Aimed to assess the education needs and resources available to inpatient pediatric units and hospitals.



EMS

This is a multi-site educational project addressing performance of EMS teams providing resuscitative care to critically ill children in a simulated setting



NICU

Evaluate and improve delivery room readiness in Level I & II community delivery rooms and

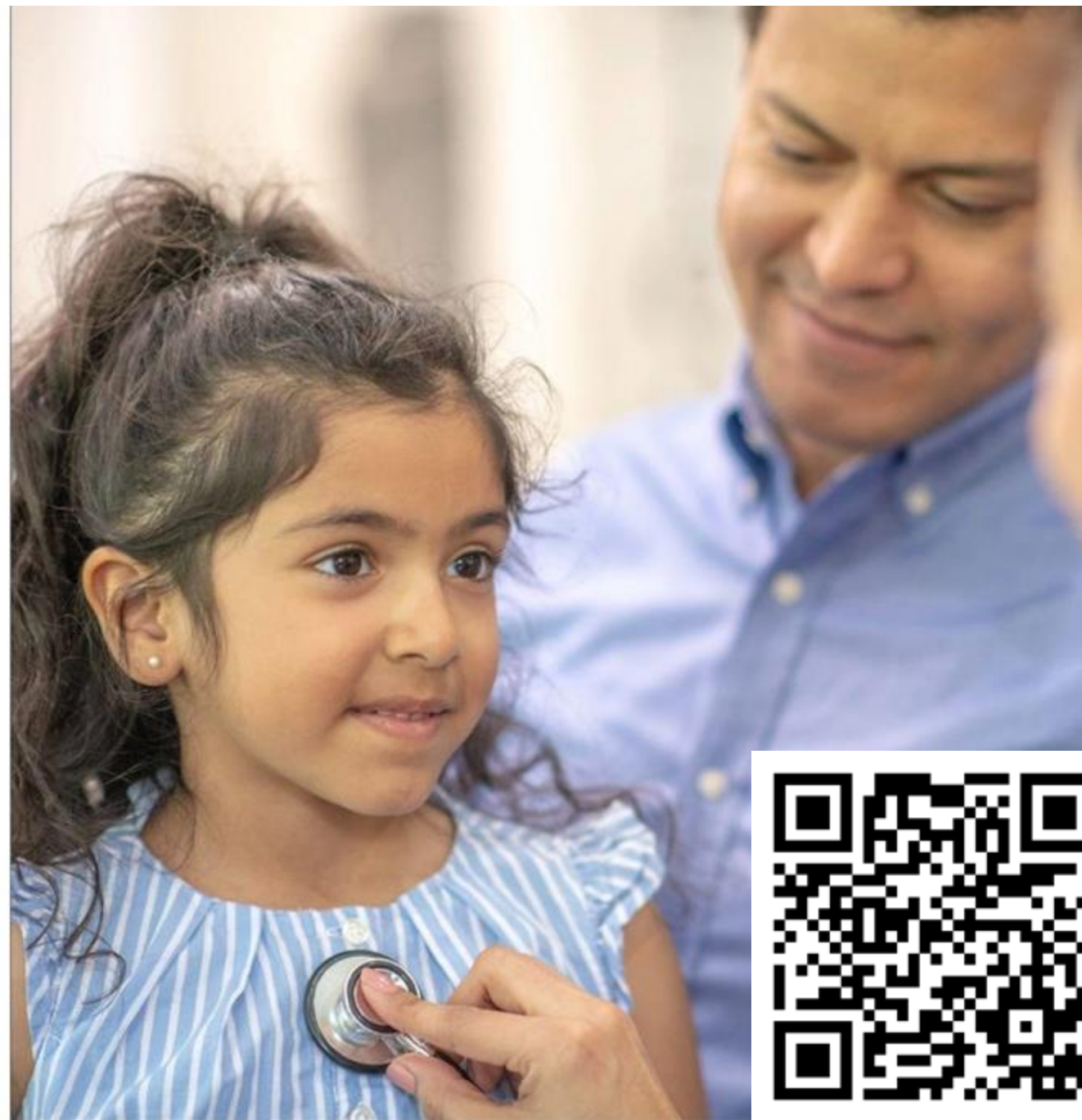
Mentors

- Complete an in-person site visit to facilitate in-person simulation exercises to practice teamwork, communication, medical management and assess your ED system of care once a year at each site.
- Complete an in-person Pediatric Readiness Survey (PRS) to identify strengths and gaps in emergency pediatric care once a year at each site.
- Conduct Monthly virtual check in with peds champion to review milestones and provide resources for addressing gaps in pediatric care.
- Partnership with an AMC (optional)

Want to get involved?

Click here to share contact information and someone will reach out with next steps.

Get Involved as a
Mentor





Champions

- Work closely with mentor to learn how to facilitate simulations and utilize resource toolkit.
- Recruits ED and EMS participants at their site to participate in simulations.
- Be a part of a community of practice with other pediatric champions.
- Commit to 6 month engagement.
- Commit to one hour per month.

*If this is too much / too little time we will adapt as necessary

Want to get involved?

Click here to share contact information and someone will reach out with next steps.

Get Involved as a
Mentor

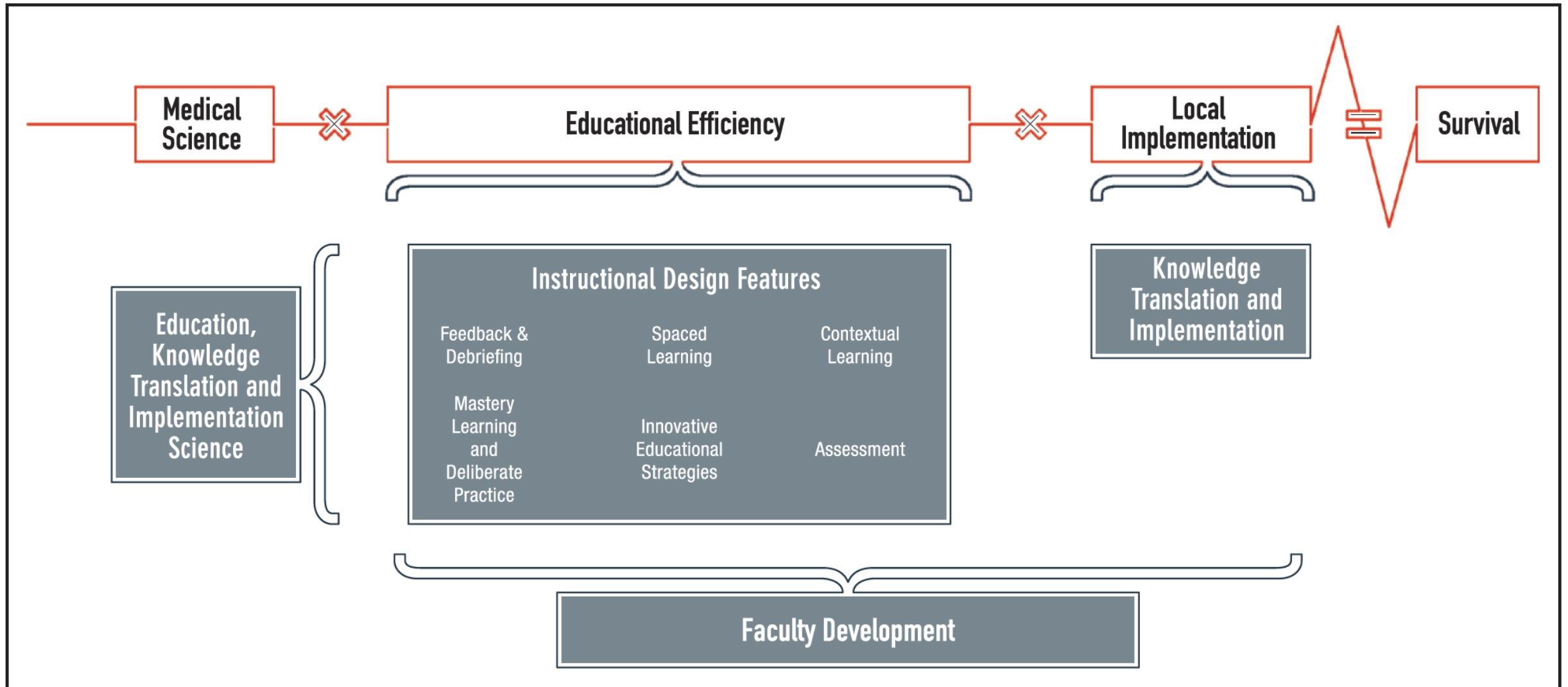
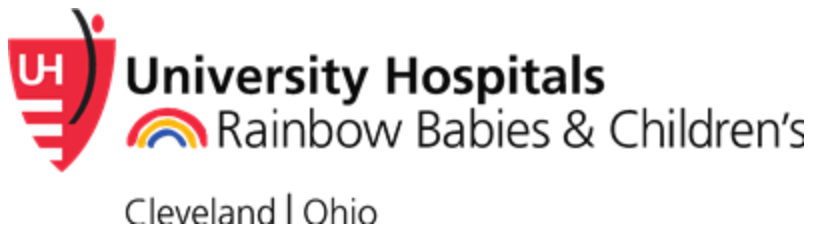


Figure. Modified formula for survival.

Rainbow Emergency Services Network

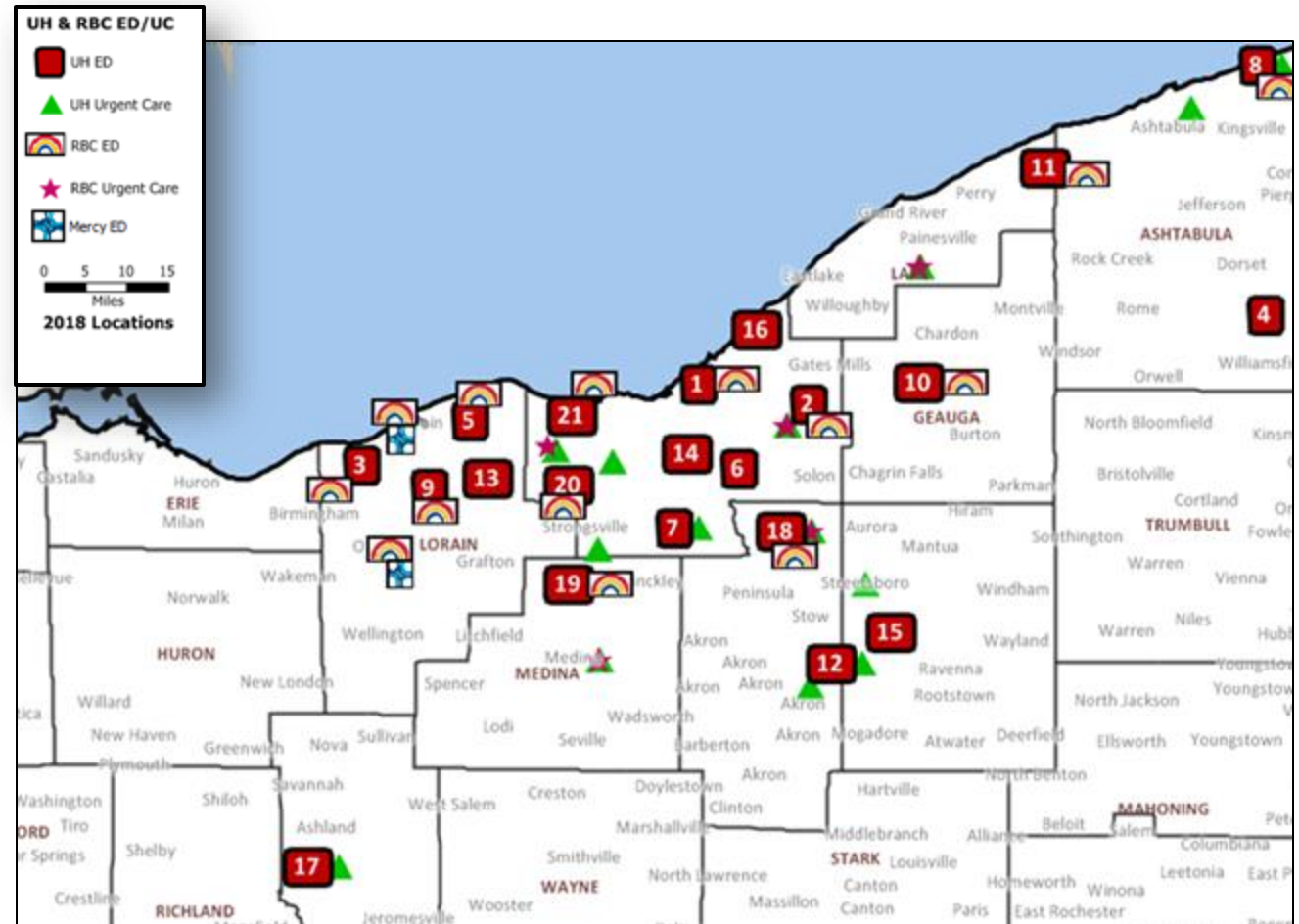
Applying readiness to health care systems



Rainbow Emergency Services

Our UH EDs cover 9 Counties in Ohio

- Cuyahoga, Ashland, Ashtabula, Geauga, Lorain, Lake, Medina, Summit, Portage
- Rainbow Emergency Services Network
 - Ashtabula, Cuyahoga, Geauga, Lorain and Medina
- PEM providers at Main Campus and SJMC



Level setting for our C-suites:

HIGH > 87 National Pediatric Readiness Scores

High levels of Pediatric Readiness in EDs are associated with the potential for:

76%

lower mortality risk in children^{1,2}

2,143

children's lives saved across the U.S. each year³

3-FOLD

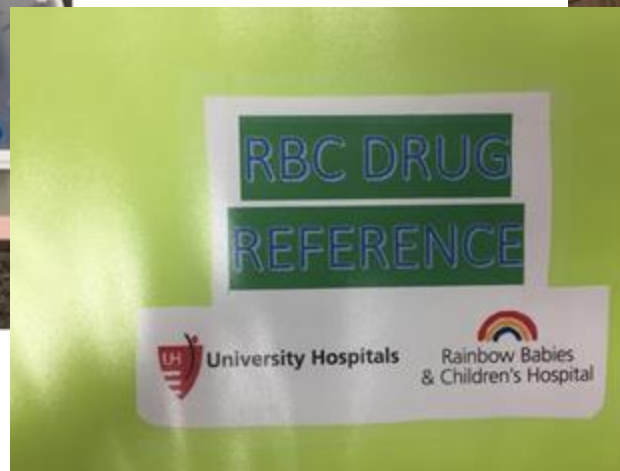
reduction in racial and ethnic disparities in mortality⁴

and only cost between \$4–48 per patient.⁵

2021 NPRP

- As a system we had an Average NPRP score of **80**
 - This included 2 new hospitals
- This has been 10 years of work
 - Standardizing Pediatric Emergency Care
 - System ED leadership engagement
 - Equipment
 - Education
 - PECC
 - Standards for Safe Care for Pediatric Patients(protocols)
 - Quality Assurance/Improvement
 - Quality Metrics and PI

Rainbow Emergency Services



Nursing and Provider Training

- Pediatric education is embedded in Emergency Department education
- All Staff across Community have PALS (EMT-P, Nursing, Providers)
 - We maintain above 80% compliance with this across the system
- Embedded in the system Emergency Medicine Quality Network
- Simulation: medical and trauma



Pediatric Emergency Care Coordinators (PECCs)

- Having a PECC in the ED is tied to double-digit increases in pediatric readiness scores
- Significant survival benefits exist at 88 points or above
- PECC is one of the strongest drivers of improved pediatric outcomes
- PECCs are a proven strategy for improving emergency care for children

At University Hospital:

- 2022 started with less than 10 PECCs
- 2023 had about had about 15
- 2024 about 40 PECCs, several sites have created PECC groups that work together.

Site	Date	NPRP Date and score	Designation
RBC	12.5.23	2021=100, 2024 =97	RBC Pediatric Emergency Care & Pediatric Level 1 Trauma Center
Ahuja	11.10.23	2021=87, 2024=70	Community ED
Geauga	12.18.23	2021=80, 2023=93	Pediatric Friendly
Parma	12.21.23	2021=70 2024= 95	Community ED
West	2.29.24	2021=54 2024=93	Pediatric Friendly
ST John	3.11.24	2021=90 2024=97.5	RBC Emergency Services
Portage	3.26.24	2021=77 2024=87	Community ED
Conneaut	5.20.24	2021=87	Community ED
Elyria	5.10.24	2021=86 2024=90	Pediatric Friendly
Geneva	5.20.24	2021=91	Pediatric Friendly
Samaritan	5.21.24	2021=83	Community ED
Tripoint	June	2021=54 2024=97	Pediatric Friendly

