

Indian Health Service Pediatric Readiness

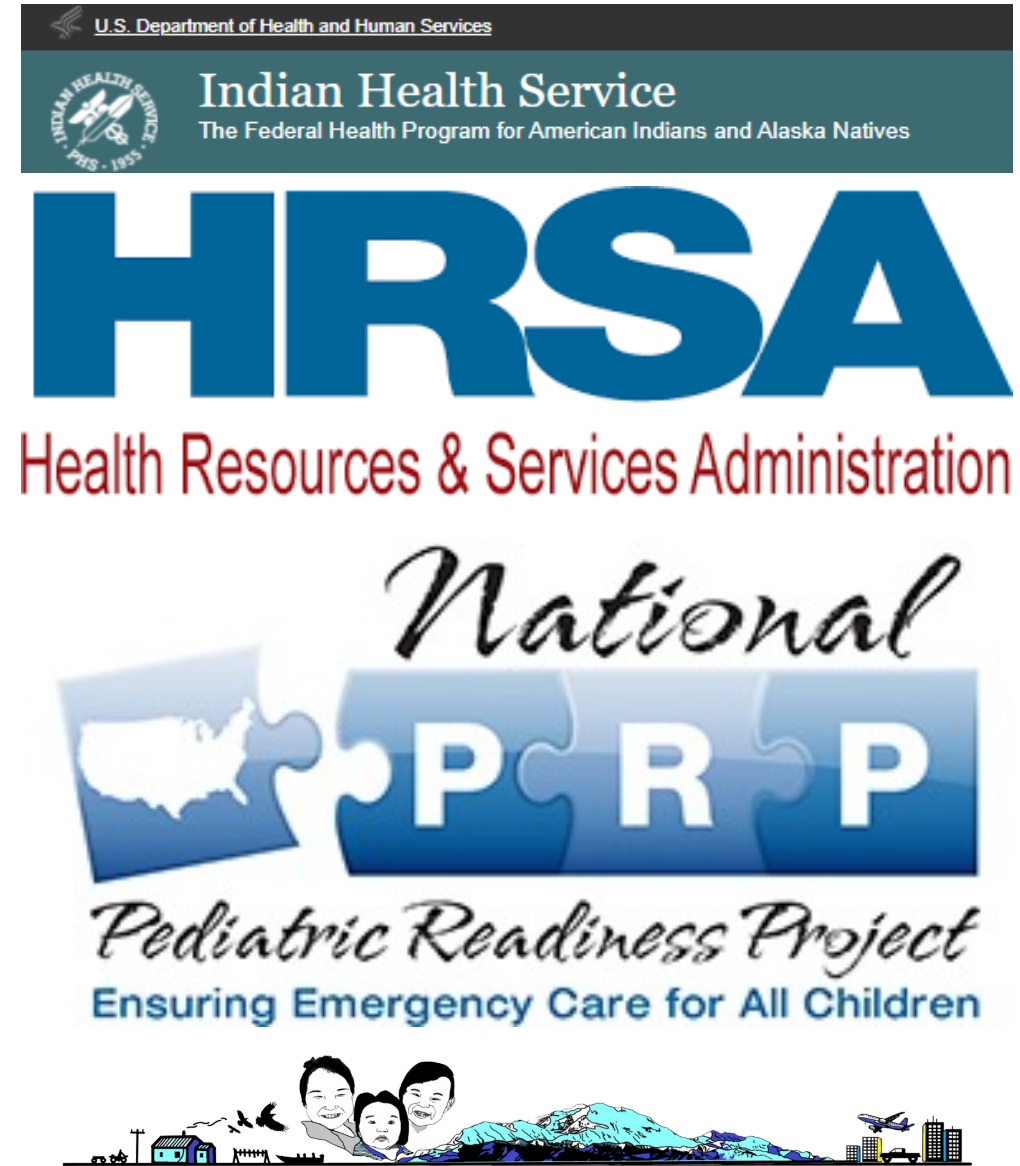
IHS EMSC Hybrid Simulation program

Pediatric Pandemic Network

25 August 2022

*Presenters:*

Jeff Robison, MD,  
Erin Montgomery, RN,  
Marcie Gawel, RN



# Funding - HRSA

- Contract Number 75H70421P00045 – Children's Hospital of Philadelphia
- Award Number 6T99HP39203-02 – University of Utah

# Team

- **PI (CHOP)** – Elizabeth Sanseau
- **PI (Utah)** – Jeff Robison, Ty Dickerson
- **Program Managers** – Erin Montgomery, Marcie Gawel
- **IHS & HRSA** – Ardith Aspaas, RN, Lorah Ludwig, BS, MA
- **Key Personnel** – Shawn D’Andrea, Tom Faber, Mariko Nomura,,  
Matt Hirschfeld, Vinay Nadkarni, Marc Auerbach, Stephanie  
Spanos, Sarah Becker
- **Partners:** ImPACTS, SimBox

# Overview

- SBAR
- Program Objectives
- Overview
- Keys to Success
- Discussion

# *Im*PACTS

IMPROVING PEDIATRIC ACUTE CARE THROUGH SIMULATION

# Situation

- The mean weight Pediatric Readiness Score of IHS/Tribal: **60.9**/100 (2013 NRPR data, published 2015)
  - Follow up 2021 PRS obtained (data being analyzed)
- PRS also low for rural hospitals that serve Native children
- No specific unified intervention developed to target IHS/Tribal ED readiness
- **Specific training is needed**



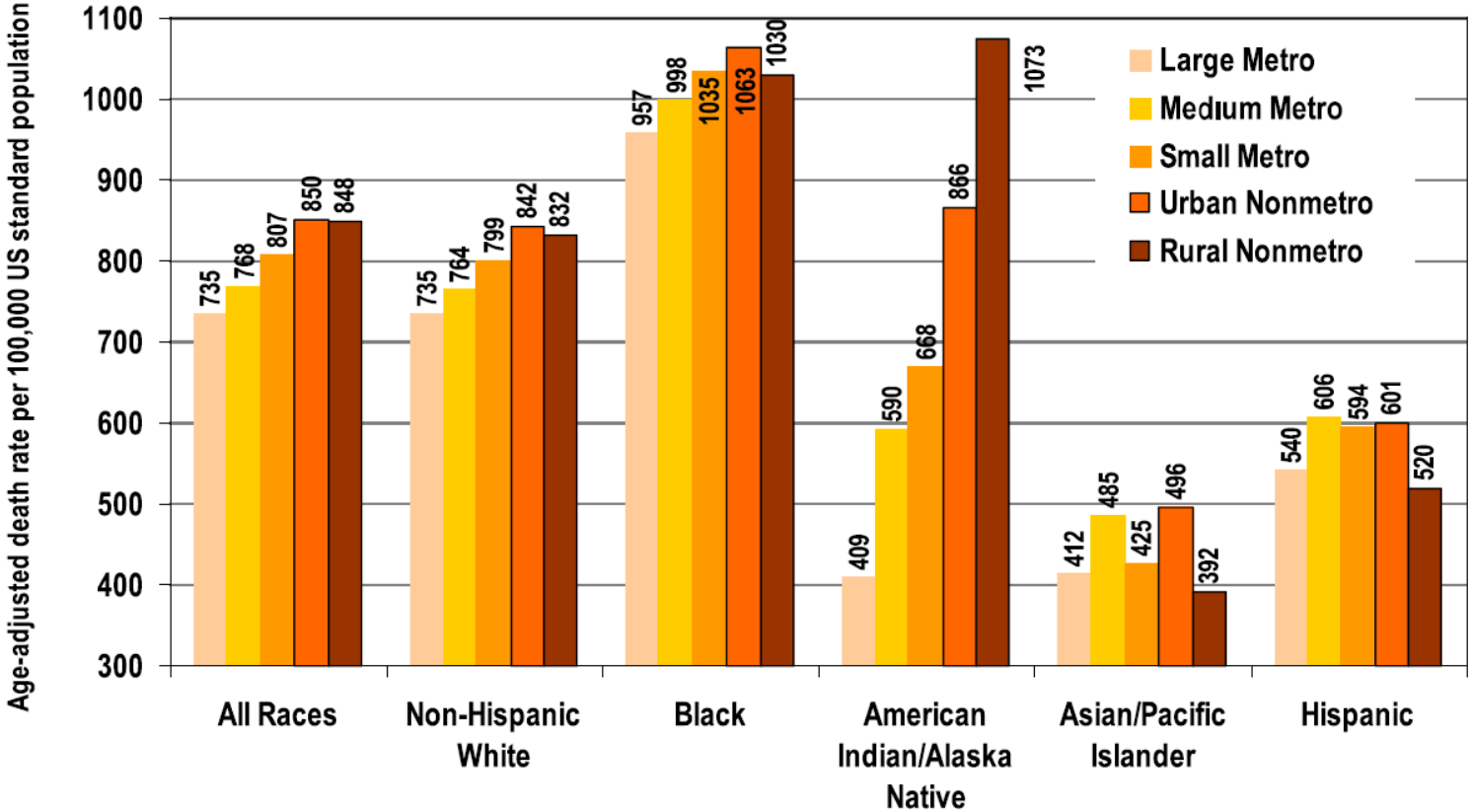


# Background

- **AI/AN population overall experiences lower life expectancy and higher disease burden** compared to rest of nation
  - **Pediatric population is specifically at risk** for severe illness or trauma in pre- and in-hospital
- IHS/Tribal EDs are general EDs with adult and pediatric patients treated in the same area, more than half in rural or remote areas
  - 45 IHS/Tribal EDs serving AI/AN communities treated ~650,000 patients in 2014 (**28% <19 yrs**)
- **A significant number of AI/AN children are cared for in non-IHS, rural hospitals**
- EMSC support IHS and Tribal Healthcare programs



# Racial disparities in mortality



Large Metro: 53.4% of U.S. population  
 Medium Metro: 20.1%  
 Small Metro: 10.0%  
 Urban Nonmetro: 14.8%  
 Rural Nonmetro: 1.7%

Singh G & Siahpush M. Journal of Urban Health, 2013, 91(2);272-292.



# Assessment

- Leaders in IHS/Tribal EDs **identified simulation-based education as a need** and asked AMC for help
- Specific barriers to simulation-based education (including but not limited to resources, geography, time, pandemic)
  - Can be overcome with free and openly accessible, easy-to-use **telesimulation tool**
  - Dedicated AMC partner



# Recommendations

- **Develop and implement a pediatric emergency simulation-based education program** for **TRIBAL-RURAL-UNDERSERVED** population
- IHS/Tribal/Rural Hospital ED/EMS assign a Pediatric Emergency Care Coordinator (**PECC**)
- Academic Children's Hospital (**AMC**) partner identified and paired with PECC
- **Program evaluation** through annual PRS, simulation checklists, PECC and participant post-sim survey for perceived efficacy and if recommend to colleague
  - Sites receive report out of simulation performance, PRS, gap analysis of PRS, action items





# Program objectives

1. Formalize a relationship between Academic Medical Centers (AMCs) and Indian Health Service and Tribal Pediatric Emergency Care Coordinators (PECCs).
2. Create a sustainable PECC co-facilitated hybrid pediatric simulation training program to improve Emergency Department (ED) readiness in the IHS and Tribal system.



# Program objectives

3. Demonstrate change in provider knowledge/attitudes/teamwork during simulation.
4. Create an acceptable hybrid simulation program for the IHS.



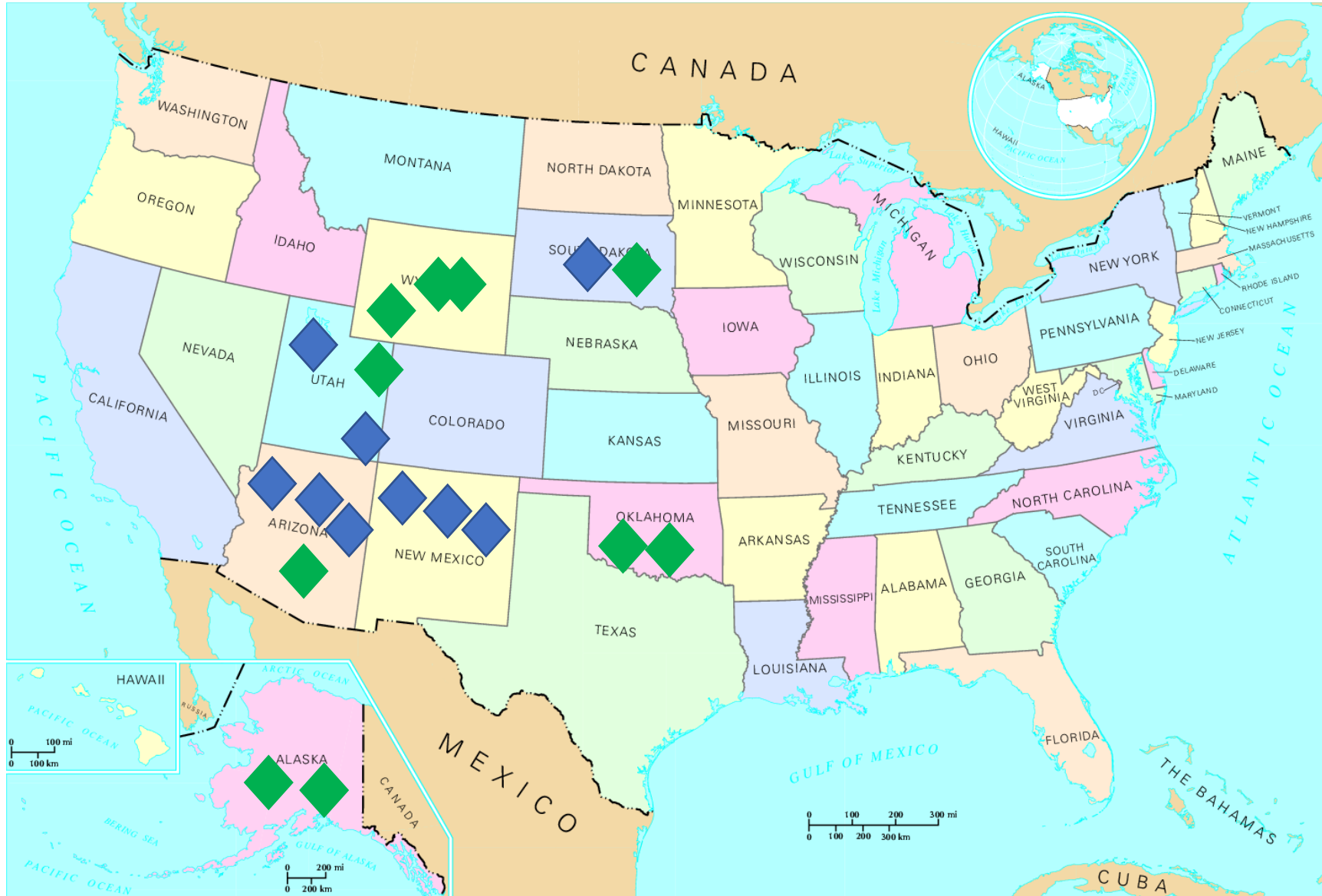


# Overview



◆ 2021-22

◆ 2022-23





**Shiprock**  
Mar 10-1, 2022



**Fort Defiance**  
Mar 12, 2022



**Gallup**  
Mar 14-15, 2022



**Zuni**  
Mar 16, 2022



**Chinle**  
Mar 27-28, 2022



**Mountain West**  
July 2022



# Performance summary

■ Tsehootsooi Medical Center

## EMSC Readiness Score

Tsehootsooi Medical Center, 66

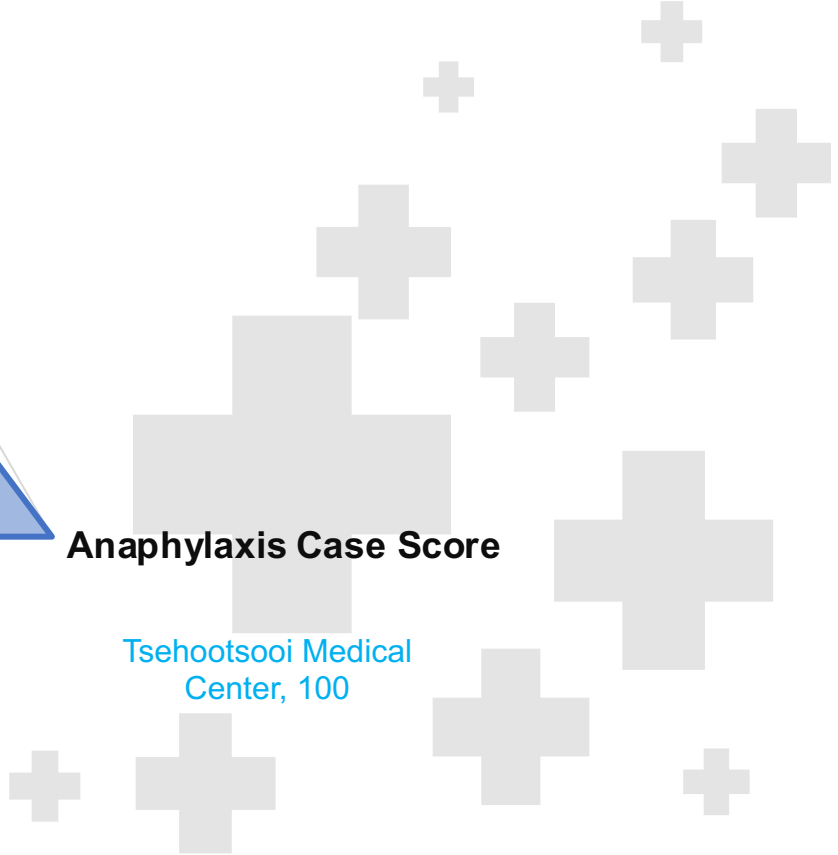
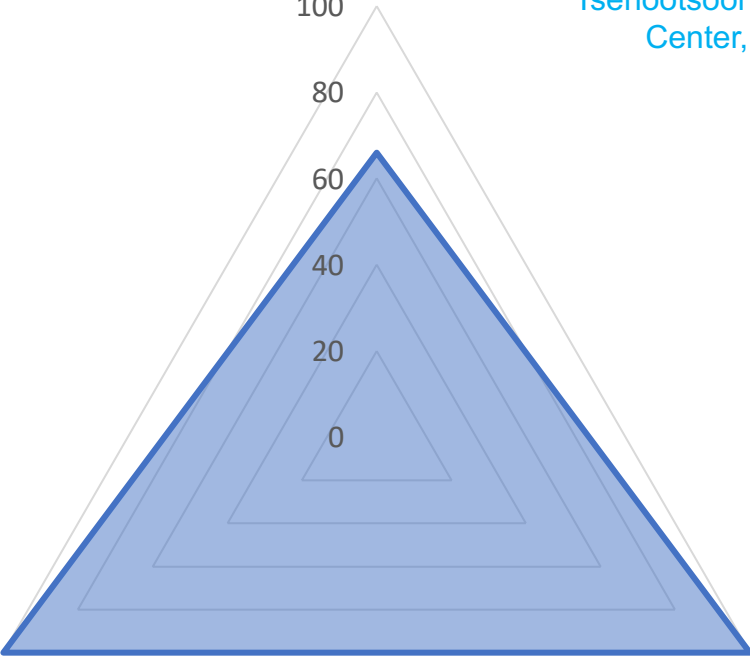
100  
80  
60  
40  
20  
0

## Seizure Case Score

Tsehootsooi Medical Center, 100

## Anaphylaxis Case Score

Tsehootsooi Medical Center, 100



# CASE PERFORMANCE

## Seizure

### Score



### Case details

5 year old male, presents with ongoing generalized seizure by EMS

- 1. Generalized seizure, no response to one dose of benzo, requiring second dose
- 2. Normal glucose. Seizure stops once a non-benzo, non-sedating anti epileptic is administered
- 3. Post-seizure care

### Checklist item

### Team 1

1. Respiratory depression recognized	+	Yes
2. Placed on O2	+	Yes
3. Airway repositioned	+	Yes
4. IV/IO placed in first 3 minutes	+	Yes
5. Benzodiazepine given	+	Yes
6. Checked bedside glucose	+	Yes

# CASE PERFORMANCE

## Anaphylaxis

### Case details

10-month old female, presents with wheezing, vomiting and coughing

1. Swelling of airway from anaphylaxis and wheezing progressing to stridor and low saturation
2. Progression of anaphylaxis with drop in BP and worsening respiratory symptoms
3. Improved POX/vitals when epinephrine administered

### Score



### Action Items

None

### Checklist item

### Team 1

- |    |   |     |
|----|---|-----|
| 1. | Weight Assessed                             | Yes |
| 2. | Airway Assessed                             | Yes |
| 4. | Anaphylaxis verbalized                      | Yes |
| 5. | Administered epinephrine IM                 | Yes |
| 6. | Started inhalation albuterol or racemic epi | Yes |
| 7. | IV/IO placed                                | Yes |
| 8. | Administered fluid                          | Yes |
| 9. | Parent allowed to stay                      | Yes |

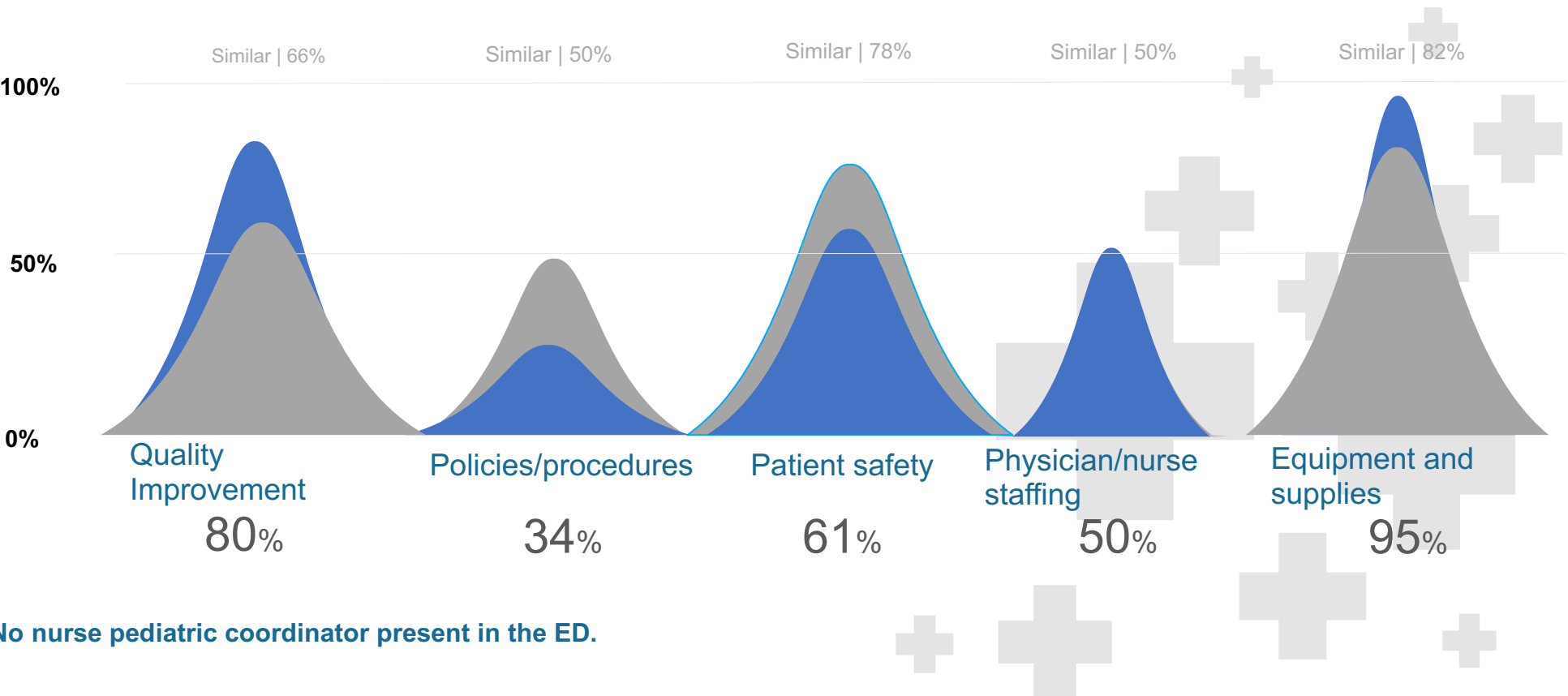




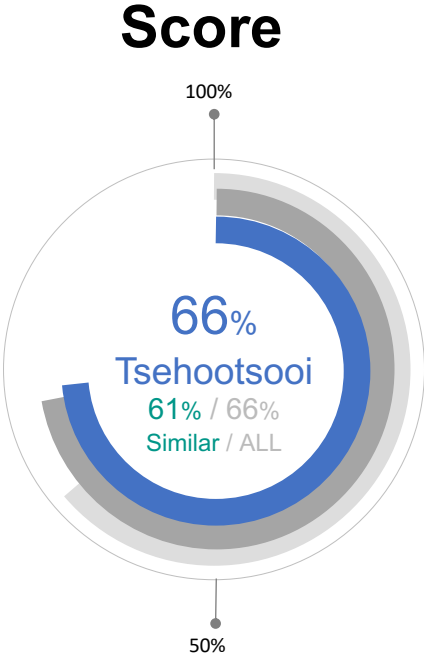
# EMSC Pediatric Readiness Score

Tsehootsoo  
Similar EDs

## Subcomponents



No nurse pediatric coordinator present in the ED.



# Gap Analysis of the EMSC score

## Items you did NOT have

### Physician and Nurses Coordinators

Nurse Pediatric Emergency Care Coordinator

### Physicians and Nurses Staffing the ED

Policy for nursing staff credentialing to include pediatric competencies

### Guidelines for quality improvement in the ED

Identification of quality indicators in children

### Guidelines for patient safety in the ED

Pain assessment in all children

Level of consciousness assessed in all children

Process for pre-calculated drug dosing

All weights recorded in medical record in kilograms

### Guidelines for policies and procedures and protocols for the ED

Pediatric Disaster Plan

Policy for Family Centered Care

Guidelines for transfer of children with behavioral health issues

Reduced dose radiation for CT and X-Ray

Death of a child in the ED

Immunization assessment and management

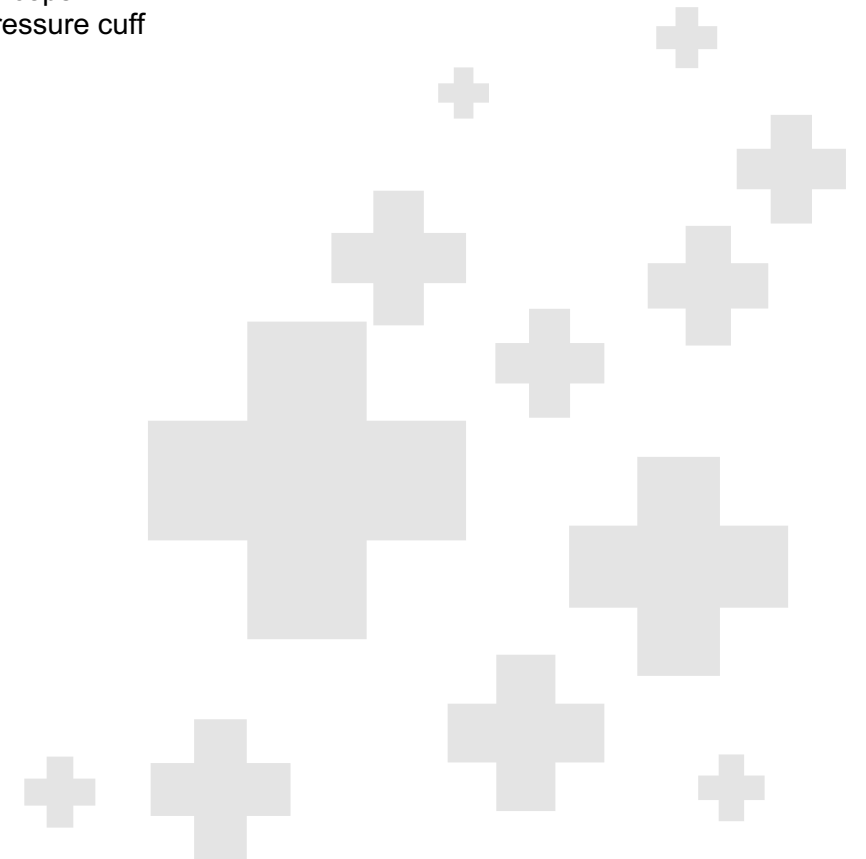
Pediatric assessment and reassessment

### Guidelines for equipment, supplies, and medications for the care of pediatric patients in the ED

Neonatal mask for bag valve mask

Pediatric Magill forceps

Neonatal blood pressure cuff



[Link for EMSC Toolkit](#)

# Action Items Summary

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- 1. Review gap analysis of PRS**
- 2. Review SimBox cases to run with ED staff**
- 3. Liz and Erin to provide trauma case for ED staff**



I had a mother come running in from the waiting room last night with her seizing 4-year-old. I was very happy I had just done that SIM!!! Thanks for all your work girl, it **really makes a difference!**

[We] had an intense peds case yesterday involving an intubation and treatment for seizure in the setting of an ICH. Once again I was **thankful for our recent peds preparedness efforts.**

*PECC, Chinle*

We had an unfortunate pediatric code this weekend but got some great feedback from nursing regarding being **more prepared thanks to the sim**, so I am definitely looking forward to having **frequent sims to have us as prepared as possible for pediatric emergencies.**

*PECC, Fort Defiance*



# CHOP Contract Proposed sites (6)

- **Alaska EMS** – Yale (E)
- **Southeast Alaska Regional Health Consortium** (Wrangell, Sitka) – SCH (E)
- **Kayenta Health Center** (AZ) – CHOP (E)
- **Claremore Indian Hospital** (OK) – U of OK (M)
- **Muskogee (Creek) Nation Community Hospital System** (OK) -- U of OK (M)
- **Cheyenne River** (SD) – Boston Children's (M)

# CHOP Contract Continued sites (7)

- **Shiprock** – UNM (E)
- **Gallup** – UNM (E)
- **Zuni** – UNM (E)
- **Fort Defiance** – Phoenix Children's (M)
- **Chinle** – Phoenix Children's (M)
- **Whiteriver** – CHOP (M)
- **Rosebud** – U of MN (M)

# **“Utah” sites (community hospitals)**

- **Mountain West Medical Center (UT)**
- **Sage West Memorial Hospital (WY)**
- **Memorial Hospital of Sweetwater County (WY)**
- **St. John’s Health (WY)**
- **Blue Mountain Hospital (UT)**
- **Uintah Basin Medical Center (UT)**

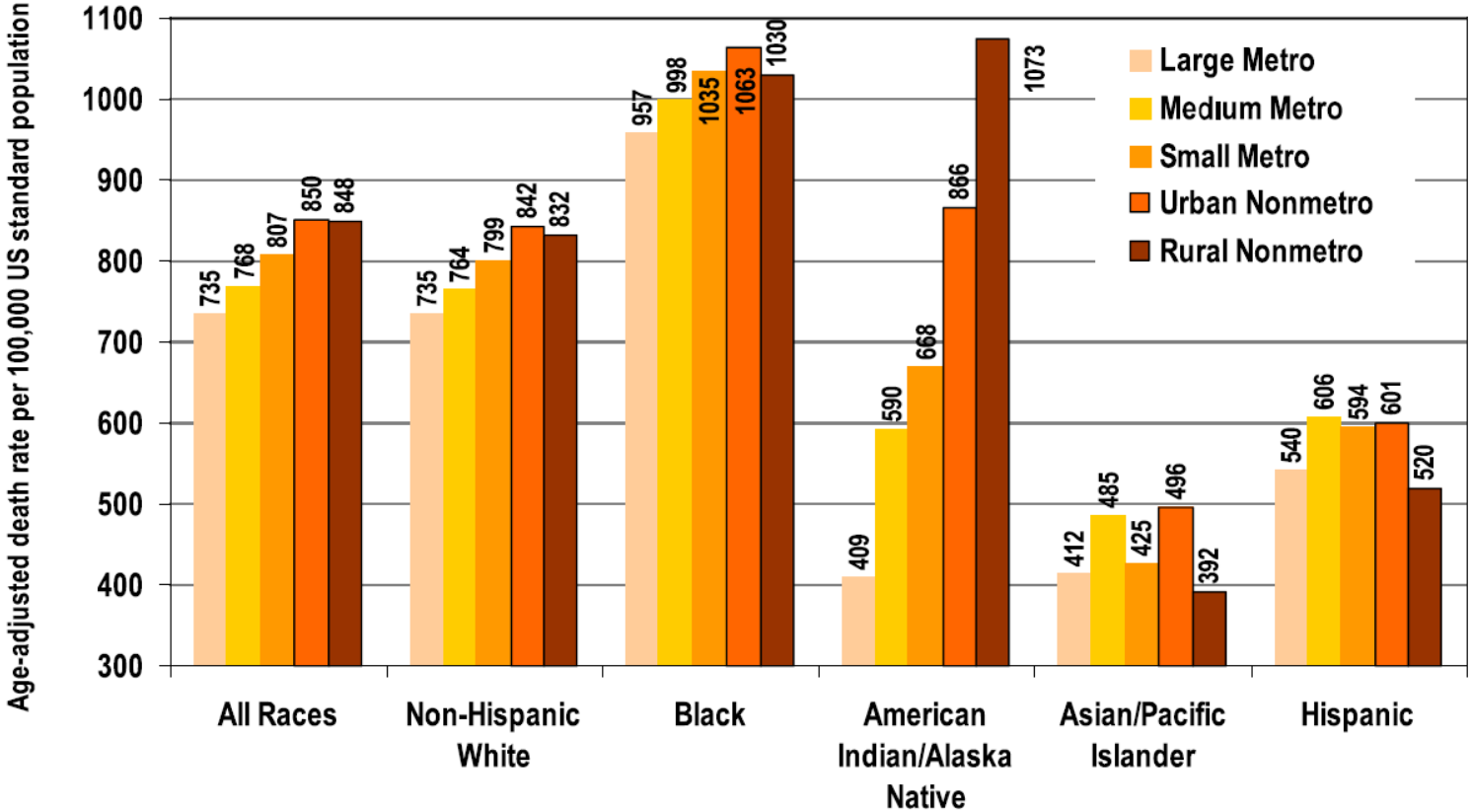
# Keys to success

- Team based approach
  - Program managers (Erin, Marcie) glue for AMC-PECC partnership and curriculum
- Leadership support of PECC and program
- AMC partner commitment to service, outreach, education w/Division support
- Funding
- Coordinated effort to prioritize care of AI/AN children
  - Adequate administrative structure

# Discussion

- Disparate HRSA funding streams via CHOP and Utah – discuss if best to have one
- Building off success and model of ImPacts
- Rolling this into a more sustainable coordinated approach through the PPN
  - **EDI component of PPN**
    - Geographic located near large Native American populations
- Demonstration of how to do this in other areas of the country where there are **rural underserved populations**

# Racial disparities in mortality



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**amazon**

The Amazon logo is centered on a light gray rectangular background. It features the word "amazon" in a bold, black, lowercase sans-serif font. Below the text is a curved orange arrow that starts under the letter 'a' and points to the right, ending under the letter 'n'.



# Grateful to:

- Atsaq John Oscar from Tununak, lives in Bethel, Yupik Alaskan, commissioned to design logos used through this presentation

# Questions?

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