Pediatric Readiness in Kentucky

How Are We Measuring Up?

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Disclosure

- Dr. Fallat receives grant support from the Health Resources & Services Administration (HRSA) for Kentucky EMSC as Principal Investigator and the Pediatric Pandemic Network grant as a sub-Principal Investigator.
- The contents are solely the responsibility of the authors and do not necessarily represent the official views of ASPR, HRSA or the Department of Health and Human Services.

Objectives

At the conclusion of this presentation, the participant should be able to:

1. define the concept of pediatric readiness for an emergency department
2. describe the benefits of emergency department pediatric readiness for ill and injured children
3. describe ways to determine gaps in pediatric readiness and how to approach these gaps in an emergency department

My Guests

Morgan Skaggs, BHS, NRP
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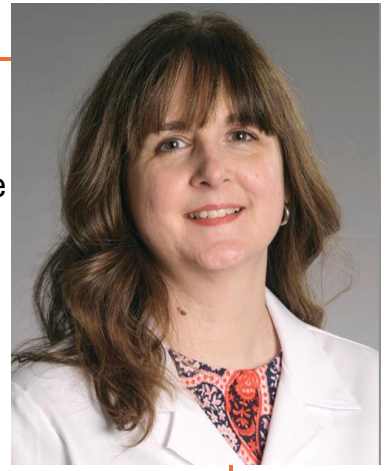

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Medical Director, Just For Kids Transport Team
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Norton Children's Hospital Hub
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What is Pediatric Readiness?

Pediatric Readiness is ensuring that *every EMS agency and emergency department* has the pediatric-specific champions, competencies, policies, equipment, and other resources needed to provide high-quality emergency care for children.

2018: Pediatric Readiness in the Emergency Department

A perfect score is 100, national average is 70 and hasn't changed much in a decade

POLICY STATEMENT Organizational Principles to Guide and Define the Child Health Care System and/or Improve the Health of all Children

EMERGENCY NURSES ASSOCIATION

American College of Emergency Physicians®

American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN™

Pediatric Readiness in the Emergency Department

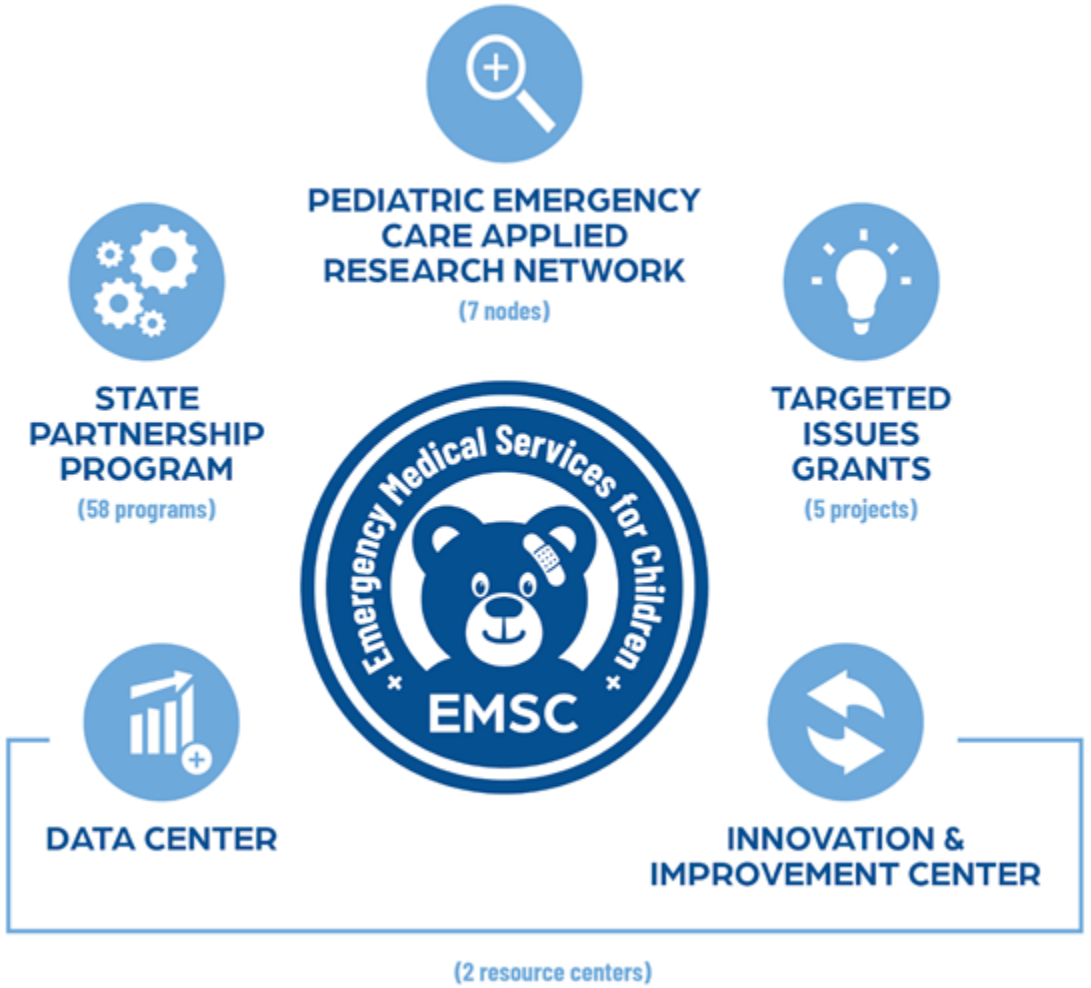
Katherine Remick, MD, FAAP, FACEP, FAEMS,[a,b,c] Marianne Gausche-Hill, MD, FAAP, FACEP, FAEMS,[d,e,f] Madeline M. Joseph, MD, FAAP, FACEP,[g,h] Kathleen Brown, MD, FAAP, FACEP,[i] Sally K. Snow, BSN, RN, CPEN,[j] Joseph L. Wright, MD, MPH, FAAP,[k,l] AMERICAN ACADEMY OF PEDIATRICS Committee on Pediatric Emergency Medicine and Section on Surgery, AMERICAN COLLEGE OF EMERGENCY PHYSICIANS Pediatric Emergency Medicine Committee, EMERGENCY NURSES ASSOCIATION Pediatric Committee

The EMS for Children Program (1985)

- Designed to reduce childhood death and disability due to severe illness or injury

- Enhances the pediatric capability of *existing* emergency care systems designed for adults

Emergency Medical Services for Children Family of Programs



CROSS-CUTTING INITIATIVES

National PRP
Prehospital Pediatric Readiness Project
Ensuring Emergency Care for All Children
(EMS)

National PRP
Pediatric Readiness Project
Ensuring Emergency Care for All Children
(EDs)

PEDIATRIC PANDEMIC NETWORK
(Disaster preparedness)

THE FEDERAL EMS FOR CHILDREN PROGRAM (HRSA, MCHB)

1984 **Initial legislation passed**

1986 First grants to 4 states: AL, NY, CA, OR

1992 Targeted Issues Grants

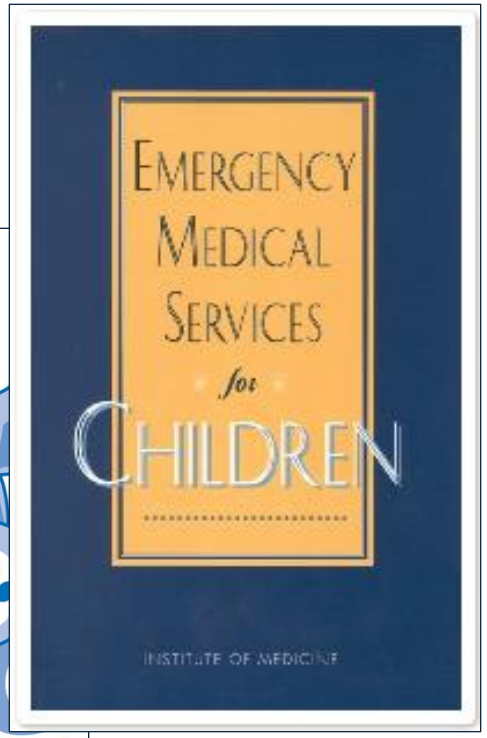
1993 **Report**

1997 **State Partnership Grants**

2001 Pecarn **First federally-funded, multi-institutional network for research in PEM**

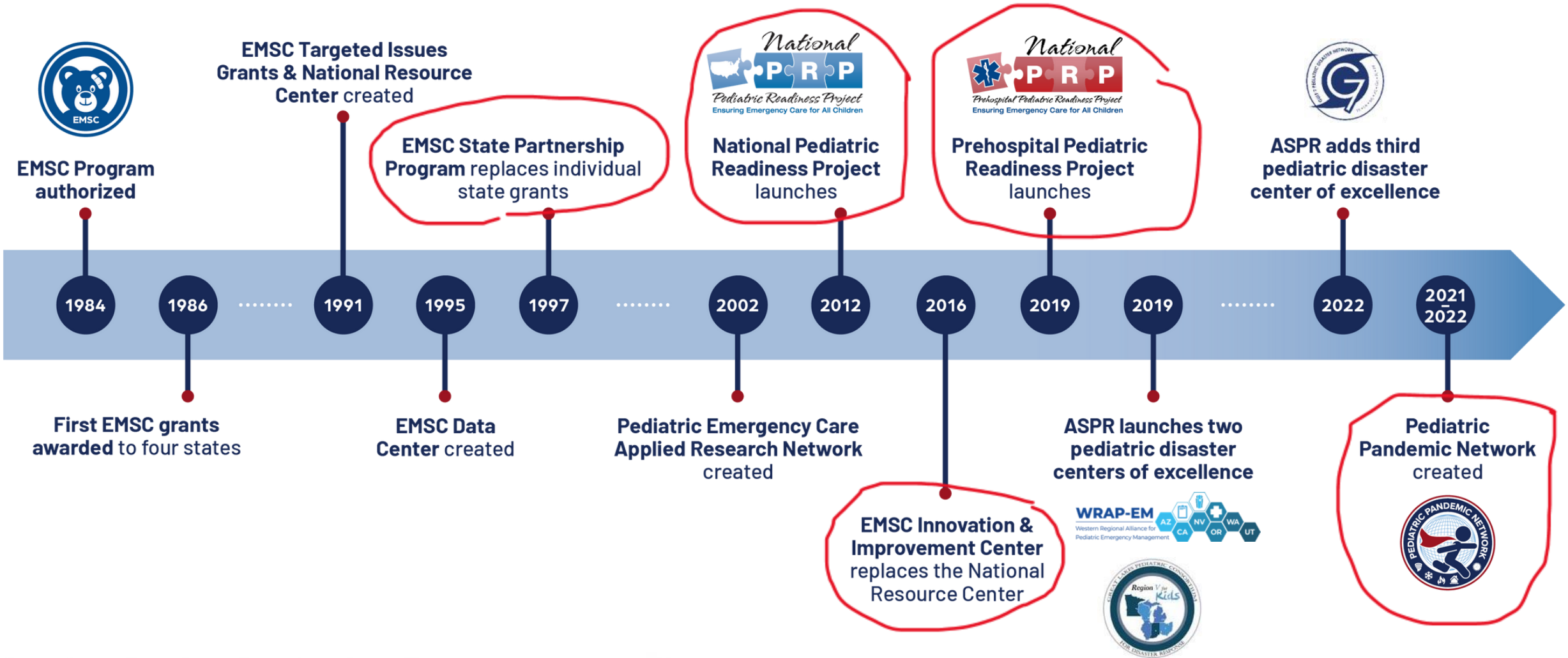
2005 **EMSC Performance Measures implemented**

2012 SPROC demonstration grants



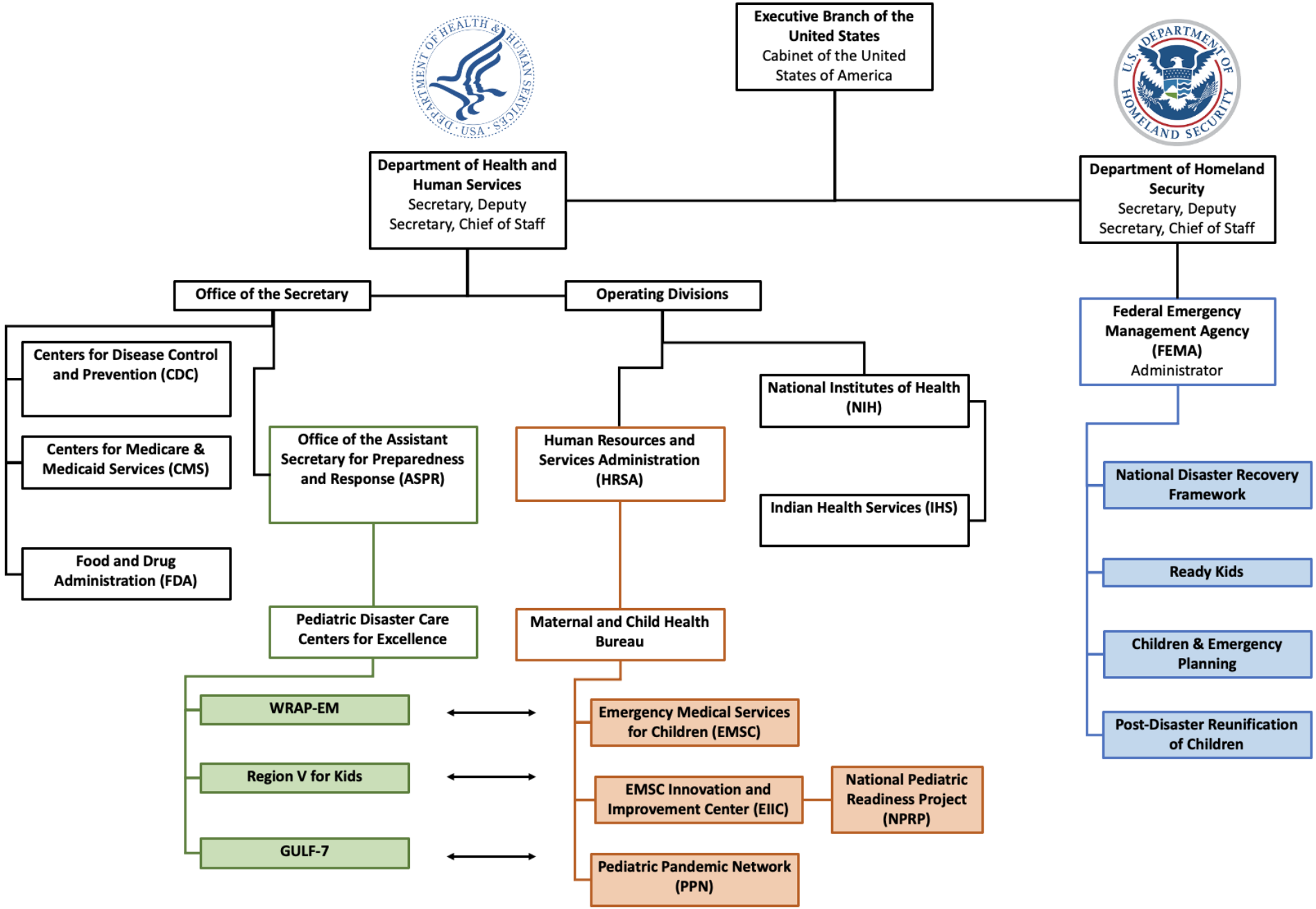
1993

Legacy of Improving Everyday and Disaster Readiness



Health Resources and Services Administration (HRSA Funded Programs) and Kentucky Involvement

2001	2016	2021
Emergency Medical Services for Children (EMSC)	**EMSC Innovation and Improvement Center (EIIC)**	**Pediatric Pandemic Network (PPN)**
improves emergency care for kids by helping first responders and hospital emergency departments be “pediatric ready” to provide the best care possible.	uses research to develop strategies to help medical professionals understand how to take better care of children who need emergency care.	collaborates across the country with children's hospitals and their communities to provide the best care possible to children in emergencies, disasters and pandemics.


Executive Branch of the United States
Cabinet of the United States of America
Department of Health and Human Services
Secretary, Deputy Secretary, Chief of Staff
Department of Homeland Security
Secretary, Deputy Secretary, Chief of Staff
Office of the Secretary
Operating Divisions
Centers for Disease Control and Prevention (CDC)
Centers for Medicare & Medicaid Services (CMS)
Food and Drug Administration (FDA)
Office of the Assistant Secretary for Preparedness and Response (ASPR)
Human Resources and Services Administration (HRSA)
National Institutes of Health (NIH)
Indian Health Services (IHS)
Federal Emergency Management Agency (FEMA)
Administrator
National Disaster Recovery Framework
Ready Kids
Children & Emergency Planning
Post-Disaster Reunification of Children
Pediatric Disaster Care Centers for Excellence
Maternal and Child Health Bureau
WRAP-EM
Region V for Kids
GULF-7
Emergency Medical Services for Children (EMSC)
EMSC Innovation and Improvement Center (EIIC)
National Pediatric Readiness Project (NPRP)
Pediatric Pandemic Network (PPN)

Where do children seek care for emergencies?

Community ED

Rural ED

Critical Access Hospital ED

>80-90% of children (30M/yr) are seen in general EDs that see *fewer than 15 children per day*

Gausche-Hill, et al. JAMA Peds. 2015

Why is A Focus on Pediatric Readiness Needed?

- 94% of children <30min to any ED
  - 55% within 30min to high peds ready ED
  - 90% live closer to non-peds ready ED
- No universal licensing requirements, variable readiness to meet the needs of children
  - Median pediatric readiness score = 69.5/100
- Variability in pediatric emergency care, <50% with QI plans

Many Hospital ERs Aren't Ready to Treat Children

Hospitals aim to be prepared; many lack equipment and pediatric training for doctors and nurses

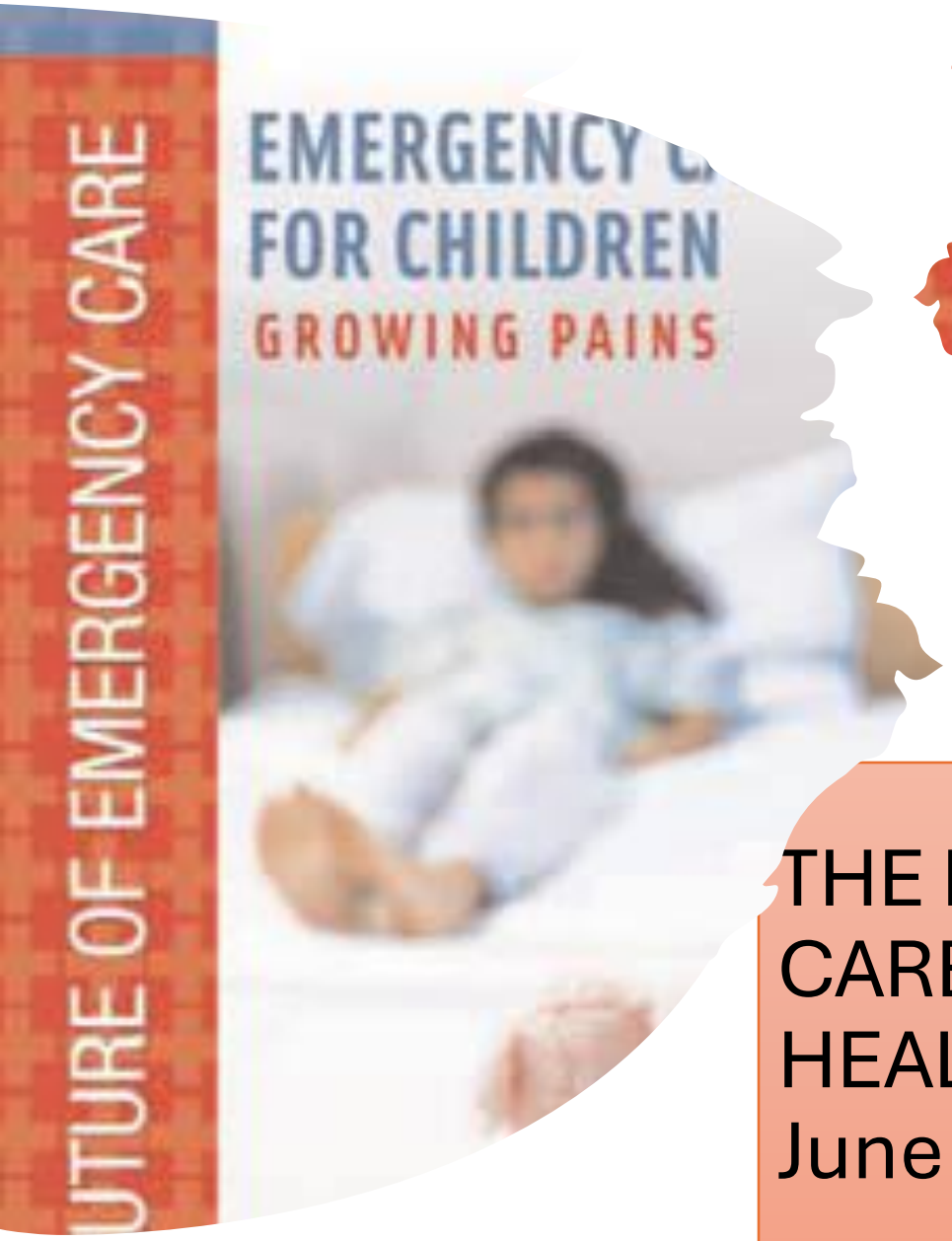
Dr. Joseph Faccio examines 14-month old Jailynn Rodriguez at Our Lady of Lourdes hospital in Camden, N.J. Her mother, Jessica Soto, brought her in for symptoms of fever and congestion.

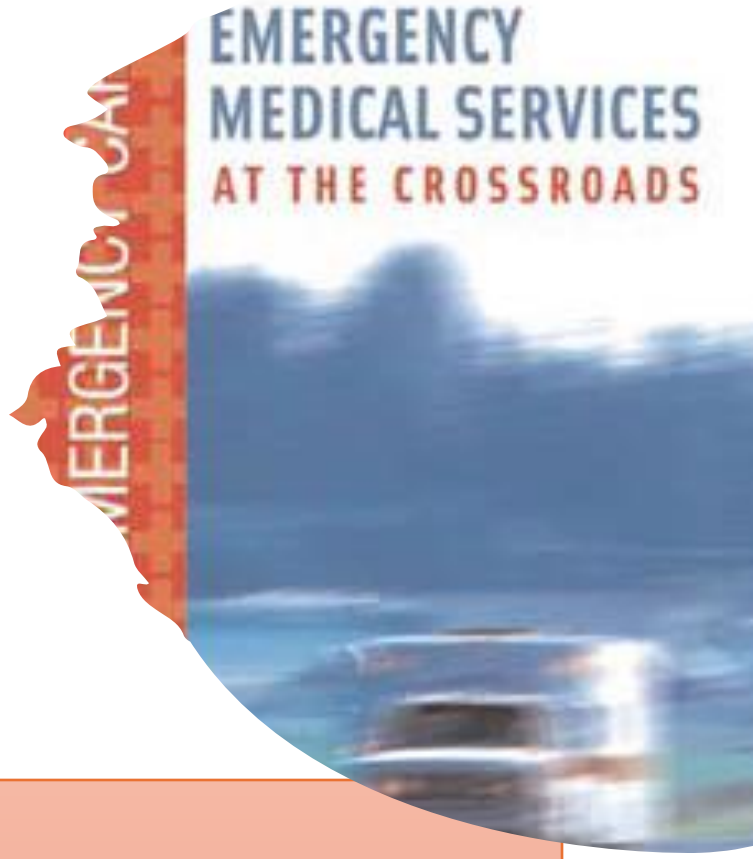
THE WALL STREET JOURNAL.

WSJ NEWS EXCLUSIVE

Children Are Dying in Ill-Prepared Emergency Rooms Across America

Hospitals and regulators have done little to ensure E.R.s are ready to treat children in emergencies, while researchers prove taking basic steps can save lives





THE FUTURE OF EMERGENCY CARE IN THE UNITED STATES HEALTH SYSTEM

June 2004-2006

2006 IOM REPORT

- Variation in preparedness described as ***UNEVEN***
- Only 6% of EDs in the US had all the supplies deemed essential for managing pediatric emergencies
    - Only half of hospitals had at least 85% of those supplies
- Lack of care coordination
- Geographic disparities in access
- Pediatric treatment patterns varied widely among emergency care providers
    - Many providers undertreated children
    - Many failed to recognize cases of child abuse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ENA
EMERGENCY NURSES
ASSOCIATION


National
PRP
Pediatric Readiness Project
Ensuring Emergency Care for All Children


EMSC
Emergency Medical
Services for Children

NPRP Assessments

2003

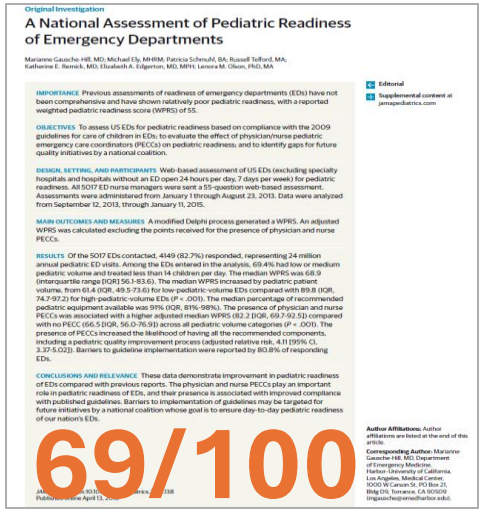
Pediatric Preparedness of US Emergency Departments: A 2003 Survey

55/100

29% (1489) response rate

Paper survey, Mail-out survey <60% aware of national guidelines

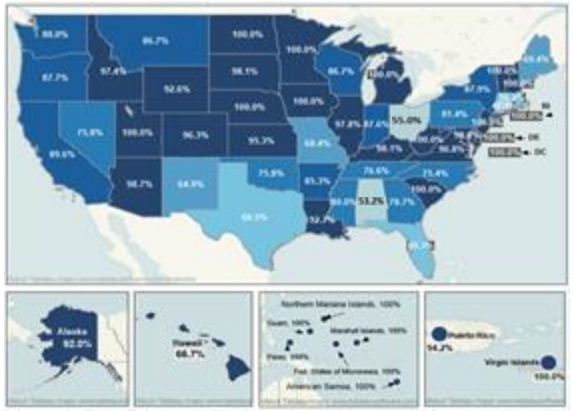
2013



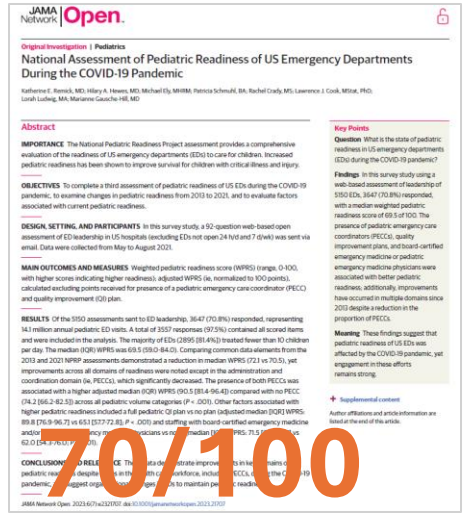
A National Assessment of Pediatric Readiness of Emergency Departments

69/100

82% (4149) response rate



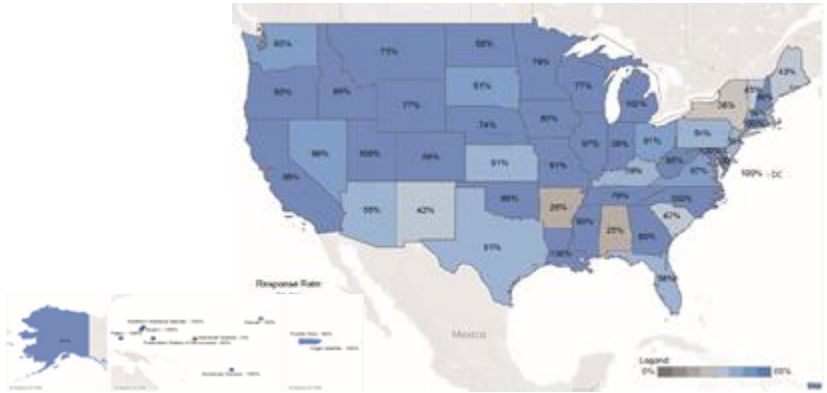
2021



National Assessment of Pediatric Readiness of US Emergency Departments During the COVID-19 Pandemic

70/100

71% (3647) response rate



response to lack of pediatric readiness

Hospitals d

Mariah Taylor (Email) -

11/17/2023 4:00:00 PM Share This Episode

Why So Many Emergency Rooms Are Failing Kids in America

A Wall Street Journal investigation found that only 14% of emergency departments nationwide have been certified to treat kids. WSJ's Melanie Evans explains why this is a problem across the country, and one family recounts their son's experience in an ER.

Further Reading:
-Find Hospitals Deemed Ready to Tr
-Children Are Dying in Ill-Prepared E
-Emergency Rooms Are Failing Kids

Read transcript

"It is unreasonable to expect every
expertise of a state-of-the-art children's hospital."

- Many EDs lack pediatric-specific protocols
- Many EDs lack immediate access to a pediatric crash cart or critical equipment
- Many parents are unable to make informed decisions
- Pediatric emergency care is under-funded; under-incentivized
- Joint Commission lacks pediatric-specific standards

ERSHIP

rong about Pediatric

aredness

Find Ho

Only 14% of U.S
or specialize i

By Melanie Evan
Dov Friedman
Oct. 1, 2023 5:30 am E

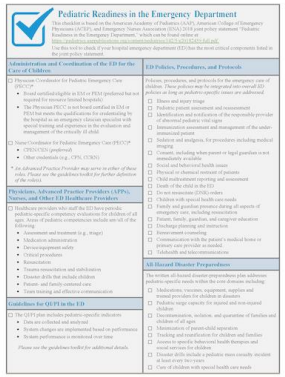
SAVE SHAR

In Response to The Wall Street Journal: We Can Improve Pediatric Emergency Care

Commentary addresses emergency department readiness.

By Amy Wimpey Knight, Torey Mack, M.D. Published Oct. 10, 2023

Resources to Facilitate Pediatric Readiness



PECC Workforce Development Collaborative

PWDC

National PRQC

Pediatric Readiness Quality Collaborative

Ensuring Emergency Care for All Children

American College of Emergency Physicians®

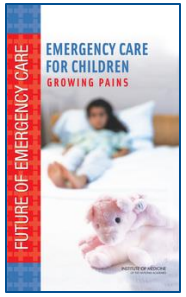
ADVANCING EMERGENCY CARE

Emergency Medical Services for Children

American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN™

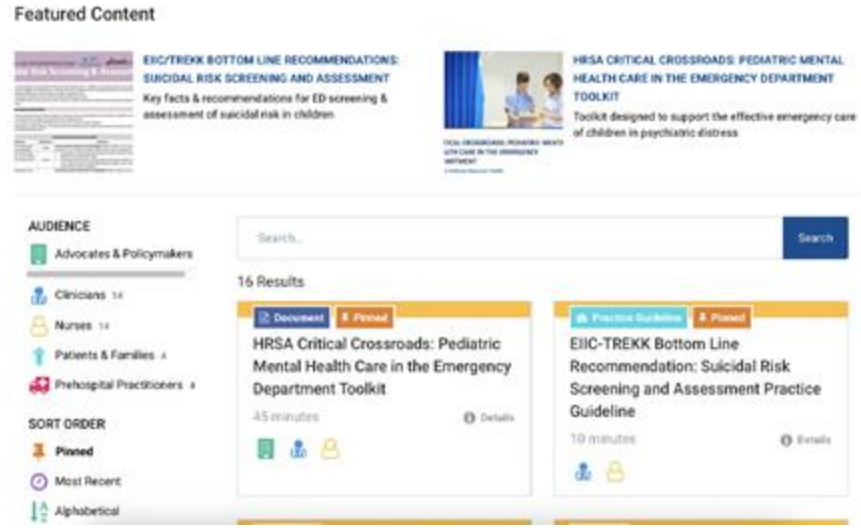
THE COMMITTEE ON TRAUMA



If there were one word to describe the state of emergency care for children, it is "uneven."

PEAK

Pediatric Education and Advocacy Kits



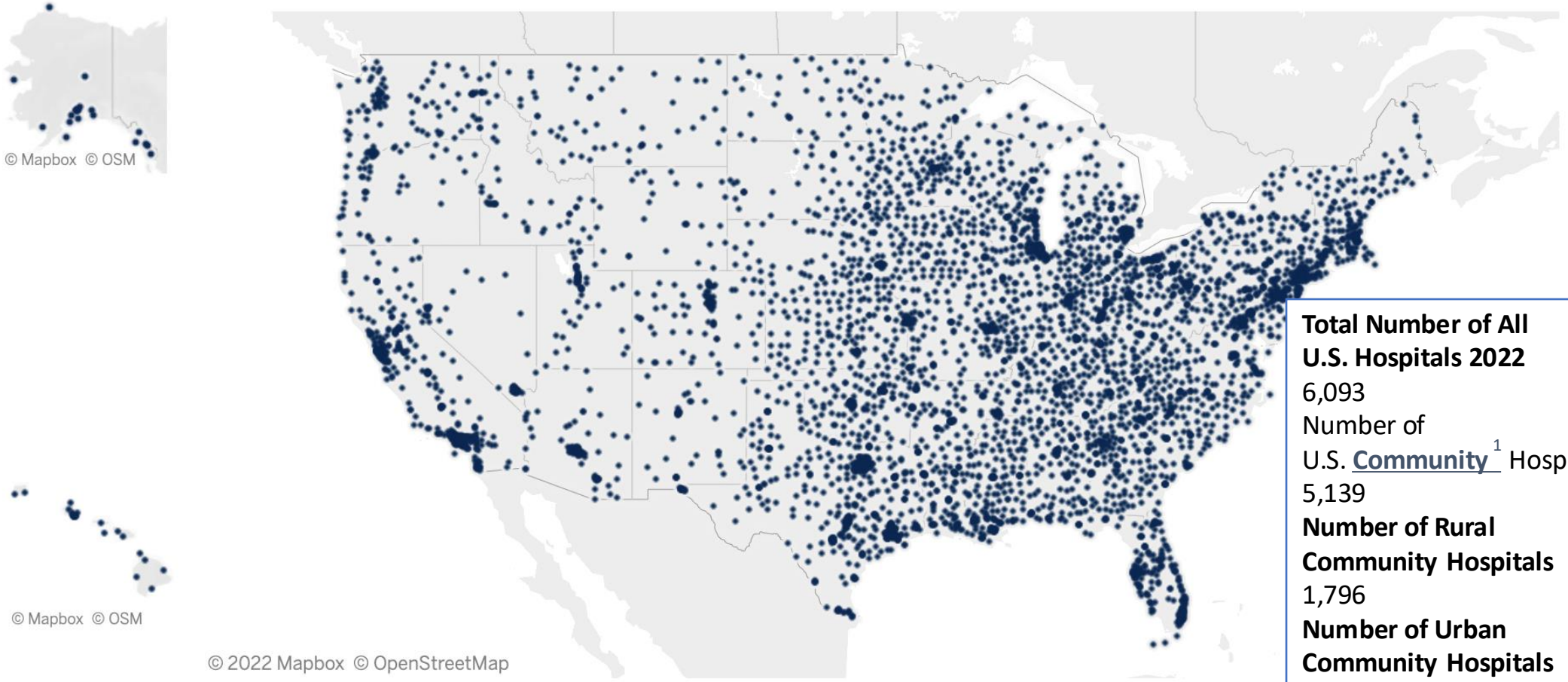
https://emscimprovement.center

Map of Community Hospitals in the United States

Data source: 2020 AHA Annual Survey Database

Learn more about hospital data from AHA

5,139
Hospitals



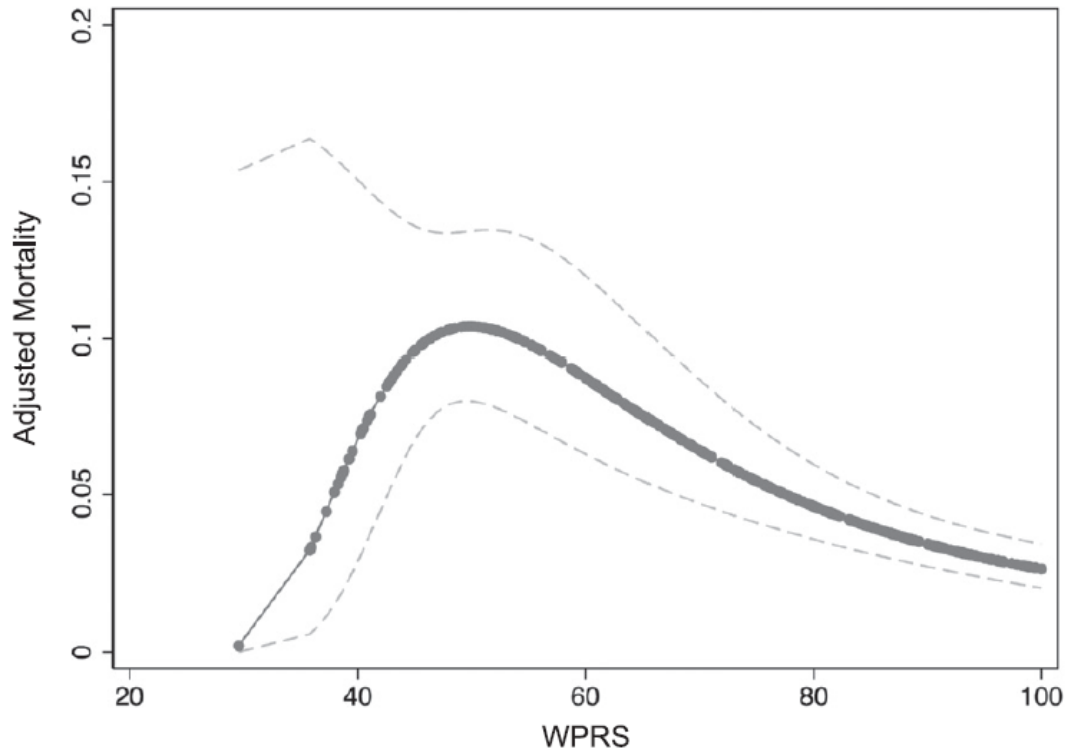
Total Number of All U.S. Hospitals 2022
6,093
Number of U.S. **Community**[1] Hospitals
5,139
Number of Rural Community Hospitals
1,796
Number of Urban Community Hospitals
3,343
Children's Hospitals 279

Pediatric readiness and mortality

Emergency Department Pediatric Readiness and Mortality in Critically Ill Children

Stefanie G. Ames, MD, MS,[a] Billie S. Davis, PhD,[e] Jennifer R. Marin, MD, MSc,[c,d] Ericka L. Fink, MD, MS,[c,e] Lenora M. Olson, PhD, MA,[g] Marianne Gausche-Hill, MD,[e,h,i] Jeremy M. Kahn, MD, MS[e,f]

Pediatric Readiness Score	Quartile 1 30-59	Quartile 2 60-74	Quartile 3 75-88	Quartile 4 89-100
Adjusted Odds Ratio (In-hospital Mortality)	----	0.52 (0.3-0.9)	0.36 (0.2-0.6)	0.25 (0.2-0.4)

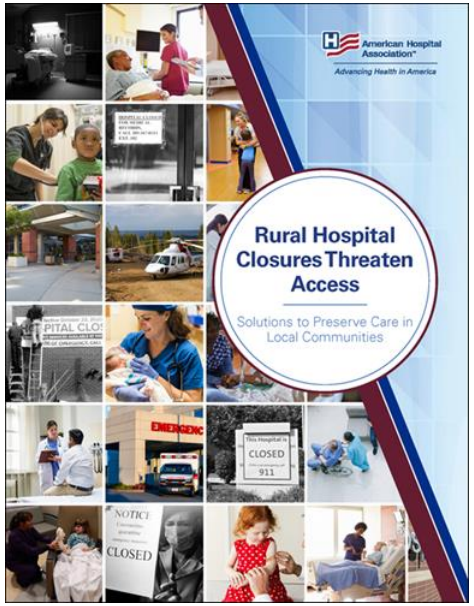


2013 vs 2021: Healthcare Landscape

- 17% fewer hospitals report availability of pediatric inpatient wards

The loss of critical access hospitals over the prior decade (N=136), pales in comparison to the loss of pediatric inpatient units.

	2013 Assessment	2021 Assessment
In-Patient Services[2]		
Newborn nursery	1931 (57.3%)	2001 (56.3%)
Neonatal intensive care unit	951 (28.2%)	991 (27.9%)
Pediatric intensive care unit	420 (12.5%)	344 (9.7%)
Pediatric inpatient ward/unit	1798 (53.4%)	1094 (30.8%)
Adult intensive care unit (admits children)	1224 (36.3%)	632 (26.7%)
Adult inpatient ward/unit (admits children)	2317 (68.8%)	1545 (48.3%)
Pediatric Volume		
Low: <1,800 pediatric patients (average of 5 or fewer a day)	1629 (39.3%)	1806 (50.8%)
Medium: 1,800 – 4,999 pediatric patients (average of 6-13 a day)	1248 (30.1%)	1103 (31.0%)
Medium to High: 5,000 – 9,999 pediatric patients (average of 14-26 a day)	708 (17.1%)	367 (10.3%)
High: >=10,000 pediatric patients (average of 27 or more a day)	561 (13.5%)	281 (7.9%)

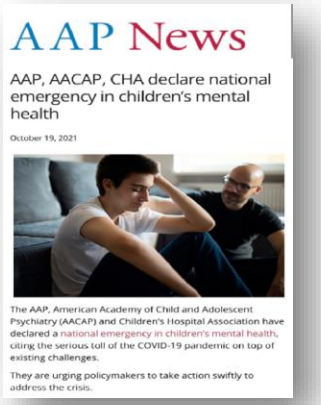


JAMA Peds Remick, 2023

What brings children to emergency departments?

Overview of Hospital Stays Among Children and Adolescents, 2019

- #1 cause of hospitalization <10yrs: Respiratory
- #1 cause of hospitalization >10yrs: Depression/Suicide

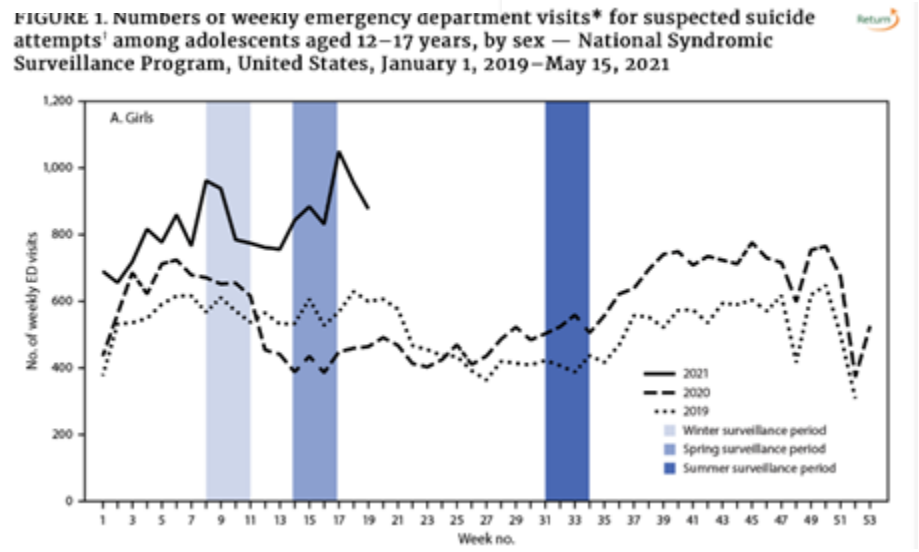


STATISTICAL BRIEF #299
November 2022

Audrey J. Weiss, Ph.D., Lan Liang, Ph.D., and Kimberly Martin, Ph.D.

Emergency Department Visits for Suspected Suicide Attempts Among Persons Aged 12–25 Years Before and During the COVID-19 Pandemic — United States, January 2019–May 2021

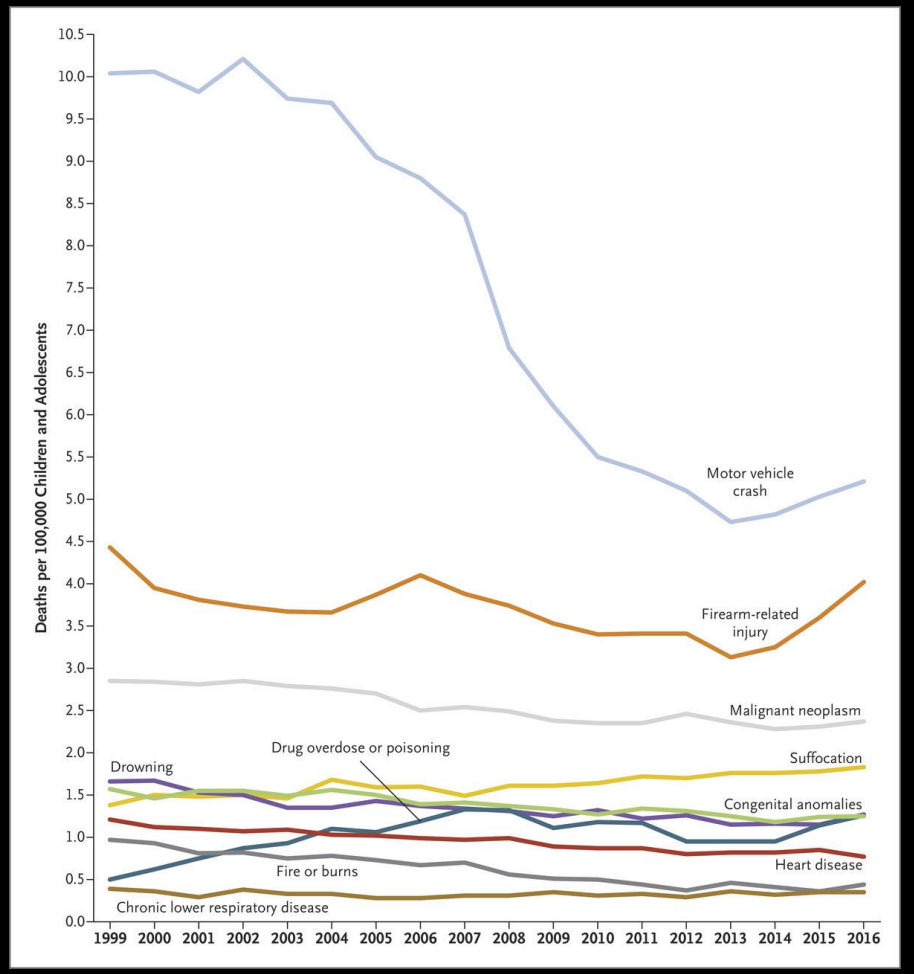
Weekly / June 18, 2021 / 70(24);888–894



https://www.cdc.gov/mmwr/volumes/70/wr/mm7024e1.htm#F2_down

Mortality Rates (Deaths per 100,000 Children and Adolescents) for the 10 Leading Causes of Death in the United States from 1999 to 2016.

1-19yr of age



RM Cunningham et al. N Engl J Med 2018;379:2468-2475.

The NEW ENGLAND JOURNAL of MEDICINE

Lee LK, Fleegler EW, Goyal MK, et al; AAP Council on Injury, Violence, and Poison Prevention. Firearm-Related Injuries and Deaths in Children and Youth. Pediatrics. 2022; 150(6):e2022060071

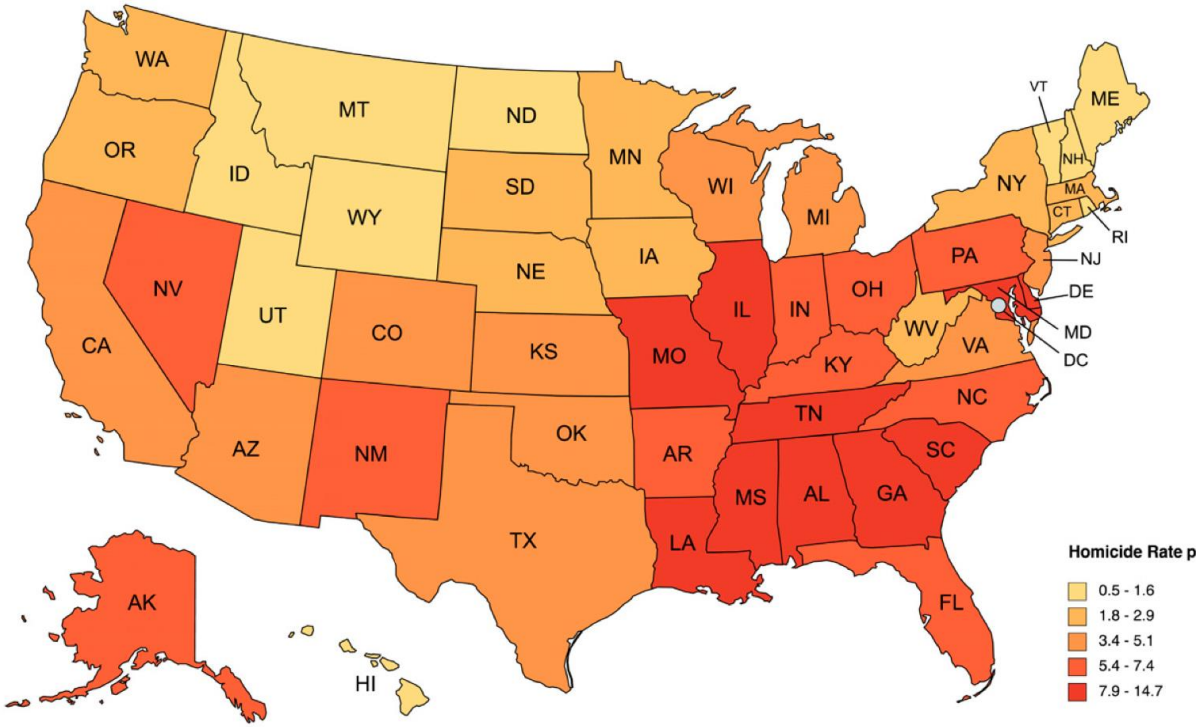


FIGURE 6
Homicide firearm fatality rates in youth 5 to 24 years, average 2016 to 2020. Data obtained from: https://www.cdc.gov/injury/wisqars.

0-24yr of age

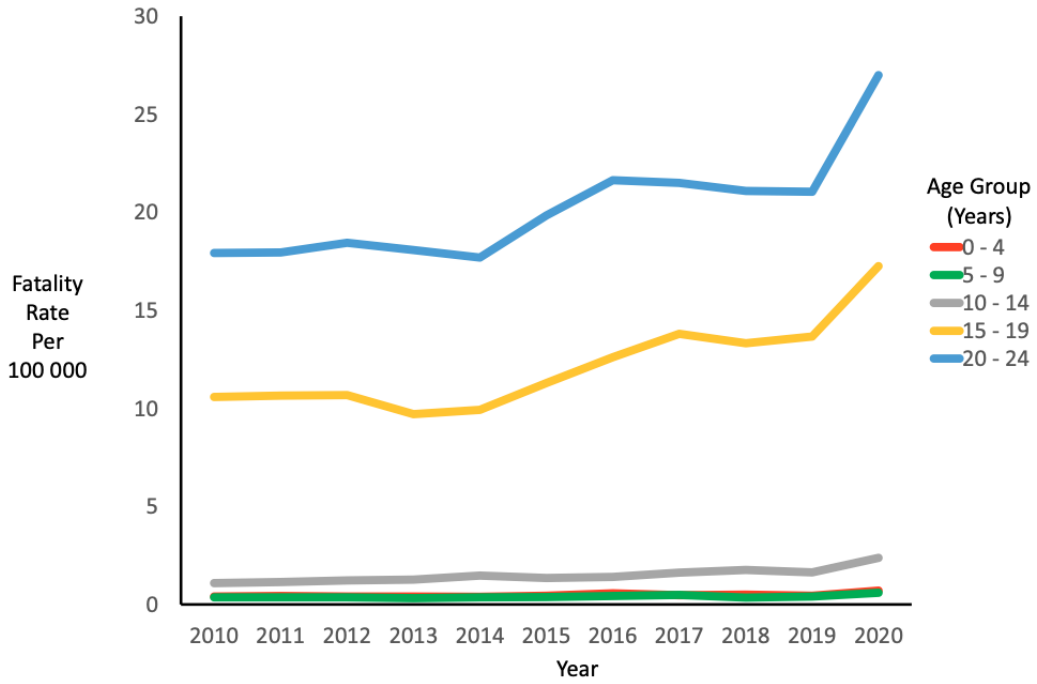
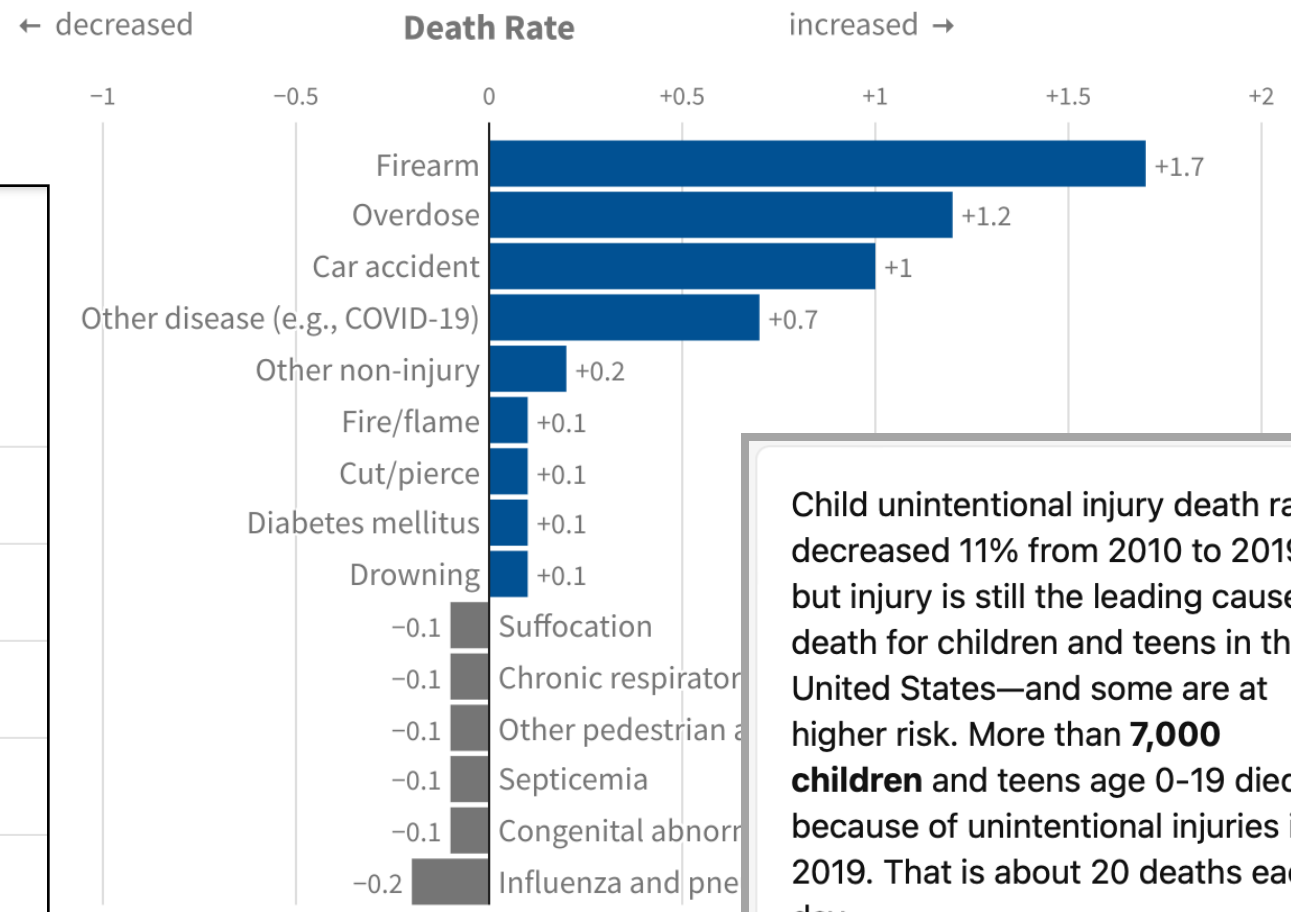


FIGURE 1
Total firearm fatality rates in youth 0 to 24 years, 2010 to 2020. Data obtained from: https://www.cdc.gov/injury/wisqars.

Gun deaths, overdoses, and car accidents caused childhood deaths to rise during the pandemic.

Change in death rate by cause of death per 100K children, ages 1 through 19, between 2019 and 2021



ase Control and Prevention

nechanisms and all other leading causes." Any underlyi
veen 2019 and 2021 is not displayed.

Injury-related deaths shown combine homicide, suicide, and unintentional death

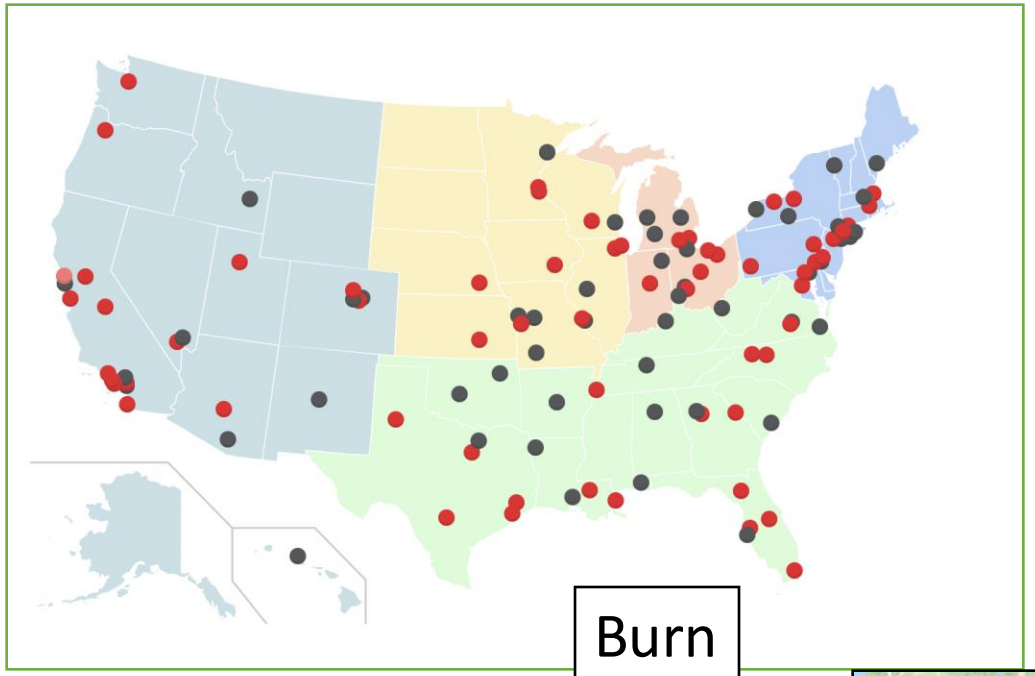
Provisional COVID-19 Deaths: Focus on Ages 0-18 Years

Data as of	Age group	COVID-19 De…	Indicator	Sex
06/28/2023	0-4 years	776	Age	All
06/28/2023	5-18 years	1,071	Age	All
06/28/2023	19-44 years	44,690	Age	All
06/28				All
06/28				All
06/28				All
06/28				All

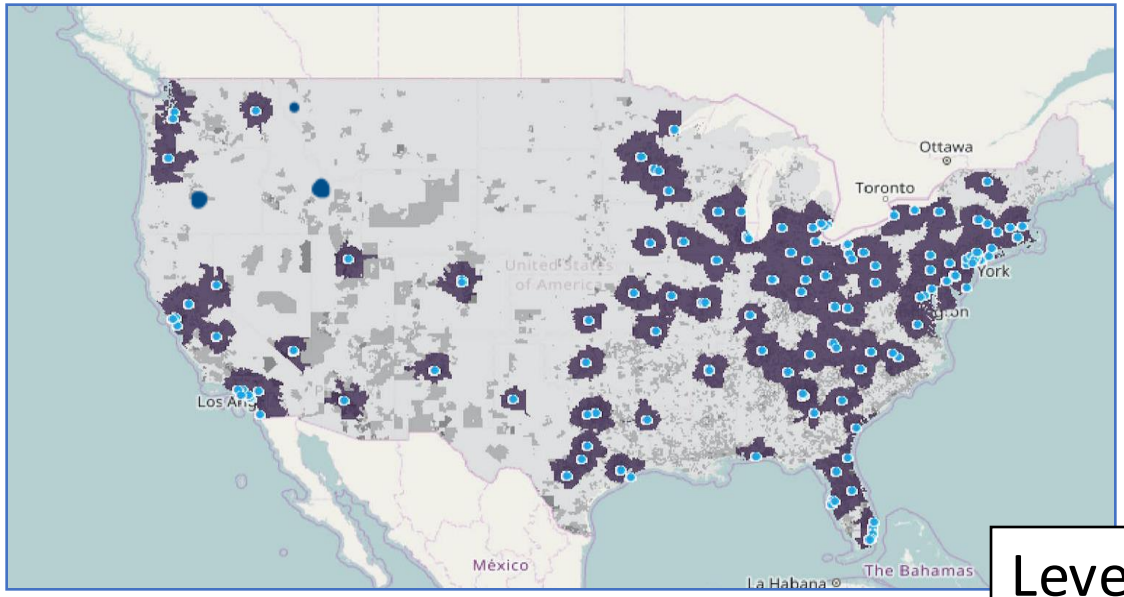
0.16% of COVID deaths were 0-18yr of age

Child unintentional injury death rates decreased 11% from 2010 to 2019, but injury is still the leading cause of death for children and teens in the United States—and some are at higher risk. More than **7,000 children** and teens age 0-19 died because of unintentional injuries in 2019. That is about 20 deaths each day.

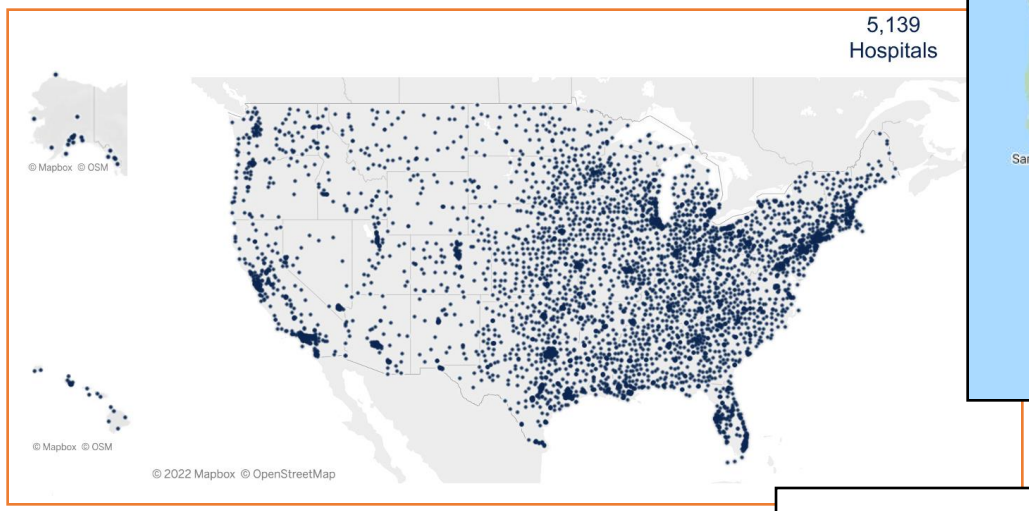
Injuries Among Children an...
cdc.gov



Burn

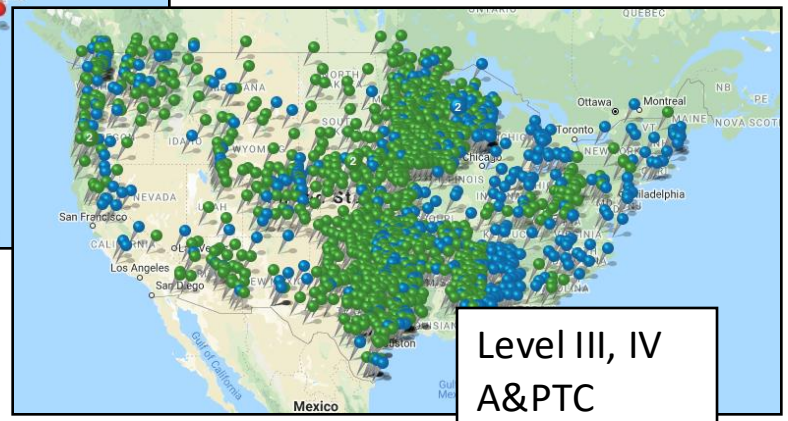


Level I, II PTC



All hospitals

Level I, II A&PTC



Level III, IV A&PTC

Raising the bar for pediatric trauma care

Published November 23, 2021

Pediatric readiness assessment to be required for trauma center verification

- 40-45% of all hospitals are trauma centers
- ~550 are ACS-verified

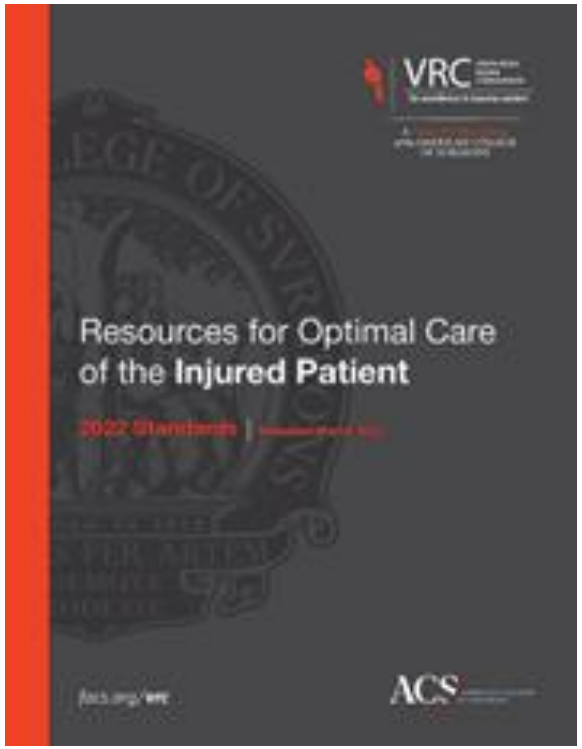
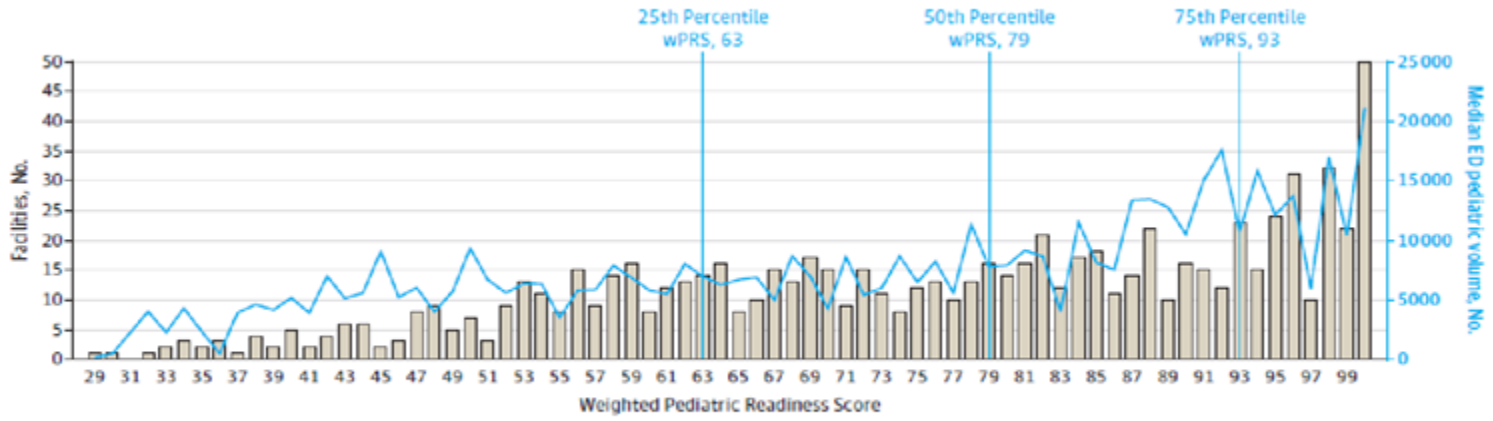


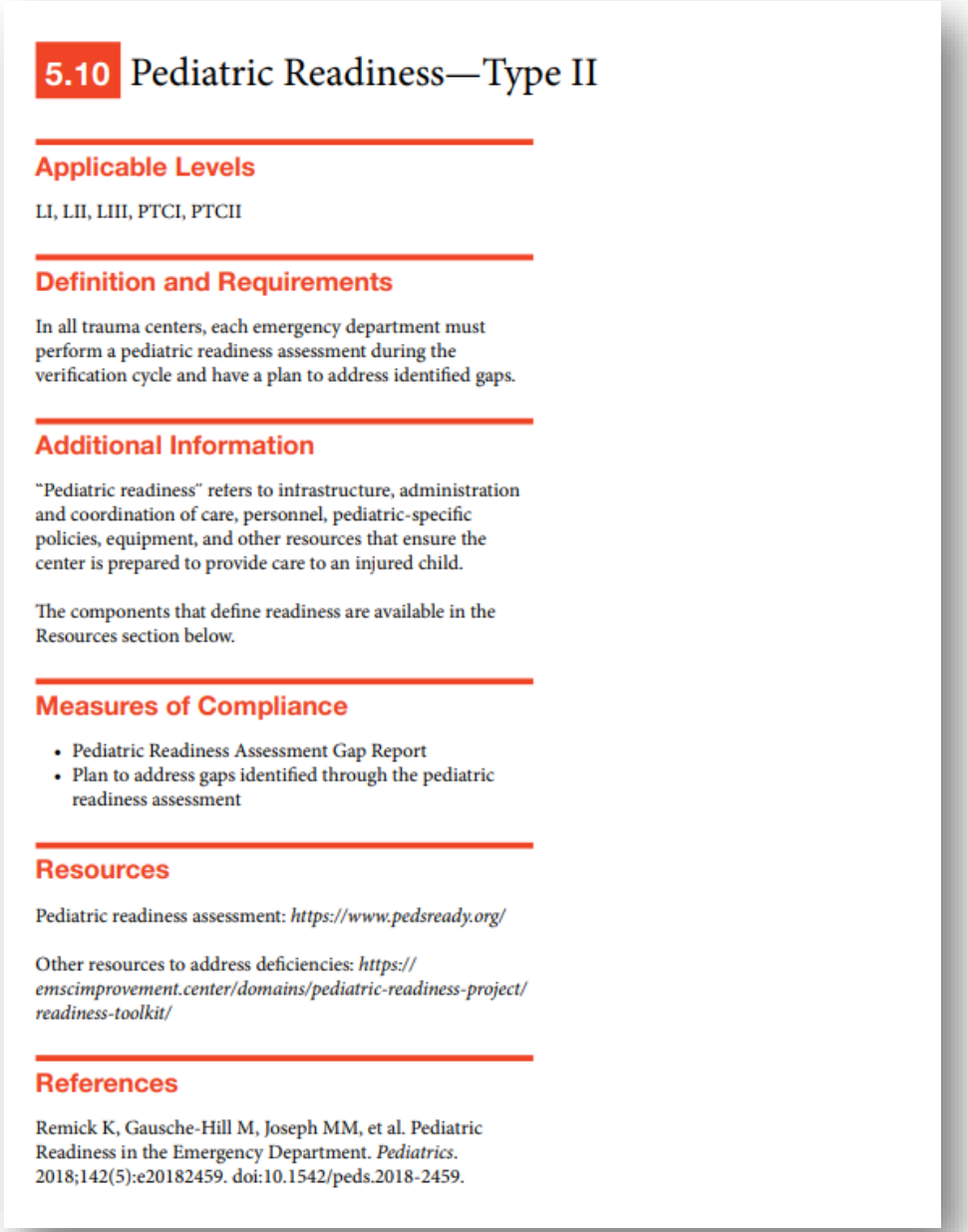
Figure 1. Emergency Department (ED) Pediatric Readiness and Annual ED Pediatric Volume in 832 Trauma Center EDs



Gray bars indicate the number of EDs at each weighted pediatric readiness score (wPRS) and the blue line indicates the median annual ED volume of children at each wPRS.

Resources for Optimal Care of the Injured Patient (2022 Standards)

- Effective for visits starting in September 2023
- Standard 5.10 - Pediatric Readiness
  - The NPRP assessment must be conducted once during the Verification cycle.
  - One cycle is defined as the thirty-six (36) month period preceding the expiration date of the current Verification status



5.10 Pediatric Readiness—Type II

Applicable Levels

LI, LII, LIII, PTCI, PTCII

Definition and Requirements

In all trauma centers, each emergency department must perform a pediatric readiness assessment during the verification cycle and have a plan to address identified gaps.

Additional Information

"Pediatric readiness" refers to infrastructure, administration and coordination of care, personnel, pediatric-specific policies, equipment, and other resources that ensure the center is prepared to provide care to an injured child.

The components that define readiness are available in the Resources section below.

Measures of Compliance

- Pediatric Readiness Assessment Gap Report
- Plan to address gaps identified through the pediatric readiness assessment

Resources

Pediatric readiness assessment: *https://www.pedsready.org/*

Other resources to address deficiencies: *https://emscimprovement.center/domains/pediatric-readiness-project/readiness-toolkit/*

References

Remick K, Gausche-Hill M, Joseph MM, et al. Pediatric Readiness in the Emergency Department. *Pediatrics*. 2018;142(5):e20182459. doi:10.1542/peds.2018-2459.

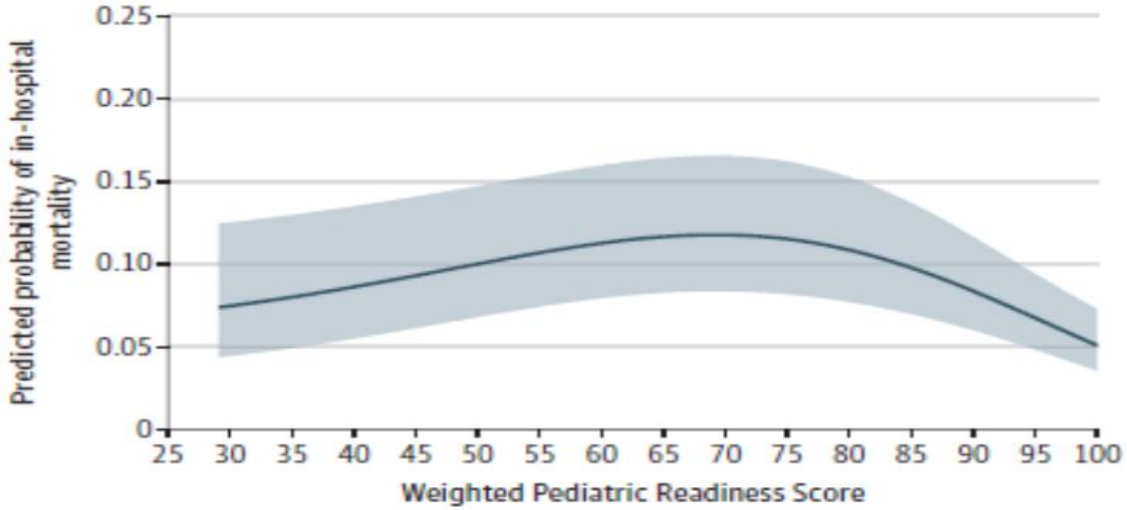
JAMA Pediatrics | Original Investigation

Evaluation of Emergency Department Pediatric Readiness and Outcomes Among US Trauma Centers

Craig D. Newgard, MD, MPH; Amber Lin, MS; Lenora M. Olson, PhD; Jennifer N. B. Cook, GCPH; Marianne Gausche-Hill, MD; Nathan Kuppermann, MD, MPH; Jeremy D. Goldhaber-Fiebert, PhD; Susan Malveau, MS; McKenna Smith, BS; Mengtao Dai, MS; Avery B. Nathens, MD, PhD; Nina E. Glass, MD; Peter C. Jenkins, MD, MSc; K. John McConnell, PhD; Katherine E. Remick, MD; Hilary Hewes, MD; N. Clay Mann, PhD, MS; for the Pediatric Readiness Study Group

Published June 7, 2021

If high pediatric readiness (wPRS>93), risk of death decreased by ~50%



Variable	OR (95% CI)	In-hospital mortality	*P* value
All patients (n = 372 004)			
4th Quartile	0.58 (0.45-0.75)		<.001
3rd Quartile	0.90 (0.70-1.17)		.44
2nd Quartile	1.16 (0.87-1.54)		.32

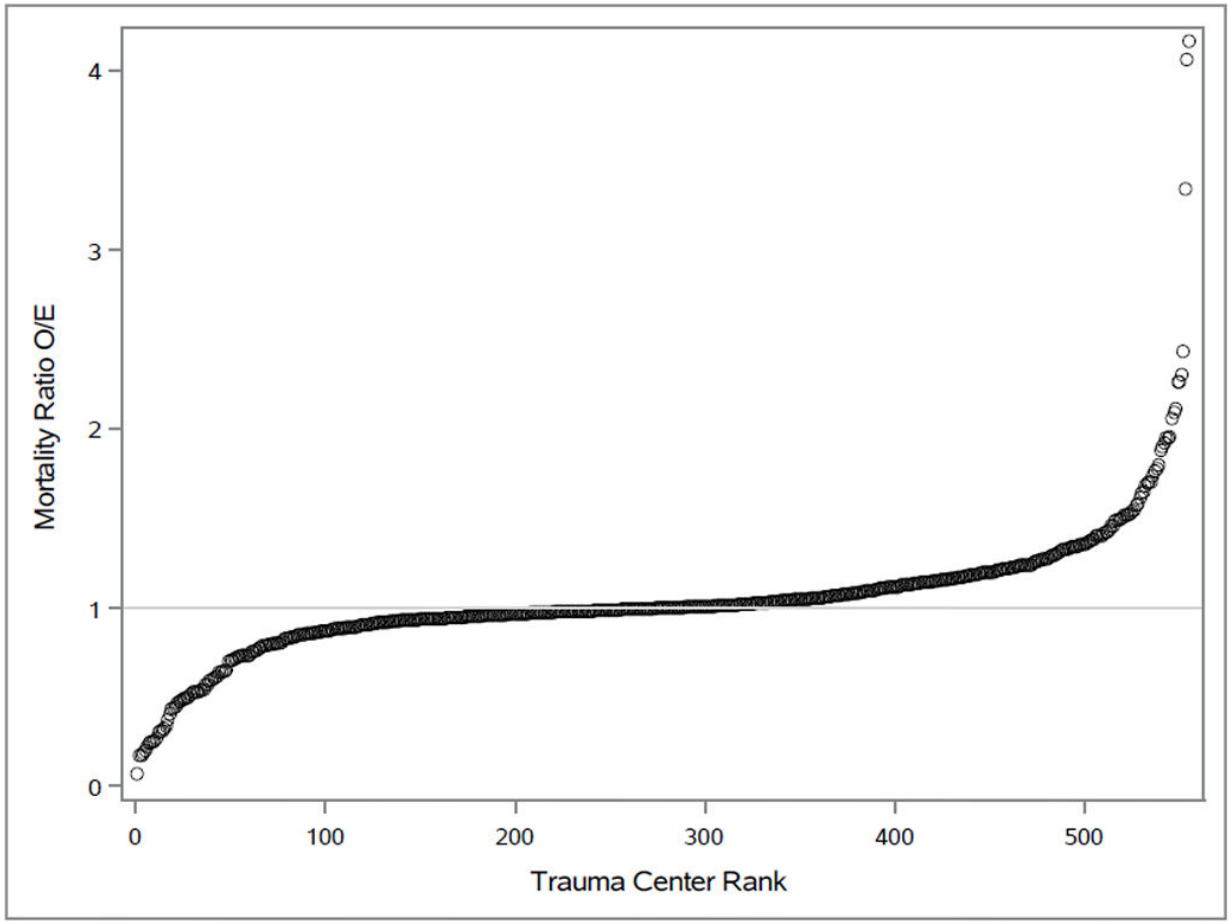
Newgard, et al. JAMA Peds. 2021

Impact of Individual Components of Emergency Department Pediatric Readiness on Pediatric Mortality in US Trauma Centers

Among 555 trauma centers, the O/E mortality ratios ranged from 0.07 to 4.17 (IQR 0.93, 1.14).

Unadjusted analyses of 23 components of ED pediatric readiness - trauma centers with better-than-expected survival have:

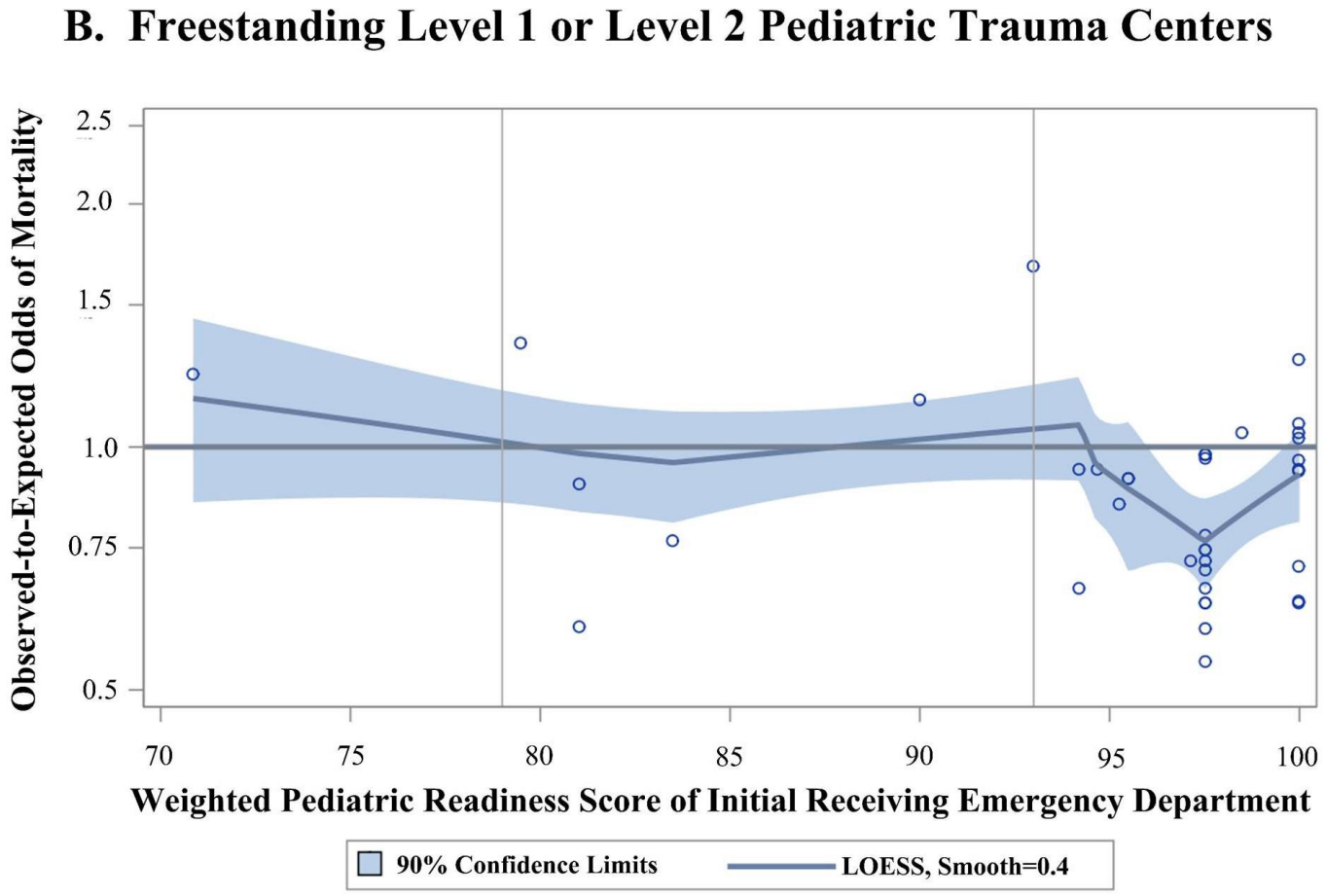
- a validated pediatric triage tool,
- comprehensive quality improvement processes,
- a pediatric-specific disaster plan, and
- critical airway and resuscitation equipment (all $p < 0.03$)



Remick et al. J Trauma Acute Care Surg. 2023 March 01; 94(3): 417–424.

The Association Between Pediatric Readiness and Mortality for Injured Children at US Trauma Centers

- Pediatric centers show an improvement in adjusted mortality for wPRS > 94

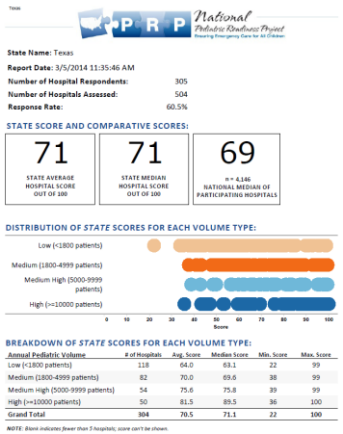


Melhado et al, Ann Surg, 2023

New TX trauma rules: 11/2024

Texas Trauma Rules:

- Pediatric simulations (semiannual)
- Pediatric competencies for staff
- Pediatric equipment and supplies
- Annual NPRP assessment
- Assessments include GCS; complete vital signs
- Serial vital signs, GCS, and pain assessments in shock and trauma
- Pediatric imaging guidelines



National Pediatric Readiness Project

State Name: Texas
Report Date: 3/5/2014 11:35:46 AM
Number of Hospital Respondents: 305
Number of Hospitals Assessed: 504
Response Rate: 60.5%

STATE SCORE AND COMPARATIVE SCORES:

71	71	69
STATE AVERAGE HOSPITAL SCORE OUT OF 100	STATE MEDIAN HOSPITAL SCORE OUT OF 100	n = 4,146 NATIONAL MEDIAN OF PARTICIPATING HOSPITALS

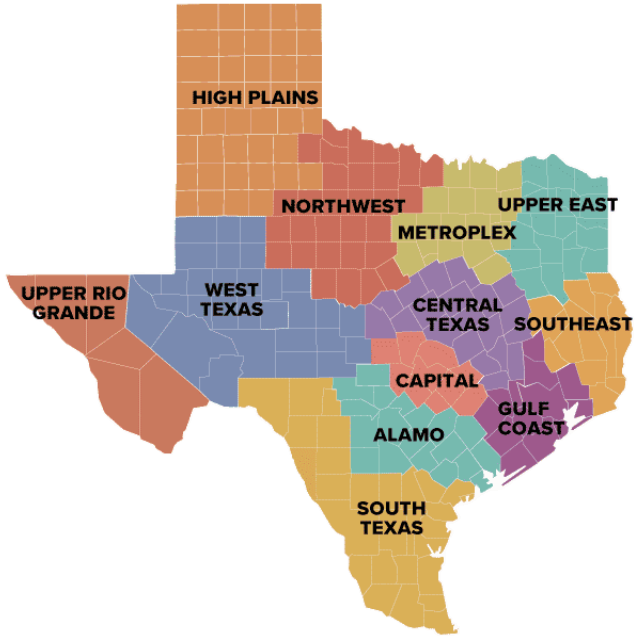
DISTRIBUTION OF *STATE* SCORES FOR EACH VOLUME TYPE:

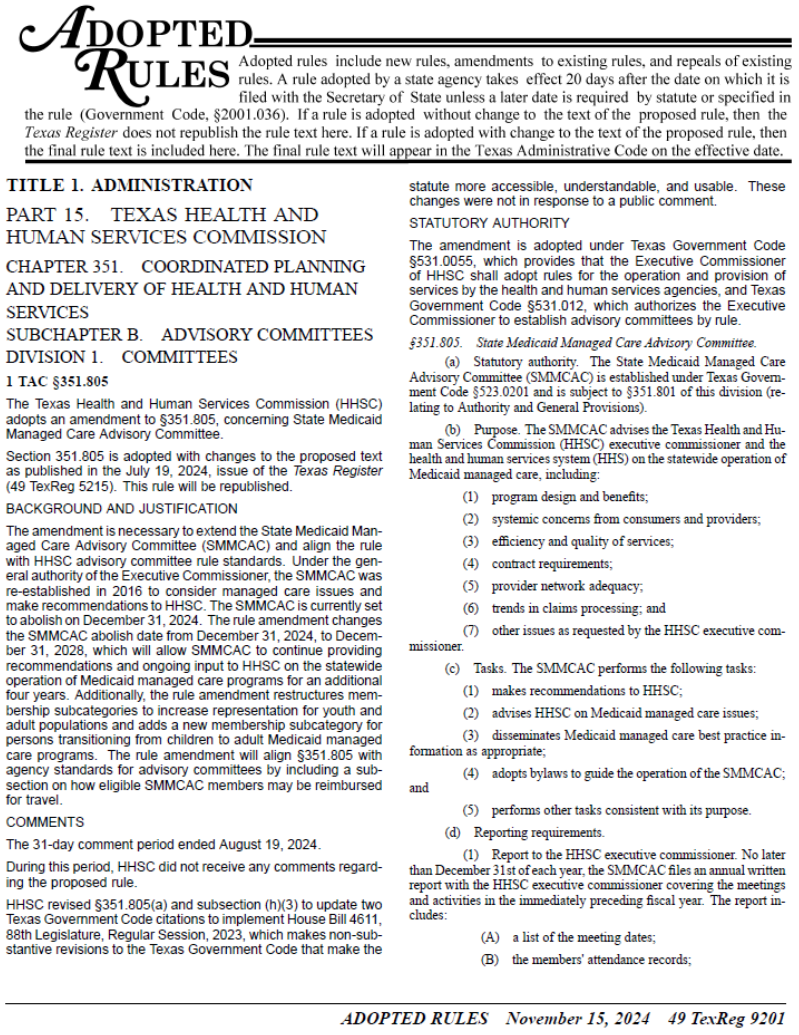
BREAKDOWN OF *STATE* SCORES FOR EACH VOLUME TYPE:

Annual Pediatric Volume	# of Hospitals	Avg. Score	Median Score	Min. Score	Max. Score
Low (<1800 patients)	118	64.0	63.1	22	99
Medium (1800-4999 patients)	82	70.0	69.6	38	99
Medium High (5000-9999 patients)	54	75.6	75.8	39	99
High (>=10000 patients)	50	81.5	89.5	36	100
Grand Total	304	70.5	71.1	22	100

NOTE: Blank indicates fewer than 5 hospitals; score can't be shown.

302 Trauma Centers





ADOPTED RULES

Adopted rules include new rules, amendments to existing rules, and repeals of existing rules. A rule adopted by a state agency takes effect 20 days after the date on which it is filed with the Secretary of State unless a later date is required by statute or specified in the rule (Government Code, §2001.036). If a rule is adopted without change to the text of the proposed rule, then the *Texas Register* does not republish the rule text here. If a rule is adopted with change to the text of the proposed rule, then the final rule text is included here. The final rule text will appear in the Texas Administrative Code on the effective date.

TITLE 1. ADMINISTRATION

PART 15. TEXAS HEALTH AND HUMAN SERVICES COMMISSION

CHAPTER 351. COORDINATED PLANNING AND DELIVERY OF HEALTH AND HUMAN SERVICES

SUBCHAPTER B. ADVISORY COMMITTEES

DIVISION 1. COMMITTEES

1 TAC §351.805

The Texas Health and Human Services Commission (HHSC) adopts an amendment to §351.805, concerning State Medicaid Managed Care Advisory Committee.

Section 351.805 is adopted with changes to the proposed text as published in the July 19, 2024, issue of the *Texas Register* (49 TexReg 5215). This rule will be republished.

BACKGROUND AND JUSTIFICATION

The amendment is necessary to extend the State Medicaid Managed Care Advisory Committee (SMMCAC) and align the rule with HHSC advisory committee rule standards. Under the general authority of the Executive Commissioner, the SMMCAC was re-established in 2016 to consider managed care issues and make recommendations to HHSC. The SMMCAC is currently set to abolish on December 31, 2024. The rule amendment changes the SMMCAC abolish date from December 31, 2024, to December 31, 2028, which will allow SMMCAC to continue providing recommendations and ongoing input to HHSC on the statewide operation of Medicaid managed care programs for an additional four years. Additionally, the rule amendment restructures membership subcategories to increase representation for youth and adult populations and adds a new membership subcategory for persons transitioning from children to adult Medicaid managed care programs. The rule amendment will align §351.805 with agency standards for advisory committees by including a subsection on how eligible SMMCAC members may be reimbursed for travel.

COMMENTS

The 31-day comment period ended August 19, 2024.

During this period, HHSC did not receive any comments regarding the proposed rule.

HHSC revised §351.805(a) and subsection (h)(3) to update two Texas Government Code citations to implement House Bill 4611, 88th Legislature, Regular Session, 2023, which makes non-substantive revisions to the Texas Government Code that make the statute more accessible, understandable, and usable. These changes were not in response to a public comment.

STATUTORY AUTHORITY

The amendment is adopted under Texas Government Code §531.0055, which provides that the Executive Commissioner of HHSC shall adopt rules for the operation and provision of services by the health and human services agencies, and Texas Government Code §531.012, which authorizes the Executive Commissioner to establish advisory committees by rule.

§351.805. State Medicaid Managed Care Advisory Committee.

(a) Statutory authority. The State Medicaid Managed Care Advisory Committee (SMMCAC) is established under Texas Government Code §523.0201 and is subject to §351.801 of this division (relating to Authority and General Provisions).

(b) Purpose. The SMMCAC advises the Texas Health and Human Services Commission (HHSC) executive commissioner and the health and human services system (HHS) on the statewide operation of Medicaid managed care, including:

(1) program design and benefits;

(2) systemic concerns from consumers and providers;

(3) efficiency and quality of services;

(4) contract requirements;

(5) provider network adequacy;

(6) trends in claims processing; and

(7) other issues as requested by the HHSC executive commissioner.

(c) Tasks. The SMMCAC performs the following tasks:

(1) makes recommendations to HHSC;

(2) advises HHSC on Medicaid managed care issues;

(3) disseminates Medicaid managed care best practice information as appropriate;

(4) adopts bylaws to guide the operation of the SMMCAC; and

(5) performs other tasks consistent with its purpose.

(d) Reporting requirements.

(1) Report to the HHSC executive commissioner. No later than December 31st of each year, the SMMCAC files an annual written report with the HHSC executive commissioner covering the meetings and activities in the immediately preceding fiscal year. The report includes:

(A) a list of the meeting dates;

(B) the members' attendance records;

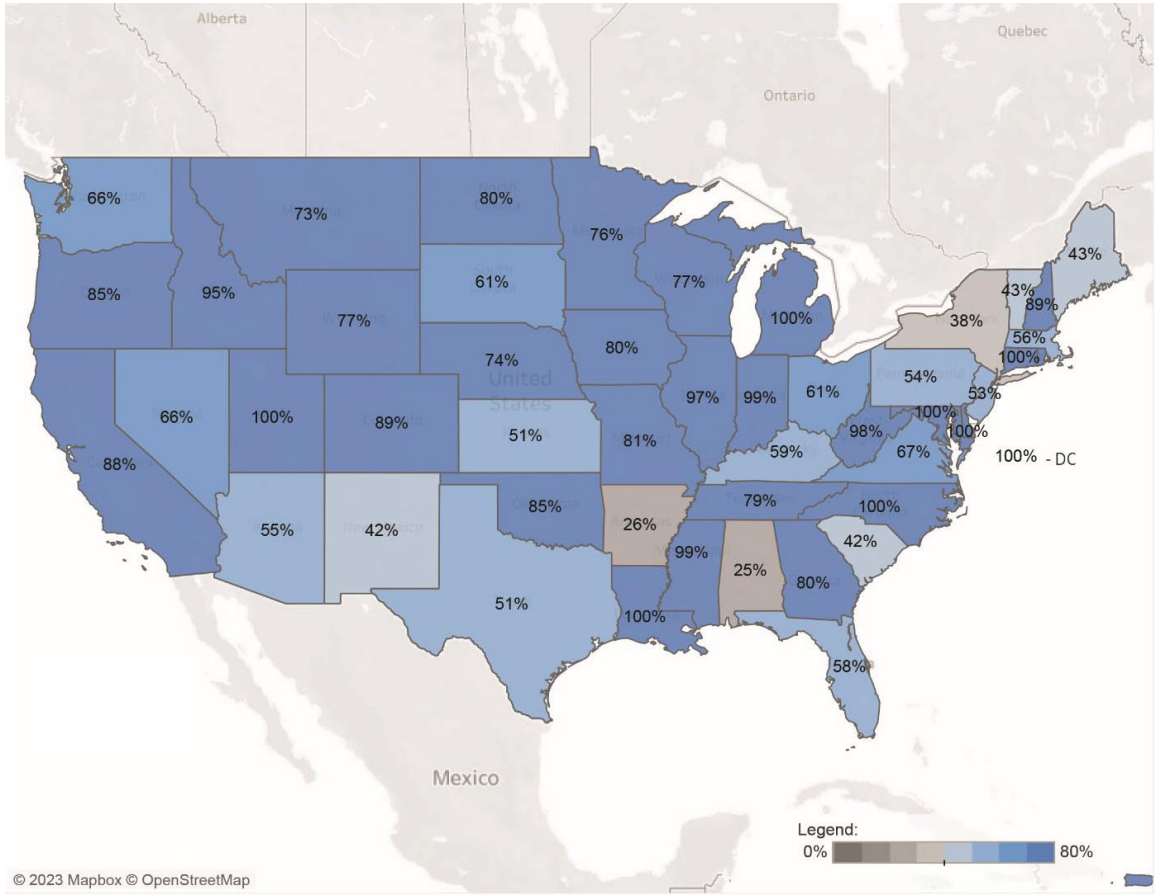
JAMA Network | Open

Original Investigation | Pediatrics

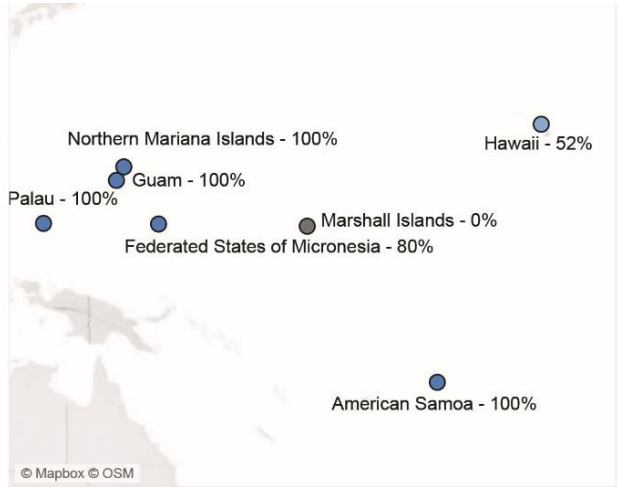
National Assessment of Pediatric Readiness of US Emergency Departments During the COVID-19 Pandemic

Katherine E. Remick, MD; Hilary A. Hewes, MD; Michael Ely, MHRM; Patricia Schmuhl, BA; Rachel Crady, MS; Lawrence J. Cook, MStat, PhD; Lorah Ludwig, MA; Marianne Gausche-Hill, MD

National PRP
Pediatric Readiness Project
Ensuring Emergency Care for All Children

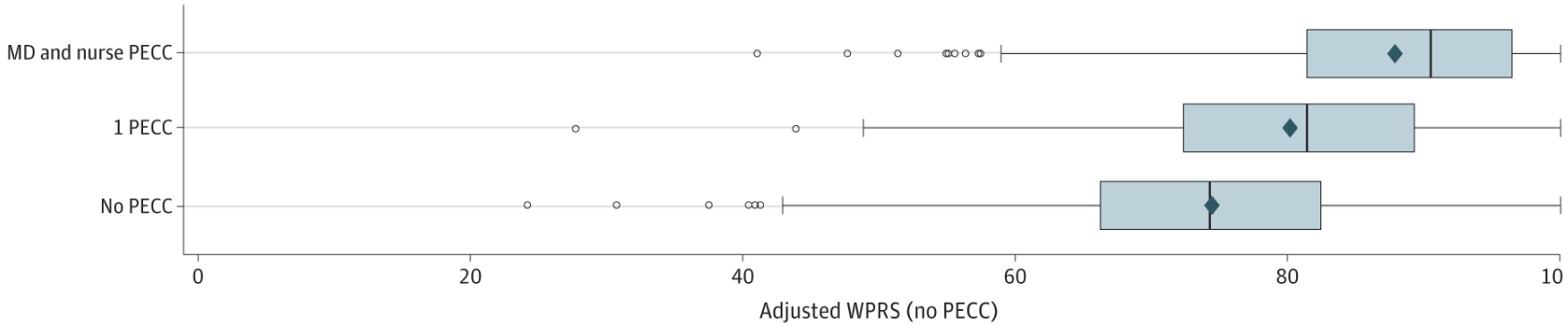


Response Rate: 70.8% (N=3,647)
Median Pediatric Readiness score= 69.5



Impact of PECCs on wPRS

- The presence of the nurse-physician PECC dyad = average **16pt increase** in adjusted wPRS compared to no PECC



2021 Stats:
Physician PECC - 37% of EDs (76% with protected time)
Nurse PECC – 37% of EDs (81% with protected time)

28.5% of EDs have both a physician and nurse PECC

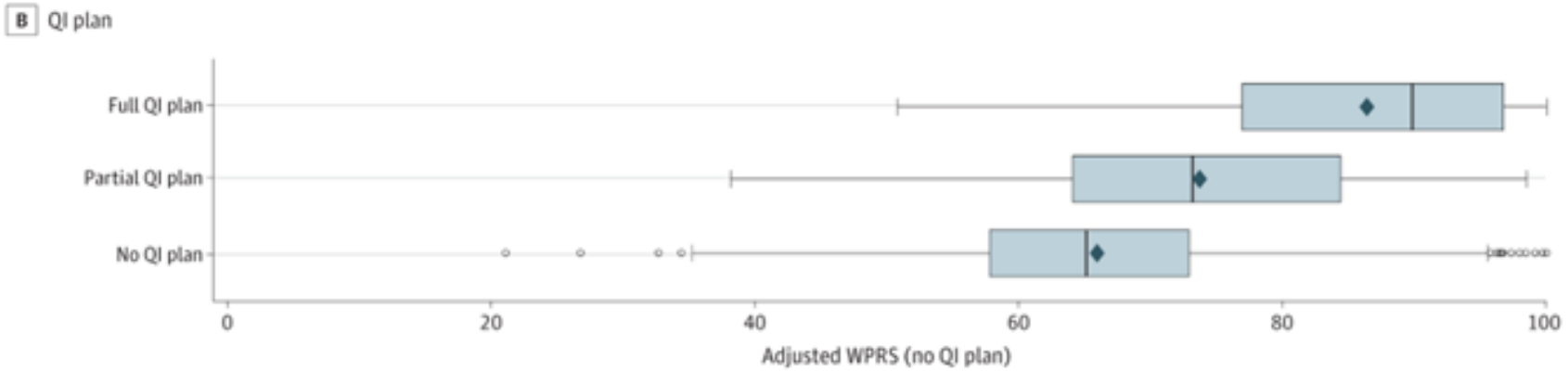
Table 4. Odds of Perfect Domain Score by PECC Presence[a]

Domains of pediatric readiness	No PECC (n = 1914)	≥1 PECC (physician, nurse, or both) (n = 1643)	Odds ratio (95% CI)	*P* value
Equipment and supplies (33 of 33 points)	864 (45.1)	999 (60.8)	1.89 (1.65-2.16)	<.001
Patient safety (14 of 14 points)	900 (47.0)	1091 (66.4)	2.23 (1.94-2.55)	<.001
Personnel training and competencies (10 of 10 points)	166 (8.7)	336 (20.5)	2.71 (2.22-3.31)	<.001
Policies and procedures (17 of 17 points)	140 (7.3)	351 (21.4)	3.44 (2.80-4.25)	<.001
Quality improvement plan (7 of 7 points)	249 (13.0)	820 (49.9)	6.66 (5.66-7.87)	<.001

JAMA Netw Open. 2023;6(7):e2321707. doi:10.1001/jamanetworkopen.2023.21707

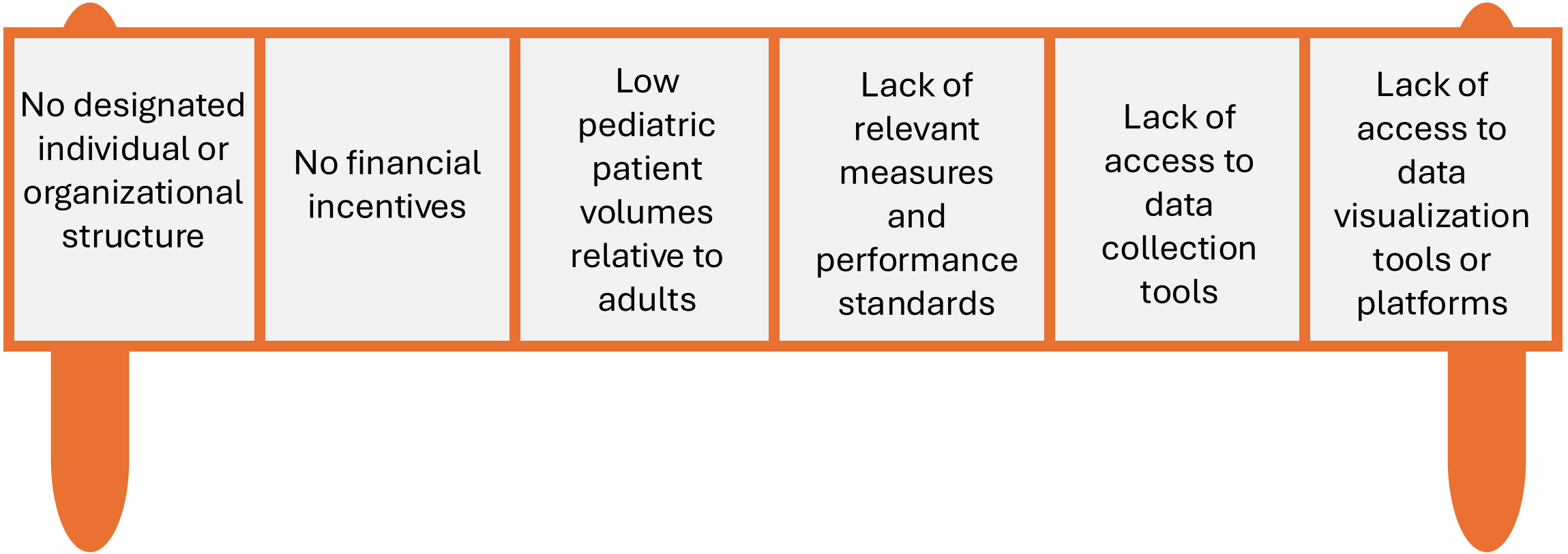
Impact of QI plans on wPRS

- The presence of a full QI plan = average **<u>26pt increase</u>** in adjusted wPRS compared to no QI plan
- Shift from lowest to top quartile of readiness



<u>2021 Stats:</u>
Peds QI Plan – 50% of EDs
Among those – 60% complete

What have been the barriers to engaging in pediatric QI?



Pediatric Vital Signs Documentation in a Nationally Representative US Emergency Department Sample

- 162.7M pediatric encounters.
- Complete vital signs - 50.8%
- Older age and patient acuity associated with vital signs documentation.
- Abnormal vital signs documented in 73.0%
- Abnormal vital signs associated with increased odds of hospitalization or transfer (odds ratio 1.51, 95% confidence interval 1.11-2.04).

Ramgopal et al. Hosp Pediatr. 2024 Jun 24;14(7):e2023007645.

Original Investigation | Emergency Medicine

JAMA Network Open

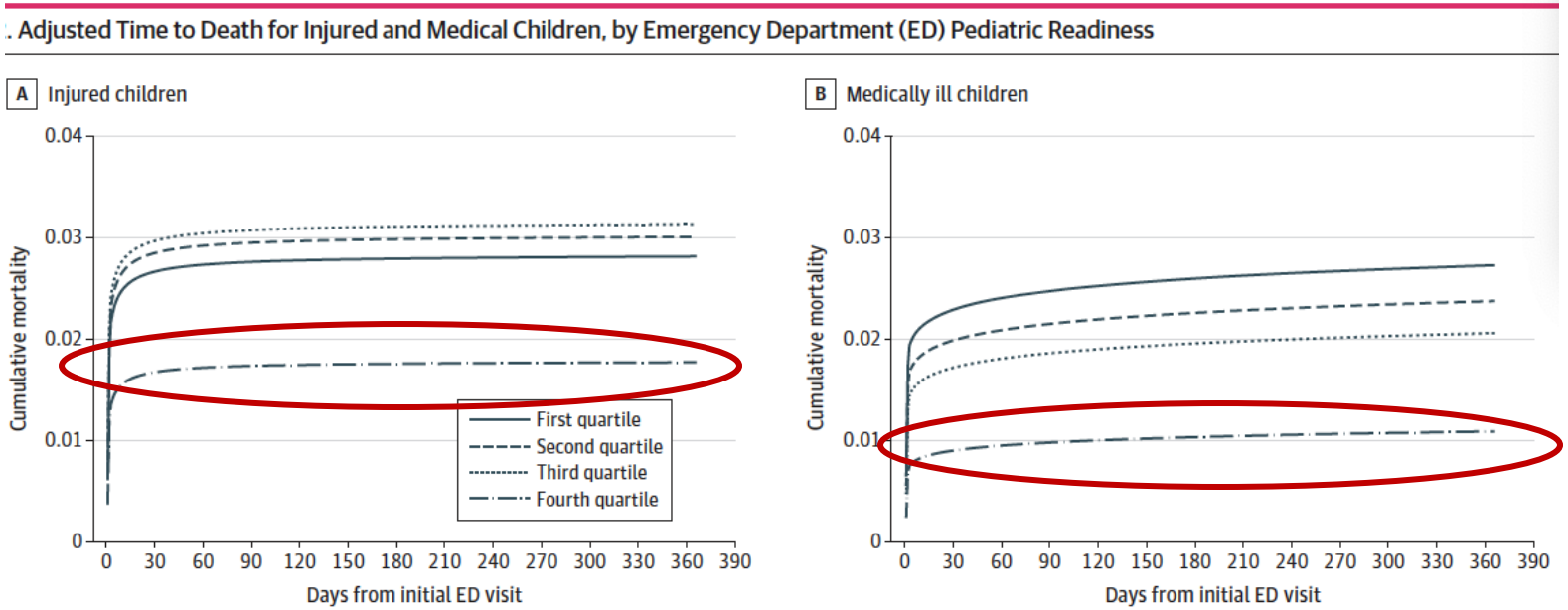
January 13, 2023

Emergency Department Pediatric Readiness and Short-term and Long-term Mortality Among Children Receiving Emergency Care

Craig D. Newgard, MD, MPH[1]; Amber Lin, MS[1]; Susan Malveau, MS[1]; et al

PEDIATRIC READINESS SAVES LIVES:

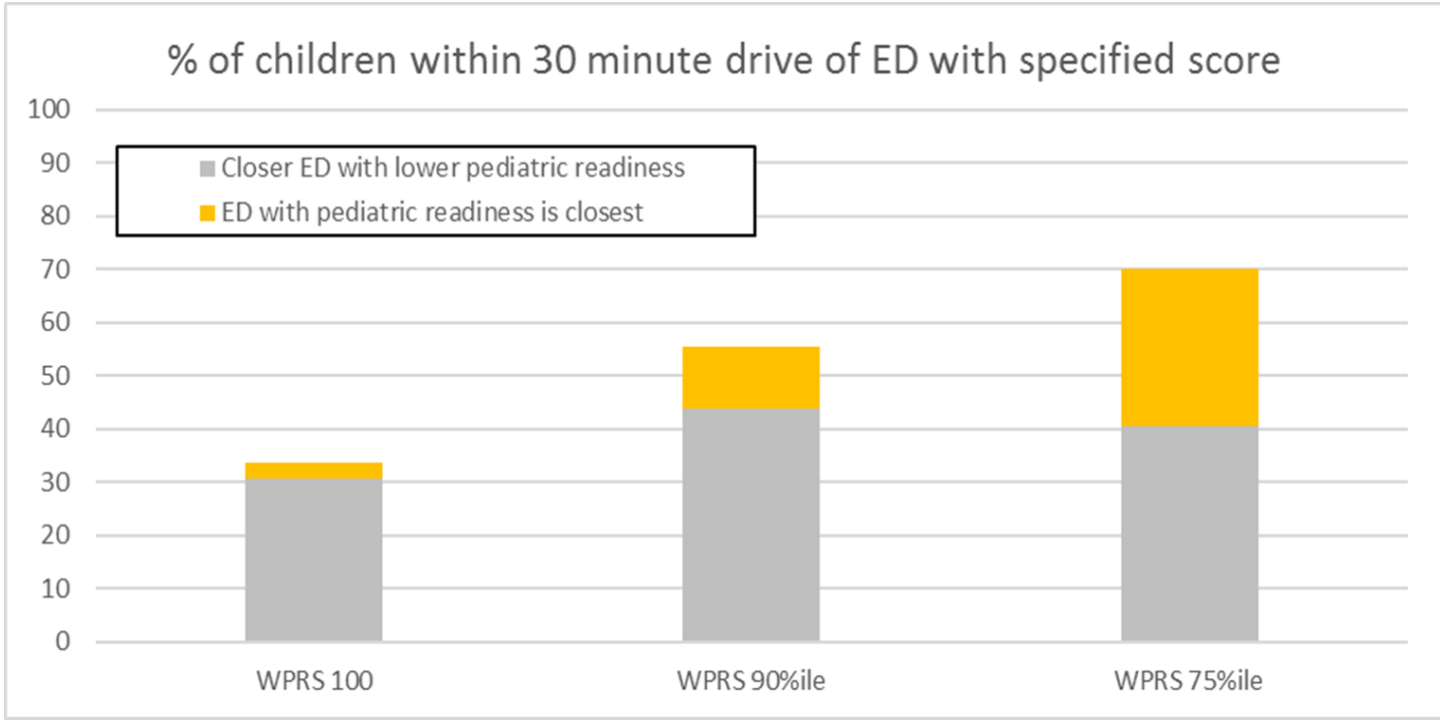
60% (injured) to 76% (ill) lower odds of in-hospital death in high-readiness ED



Newgard CD, et al. JAMA Network Open. 2023

Access to Pediatric Ready EDs

- 33% of children live < 30 min from a Pediatric Ready ED
- 90% live closer to a **non-**Pediatric Ready ED



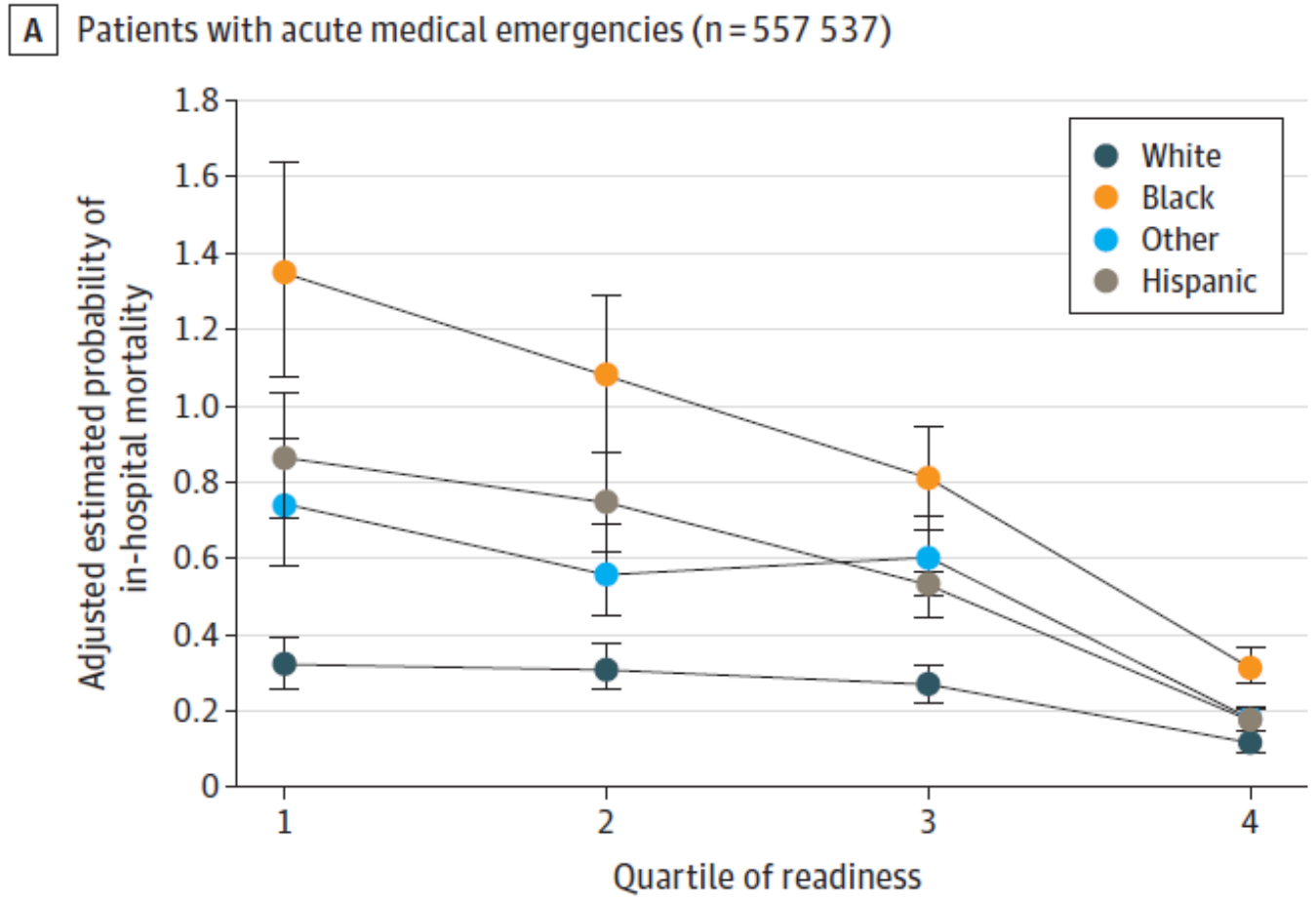
Ray, Olson, Kahn et al. Access to High Pediatric Readiness. J Peds 2018

Original Investigation | Equity, Diversity, and Inclusion

Emergency Department Pediatric Readiness and Disparities in Mortality Based on Race and Ethnicity

Peter C. Jenkins, MD, MSc; Amber Lin, MS; Stefanie G. Ames, MD, MS; Craig D. Newgard, MD, MPH; Benjamin Lang, MD, MPH; James E. Winslow, MD, MPH; Jennifer R. Marin, MD, MSc; Jennifer N. B. Cook, GCPH; Jeremy D. Goldhaber-Fiebert, PhD; Linda Papa, MD, MSc; Mark R. Zonfrillo, MD, MSCE; Matthew Hansen, MD, MCR; Stephen P. Wall, MD, MSHS, MAEd; Susan Malveau, MS; Nathan Kuppermann, MD, MPH; for the Pediatric Readiness Study Group

High pediatric readiness is associated with a 3-fold reduction in disparities for pediatric mortality among medically ill children.



Integrating Pediatric Emergency Response into State Planning

PROGRAM GOAL

To increase the percent of hospitals with an ED recognized through a statewide, territorial, or regional standardized program that are able to stabilize and/or manage pediatric emergencies.

NATIONAL TARGET

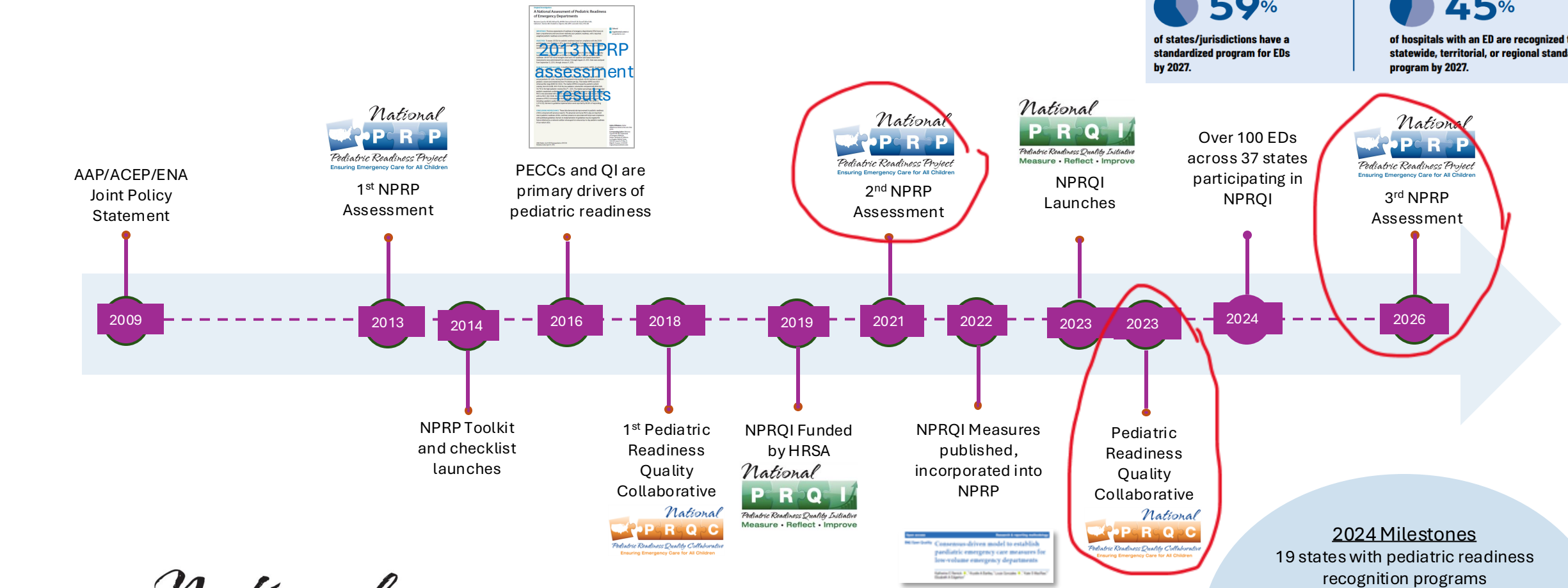
59%

of states/jurisdictions have a standardized program for EDs by 2027.

STATE TARGET

45%

of hospitals with an ED are recognized through a statewide, territorial, or regional standardized program by 2027.



2024 Milestones

19 states with pediatric readiness recognition programs

>15,000 pediatric ED encounters represented in NPRQI

>250 ED-based teams have participated in pediatric readiness QI collaboratives

National PRP
Pediatric Readiness Project
Ensuring Emergency Care for All Children

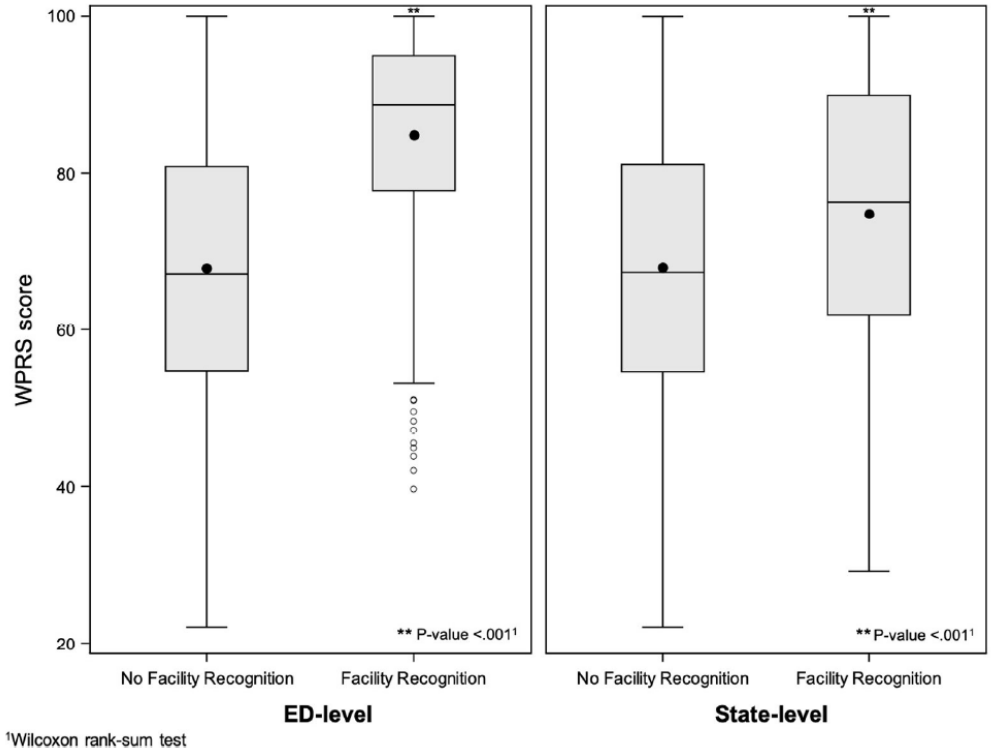
Pediatric Readiness Recognition Programs and Association with Pediatric Readiness

All Hospitals (No. of Points)	Verified (n=51), Median (IQR)	Assessed (n=31), Median (IQR)	Nonassessed (n=218), Median (IQR)
Overall median WPRS (100)*	89.6 (84.1, 94.1)	70.7 (57.4, 88.9)	65.5 (55.5, 76.3)

THE JOURNAL OF PEDIATRICS • www.jpeds.com ORIGINAL ARTICLES

Statewide Pediatric Facility Recognition Programs and Their Association with Pediatric Readiness in Emergency Departments in the United States

Travis M. Whitfill, MPH[1], Katherine E. Remick, MD[2,3,4,5], Lenora M. Olson, PhD, MA[6], Rachel Richards, MStat[6], Kathleen M. Brown, MD[7,8], Marc A. Auerbach, MD, MSci[1], and Marianne Gausche-Hill, MD[9,10,11]



Remick, et al. Ann Emerg Med 2016.

Whitfill, et al. J Pediatr 2019.

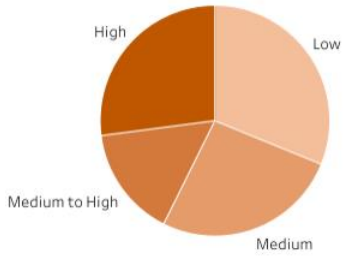
NPRQI Reporting Dashboard

122 Sites / 22,553 Records

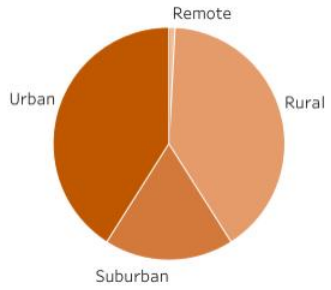
Make your selections from the green filter bar, and Click "GO" to return your report

Year	Quarter	Site	Results View	Patient Clinical Group	
Select all that apply	Limit the # of Quarters by selecting Year(s) first				
(All)	(All)	(Multiple values)	Table	All Patients (Core Measures)	GO

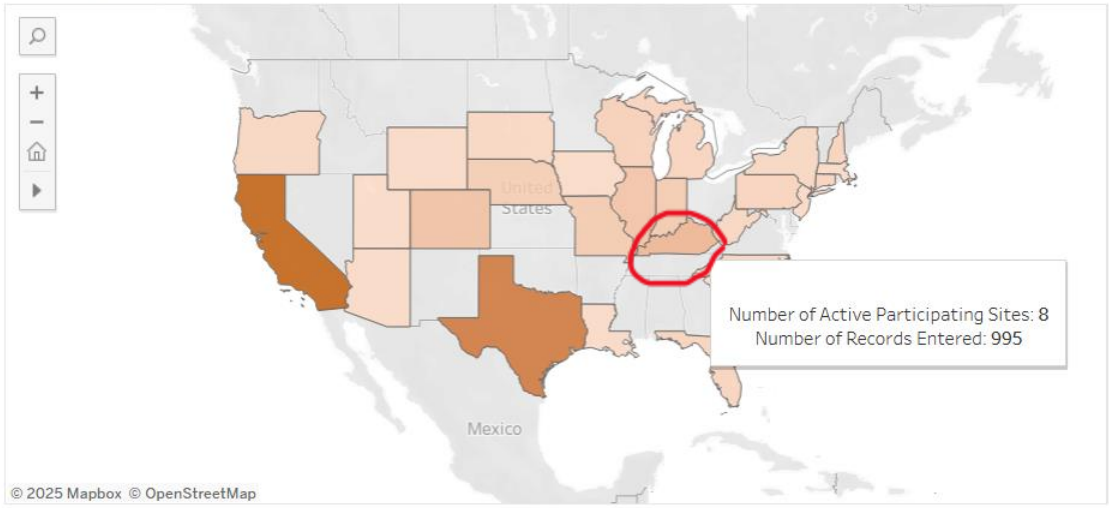
Number of Sites by Patient Volume Category



Number of Sites by Geographic Category



Participation in the National Pediatric Readiness Quality Initative



National PRQI
CLARIO.
The NPRQI is supported in part by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS). Additional funding is provided by the Toyota Way Forward Fund.

Last Dataset Refresh:
4/11/2025 7:39:00 PM
Last Patient Included:
4/9/2025

There are 152 hospitals participating nationally, Kentucky has 12 hospitals (only exceeded by Texas and California)

Baptist Health Hardin

913 North Dixie Avenue, Elizabethtown, KY 42701

Visit website

Bluegrass Community Hospital

360 Amsden Avenue, Versailles, KY Versailles

Visit website

CHI Saint Joseph London

1001 Saint Joseph Lane, London, KY 40741

Visit website

Clark Regional Medical Center

175 Hospital Drive, Winchester, KY 40391

Visit website

Crittenden County Hospital

520 W Gum St, Marion, KY 42064

Visit website

Deaconess Union County Hospital

4604 US HWY 60 W, Morganfield, KY 42437

Visit website

Ephraim McDowell Regional Medical Center

217 S 3rd Street, Danville, KY 40422

Visit website

Georgetown Community Hospital

1140 Lexington Rd, Georgetown, KY 40324

Visit website

Lake Cumberland Regional Hospital

305 Langdon Street, Somerset, KY 42501

Visit website

McDowell ARH Hospital

9879 KY-122, McDowell, KY 42501

Visit website

Owensboro Health Regional Hospital

1201 Pleasant Valley Rd, Owensboro, KY 42303

Visit website

Rockcastle Hospital & Respiratory Care Ctr

145 Newcomb Avenue, Mount Vernon, KY 40456

Visit website

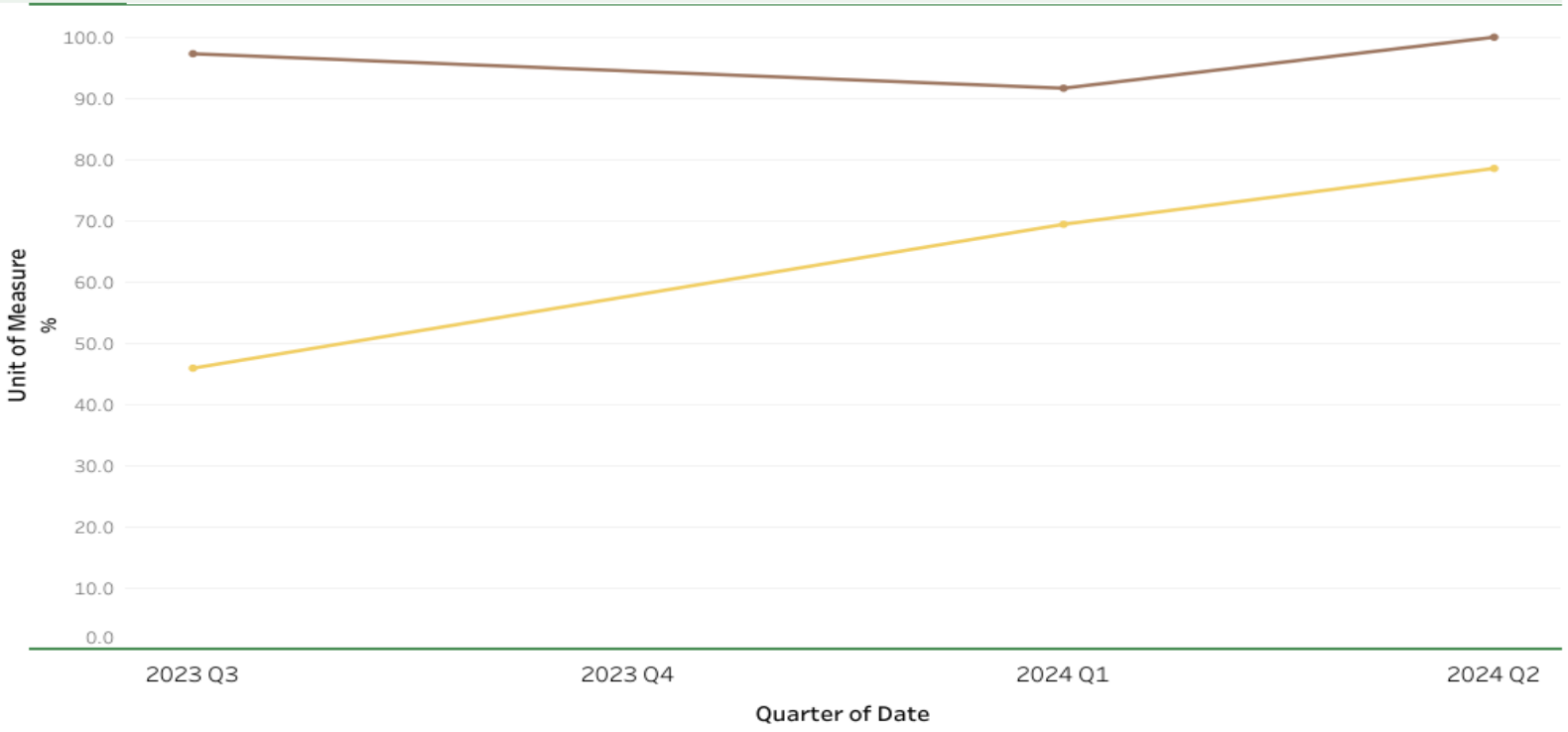
NPRQI Site Dashboard – Graph View

Performance Report:
Dates: 2023 Q3 to 2024 Q2 | Clinical Measures Group: All Patients (Core Measures)
Measures with fewer than 10 records will not be displayed

Back to Landing

Last Dataset Refresh:
4/23/2024 1:46:19 PM
Last Patient Included:
4/12/2024

Show Graph Measures (Measure Selection Only Applies When Patient Clinical Groups With Bundle and Core Measures Selected On the Landing Page)
All



Graph - Legend
Ctrl + Click to select multiple Measures to be displayed

- % of pediatric patients with weight documented in kilograms only
- % of pediatric patients with pain assessed
- Median ED length of stay
- % of high acuity pediatric patients with vital signs re-assessed
- Median time from triage to first intervention
- % of transferred pediatric patients who met site-specific transfer criteria
- Median time from triage to transport
- % of transferred pediatric patients who were discharged from the receiving ED

Patient Demographics

Age Category
All

Triage Level
All

Ethnicity
All

Race
All

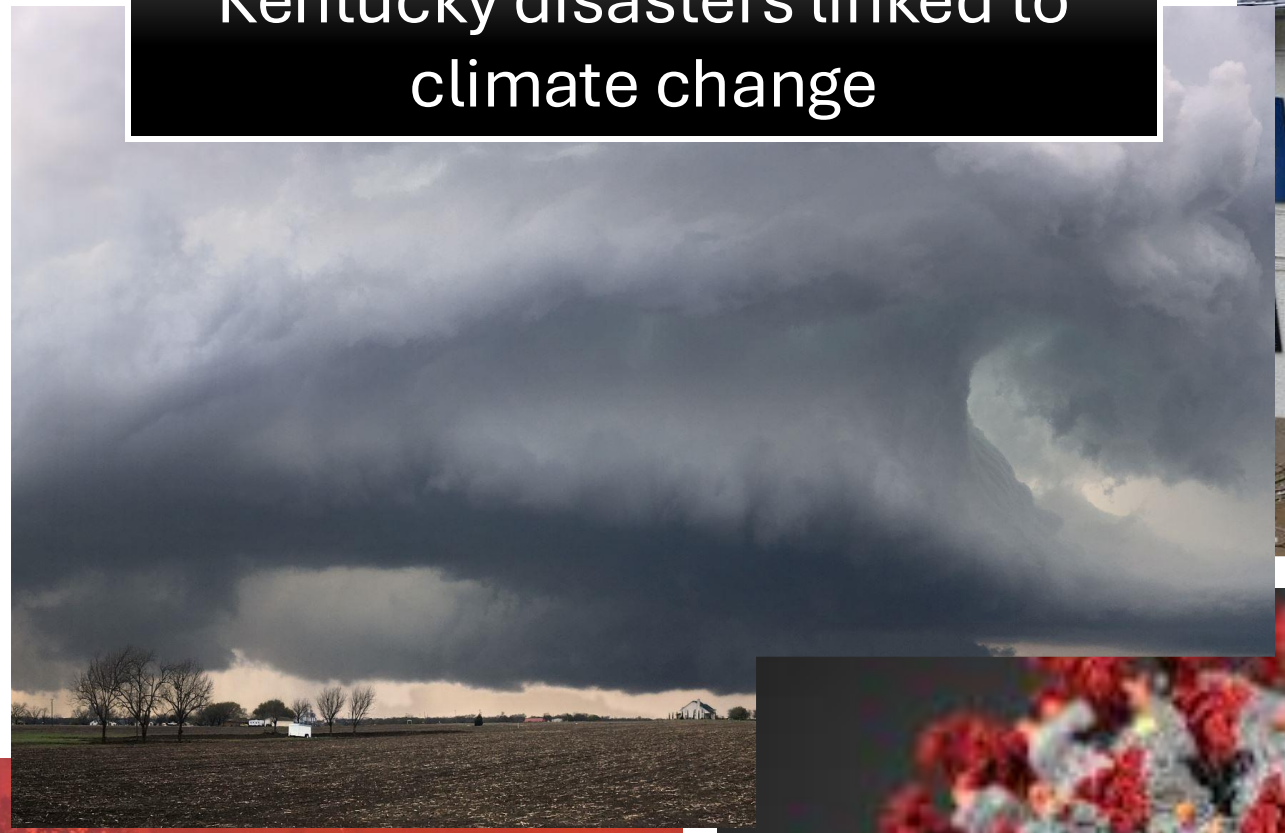
Gender
All

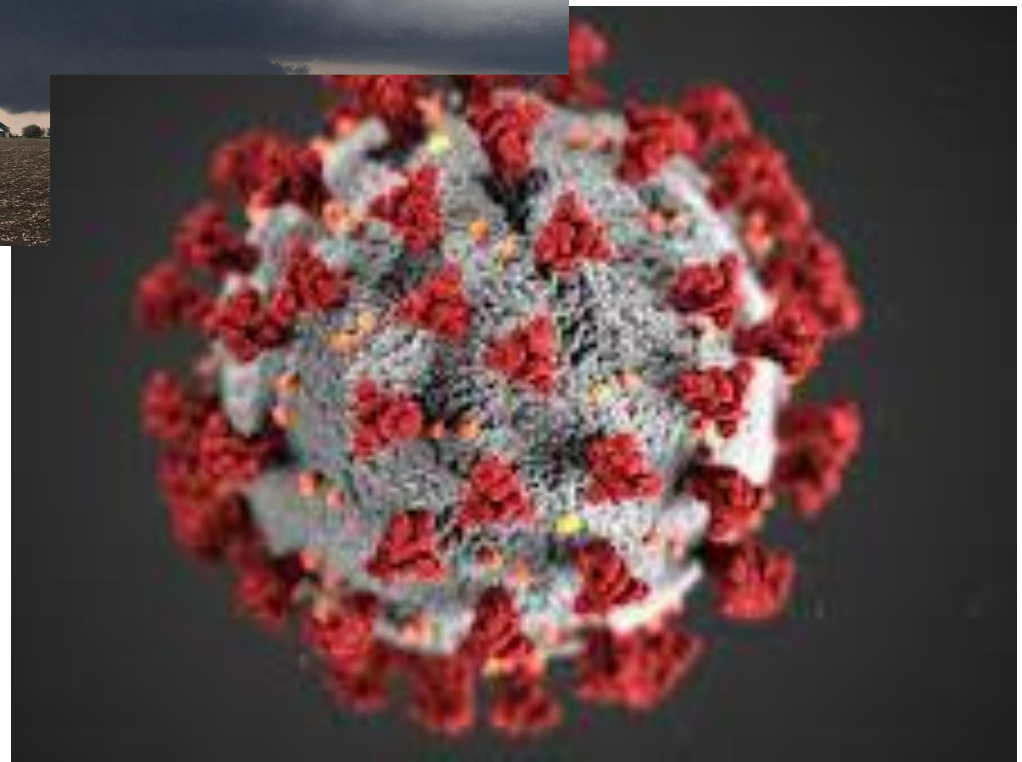
Payor Source
All

Geography: **All** | Patient Volume: **All** | ED Configuration: **All** | Specialty Center Status: **All**
Age Category: **All** | Triage Level: **All** | Ethnicity: **All** | Race: **All** | Gender: **All** | Payor Source: **All**

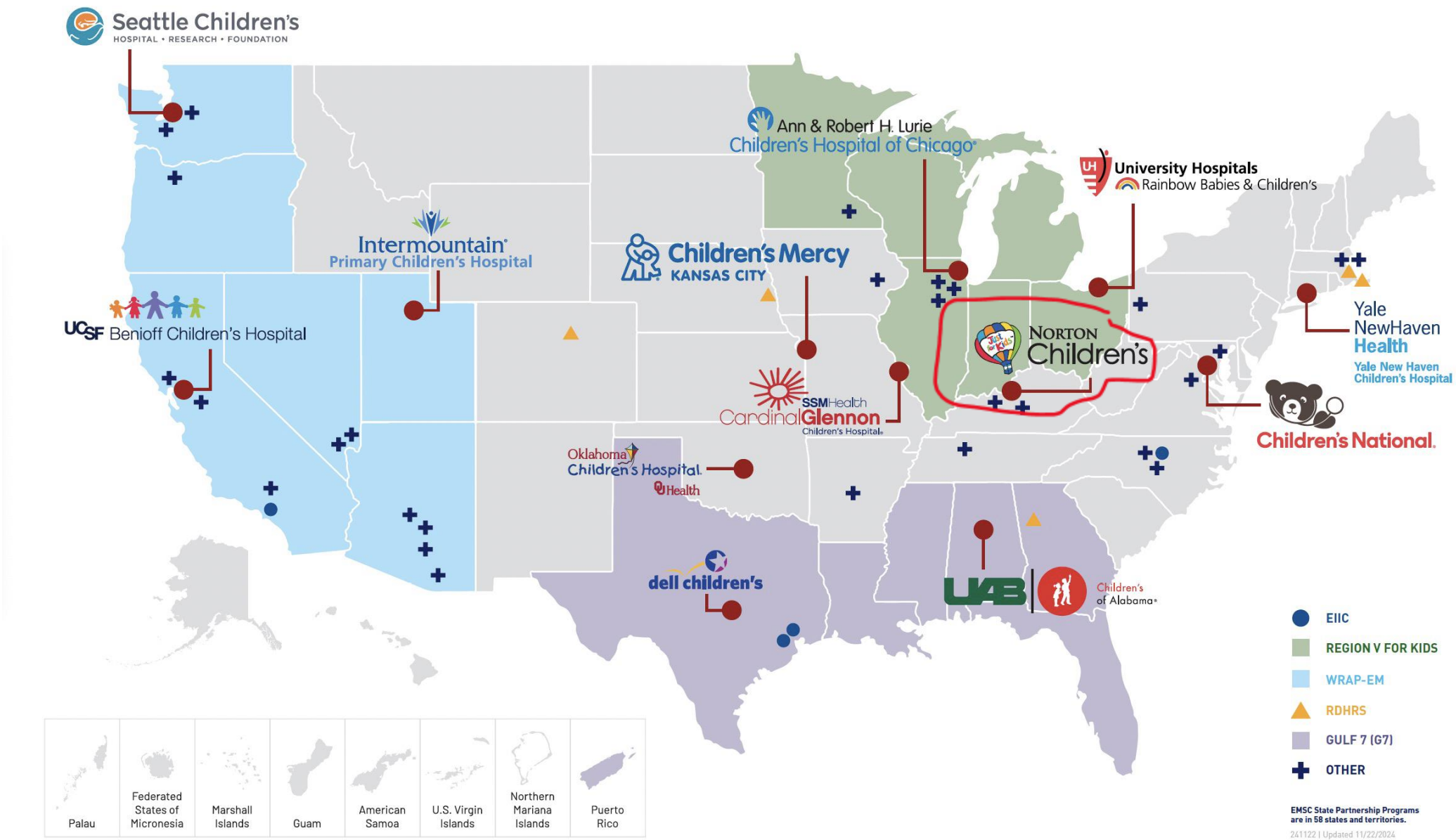
The NPRQI is supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) as part of an award totaling $1.2M with 0% percentage financed with nongovernmental sources.
The contents are those of the author(s) and do not necessarily represent the official views of, nor an endorsement, by HRSA, HHS or the U.S. Government.

Kentucky disasters linked to climate change





PPN Hub Sites and Key Partners



EMSC State Partnership Programs are in 58 states and territories.

241122 | Updated 11/22/2024

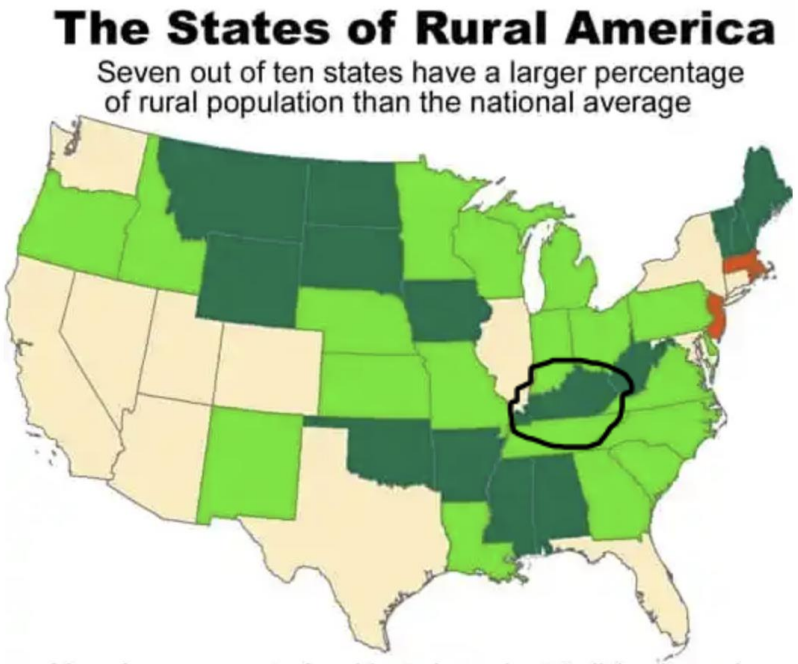
Pediatric Readiness in a disaster presumes Pediatric Readiness everyday

- Pediatric Readiness (PR) as a ***stretch goal*** is to ensure that *every EMS agency and emergency department in the US* has all pediatric-specific requirements and resources needed to provide high-quality emergency care for children
- PR Research: 70 + articles provide evidence that it decreases all cause pediatric mortality including trauma
- BUT the PR score must be around 94 to achieve a mortality reduction

Understand your state

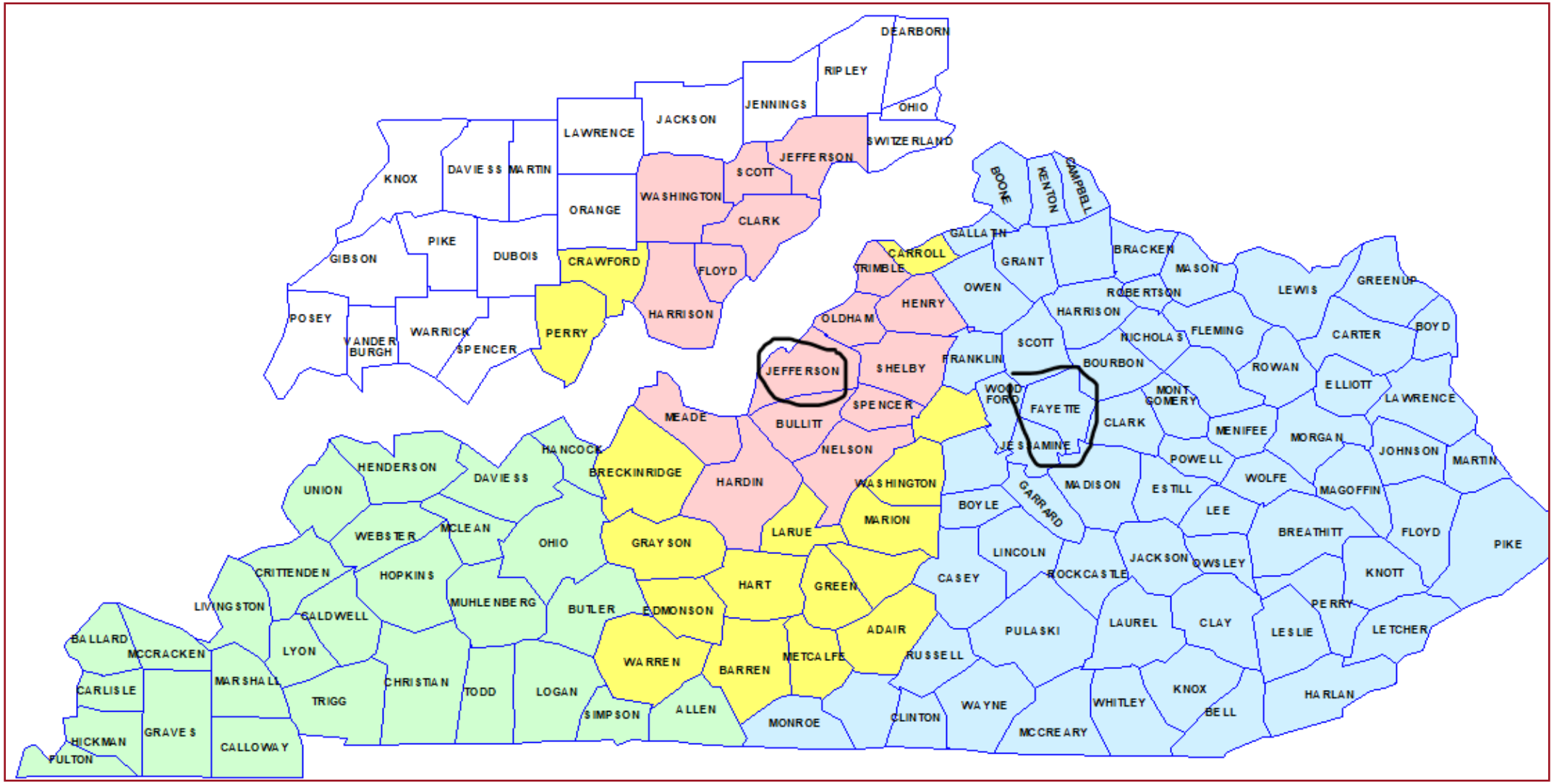
KENTUCKY QUICK FACTS
Population: 4.5 million
22.5% <18 years (1,012,500)
25% degree in higher education
82% have internet access
14.9% live in poverty

2022
In Kentucky, **nearly 620,000 children** — or roughly 61% of our children <19 — were enrolled in Medicaid and KCHIP.
120 counties
104 hospitals with EDs including the
2 children's hospitals



The states in green have rural populations that have a higher proportion of people living in rural areas or small towns than the nation as a whole.

Look to your children's hospitals and their function in state planning/outreach as the leaders



Year	Licenses/ Ambulance Services
2004	257
2017	220
2024	228 (160)

120 counties; HALF IN APPALACHIA

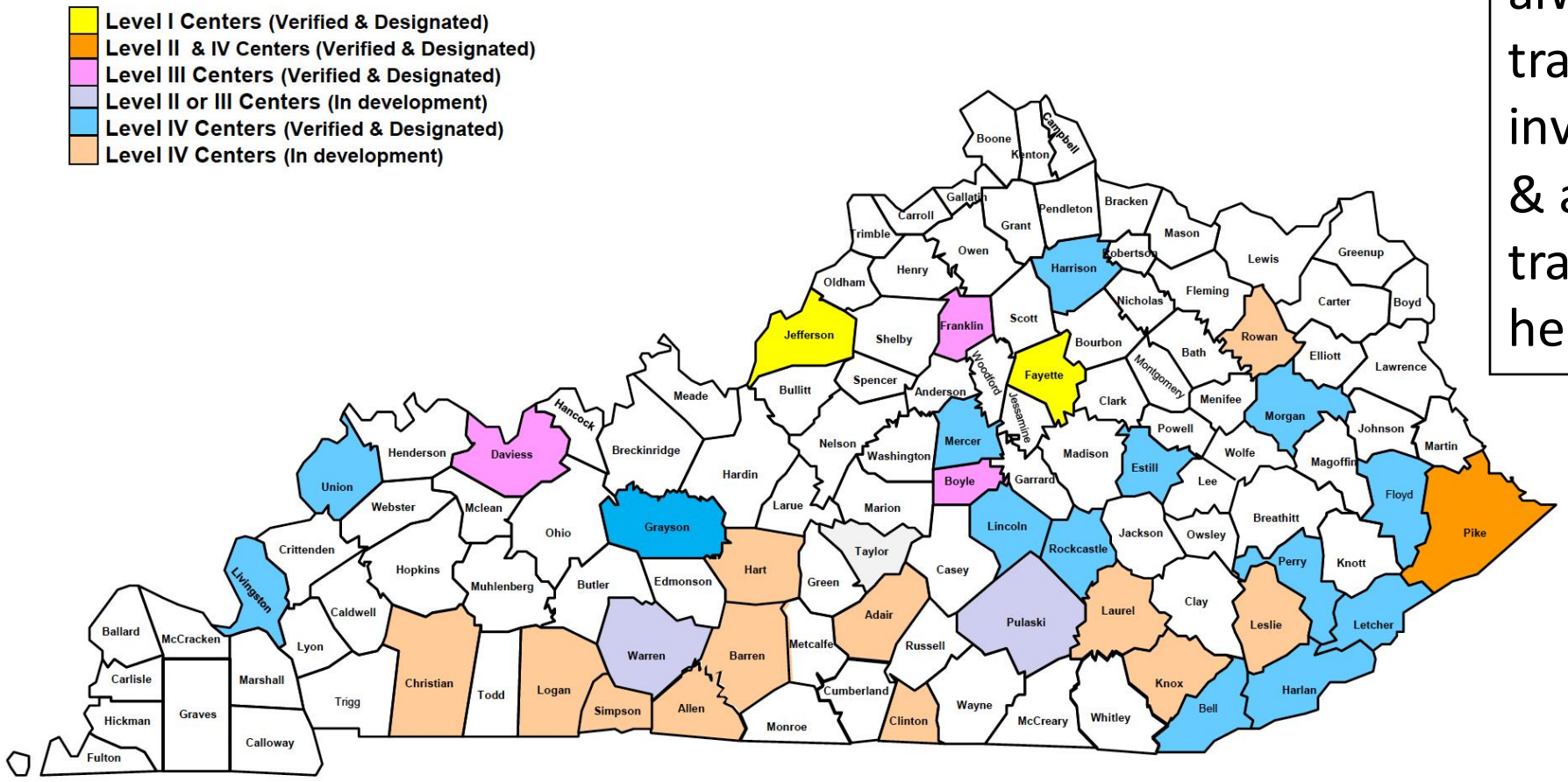
Bordered by 7 states

23.3% of the population lives in 59 rural counties

33 of our 160 agencies recognized for their commitment to improve pediatric emergency care.

Hospitals in the Kentucky Trauma System

(August 26, 2024)



Disasters do not always involve trauma but most involve children & a functional trauma system helps

Verified Trauma Centers

Level I - Pediatric – Norton Children's Hospital, Louisville
Level I - Pediatric – Kentucky Children's Hospital, Lexington
Level I - UK Chandler Hospital Lexington
Level I - University of Louisville Hospital, Louisville
Level II - Pikeville Medical Center
Level III - Ephraim McDowell Reg. Med. Center, Danville
Level III - Frankfort Regional Medical Center
Level III - Owensboro Health Regional Hospital
Level IV - Deaconess Union Co. Hospital, Morganfield
Level IV - Ephraim McDowell Fort Logan Hospital, Stanford
Level IV - Ephraim McDowell Haggin, Harrodsburg
Level IV - Harlan ARH Hospital
Level IV - Harrison Memorial, Cynthiana
Level IV - Hazard ARH Hospital, Hazard, KY
Level IV - Highlands ARH Reg Med Cntr, Prestonsburg
Level IV - Livingston Hospital, Salem
Level IV - Mercy Marcum & Wallace Hospital, Irvine
Level IV - Middlesboro ARH
Level IV - Morgan Co. ARH, West Liberty
Level-IV - Owensboro Health Twin Lakes Reg Med Cntr, Leitchfield
Level IV - Rockcastle Reg. Hospital, Mt. Vernon
Level-IV - Tug Valley ARH Reg Med Cntr, S. Williamson
Level-IV - Whitesburg ARH Hospital

Hospitals in the Kentucky Trauma System

(June 28, 2021)

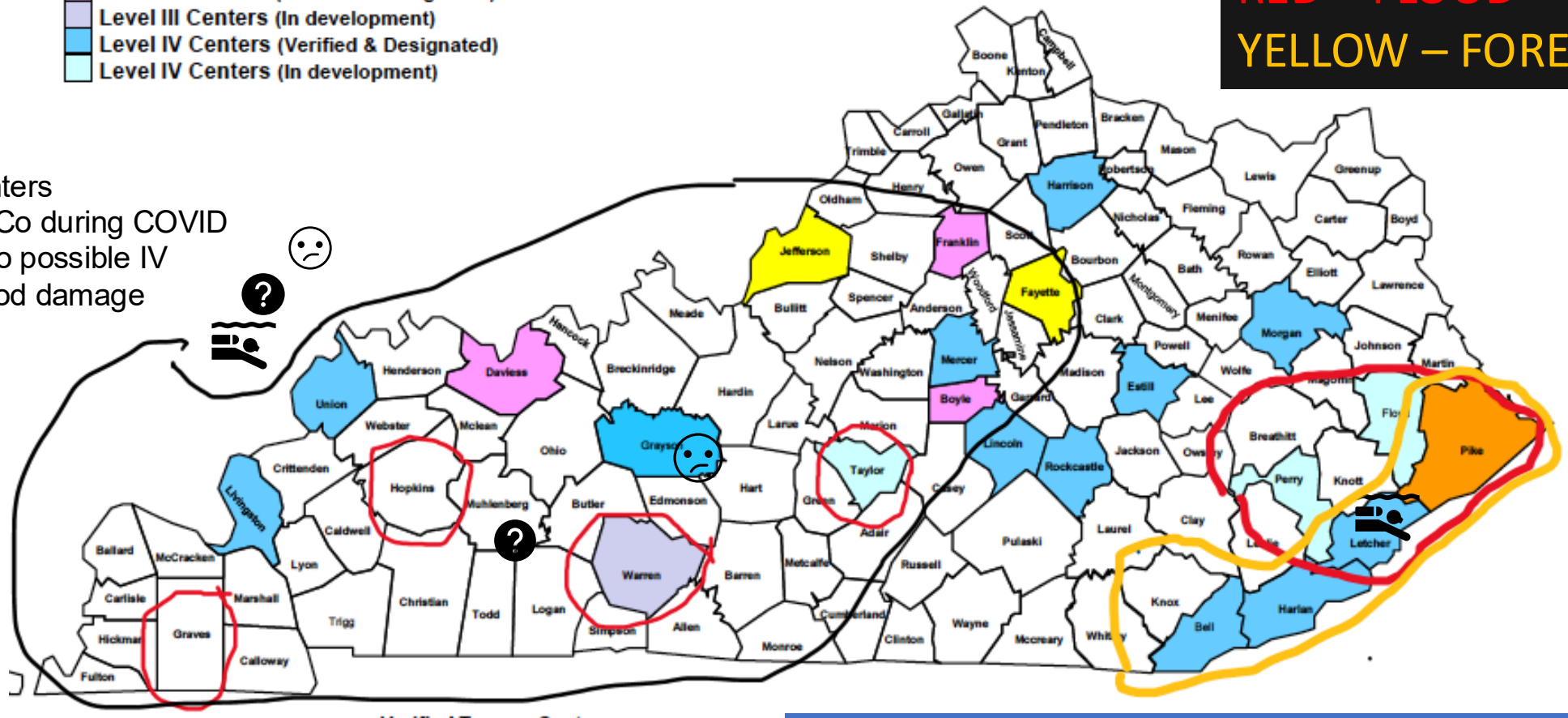
BLACK – TORNADO

RED – FLOOD

YELLOW – FOREST FIRES

Level I Centers (Verified & Designated)
Level II & IV Centers (Verified & Designated)
Level III Centers (Verified & Designated)
Level III Centers (In development)
Level IV Centers (Verified & Designated)
Level IV Centers (In development)

Current
22 verified centers
Lost Grayson Co during COVID
Muhlenberg Co possible IV
Letcher Co flood damage



Verified Trauma Centers

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Level III - Owensboro Hea
Level IV – Deaconess Uni
Level IV - Ephraim McDow
Level IV - Ephraim McDow
Level IV - Harlan ARH Hos
Level IV - Harrison Memor
Level IV - Livingston Hospital, Salem
Level IV - Whitesburg ARH Hospital

2025: Breathitt, Clay, Estill, Floyd, Harlan, Johnson, Knott, Laurel, Lee, Letcher, Martin, McCreary, Owsley, Perry, Pike, and Simpson.

Continuum of Care Long-term Goal

Development of 'Peds Ready' status for pediatric trauma/ burn resuscitation and stabilization capability takes place mainly in non-pediatric centers; trauma surgeons need to be part of the team

Pediatric Planning Committee

Hospital Preparedness Program - ASPR	State Hospital Association
Emergency Medical Services for Children – HRSA	Emergency Medical Services
ASPR Pediatric Centers of Excellence (COE)	Public Health
Pediatric Pandemic Network – HRSA	Emergency Management
Representatives from each of the state's children's hospitals including the emergency department, pediatric/neonatal transport teams	State Communications Specialist (hospital dashboard management)
State Trauma Director	Office of Children with Special Healthcare Needs
	Department for Behavioral Health, Developmental and Intellectual Disabilities

2021 Pediatric Readiness Response Rate
Numerator: **59**
Denominator: **100**
Response Rate: **59%**

2013-14 Pediatric Readiness Response Rate
Numerator: **103**
Denominator: **105**
Response Rate: **98%**

- The survey is voluntary
- Kentucky saw a significant reduction in participation from 2013 to 2021
- While many hospitals are willing to make peds readiness a priority, many will not without additional incentive

National Pediatric Readiness Project
Ensuring Emergency Care for All Children

Kentucky

Emergency Medical Services for Children Program

Kentucky Score	National Score
69 Median Score out of 100 (n=58)	**70** Median Score out of 100 (n=3,557)

KY Response Rate: 59% (59 out of 100) - 1 record(s) in this dataset were excluded from the state median score.

% of Participating Hospitals in KY by Urbanicity and Median Score for Each Area

			# of Children
Urban	34%	73	602,484
Suburban	5%	72	69,969
Rural	36%	67	222,981
Remote	25%	62	112,185

Urbanicity is calculated using the 2013 Urban Influence Codes; population data is from the 2020 ACS 5 Yr Estimates.

Pediatric Readiness:

The data shown here are individual state results from the 2021 National Pediatric Readiness Project (NPRP) Assessment of hospitals with a 24/7 emergency department (ED). EDs that are well-prepared for the unique health needs of pediatric patients score 88 or higher on the NPRP Assessment and are associated with lower mortality for ill and injured children. [1]

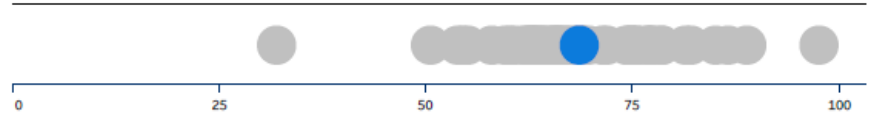
The Power of PECCs:

Designating an individual to serve as a pediatric emergency care coordinator (PECC) is one of the best ways to increase readiness and provide quality care to children in the ED.

54% of KY Hospitals Have One or More PECC(s)

How Do We Compare with the Nation?

Kentucky's Median Score (in light blue) in Comparison to the National Distribution of All Median Scores



To learn more about pediatric readiness and PECCs, visit PediatricReadiness.org.

Questions about your state? Contact your State EMSC Program Manager.

1 Emergency Department Pediatric Readiness and Short-term and Long-term Mortality Among Children Receiving Emergency Care. Newgard CD et al.

EMSC Emergency Medical Services for Children

The NPRP Assessment and Emergency Medical Services for Children (EMSC) Data Center are funded in part by the U.S. Department of Health and Human Services (HHS), Health Resources and Services Administration (HRSA), Maternal & Child Health Bureau, EMSC Program, as part of the EMSC Data Center award totaling $3,200,000 with 0% financed with non-governmental sources. The contents are those of the author(s) and do not necessarily represent the official views of, nor an endorsement, by HRSA, HHS, or the U.S. Government. For more information, please visit HRSA.gov.

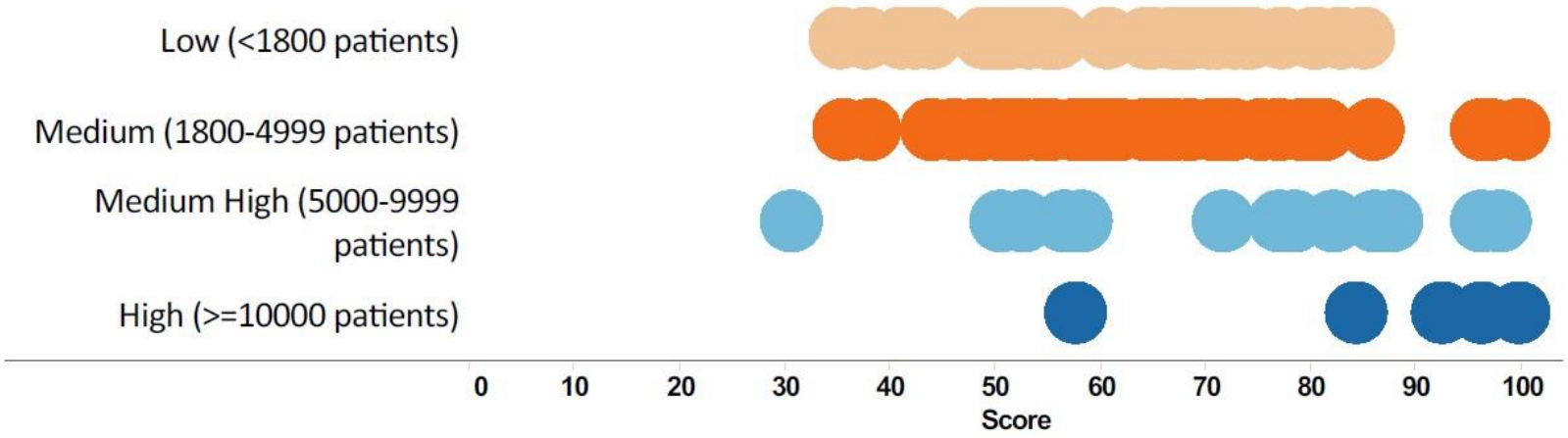
NPRP Kentucky Results

	98% response rate 103 hospitals	58% response rate 58 hospitals
Kentucky	**2013**	**2021**
Overall	66.2	70.8
Low (<1800)	61.6	66.1
Medium (1800-499)	65.5	72.5
Medium-High (5-10K)	71.5	70.2
High (>10K)	87.4	98.5

Categories of pediatric patient volume

KY and the 2013 NPRP

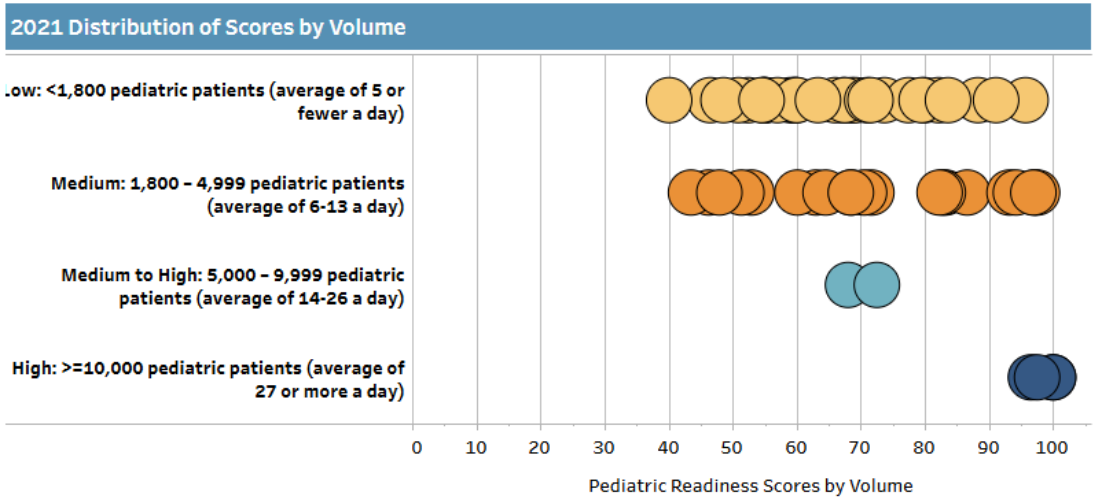
DISTRIBUTION OF *STATE* SCORES FOR EACH VOLUME TYPE:



BREAKDOWN OF *STATE* SCORES FOR EACH VOLUME TYPE:

Annual Pediatric Volume	# of Hospitals	Avg. Score	Median Score	Min. Score	Max. Score
Low (<1800 patients)	34	61.6	64.9	35	85
Medium (1800-4999 patients)	50	65.5	63.3	36	100
Medium High (5000-9999 patients)	13	71.5	77.3	31	98
High (>=10000 patients)	6	87.4	92.7	58	100
Grand Total	**103**	**66.2**	**65.6**	**31**	**100**

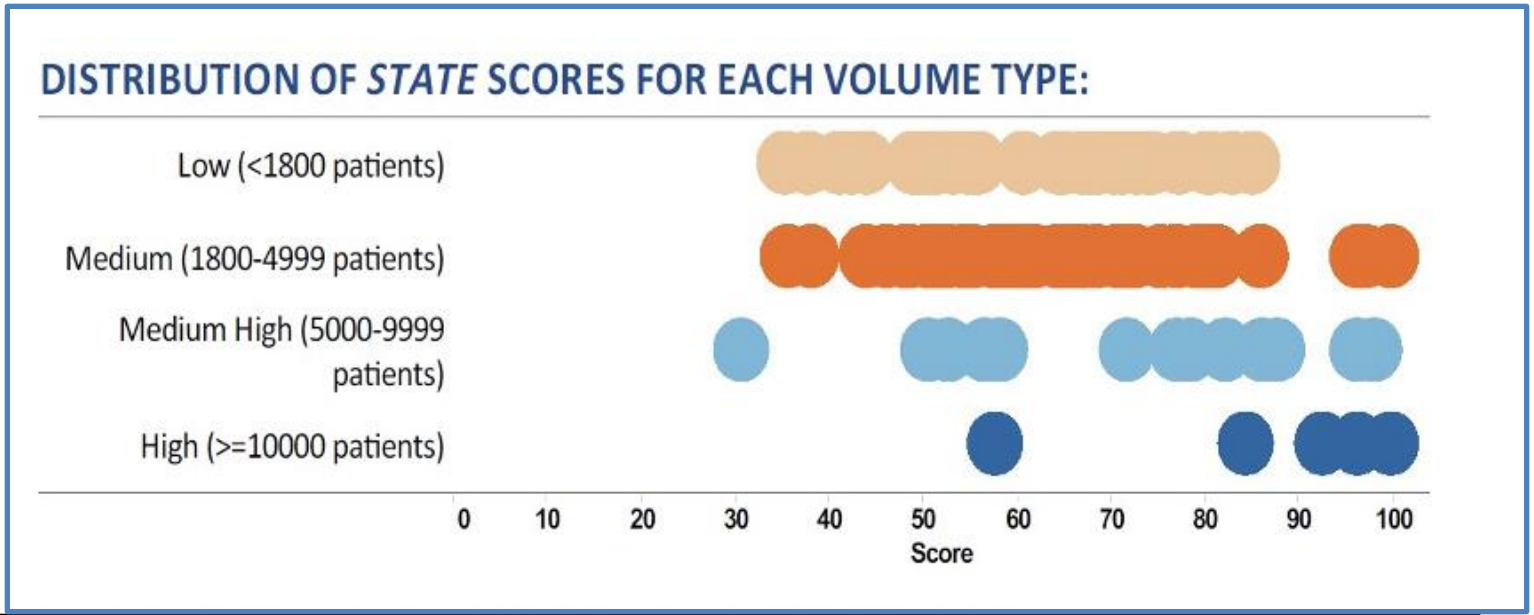
KY and the 2021 NPRP

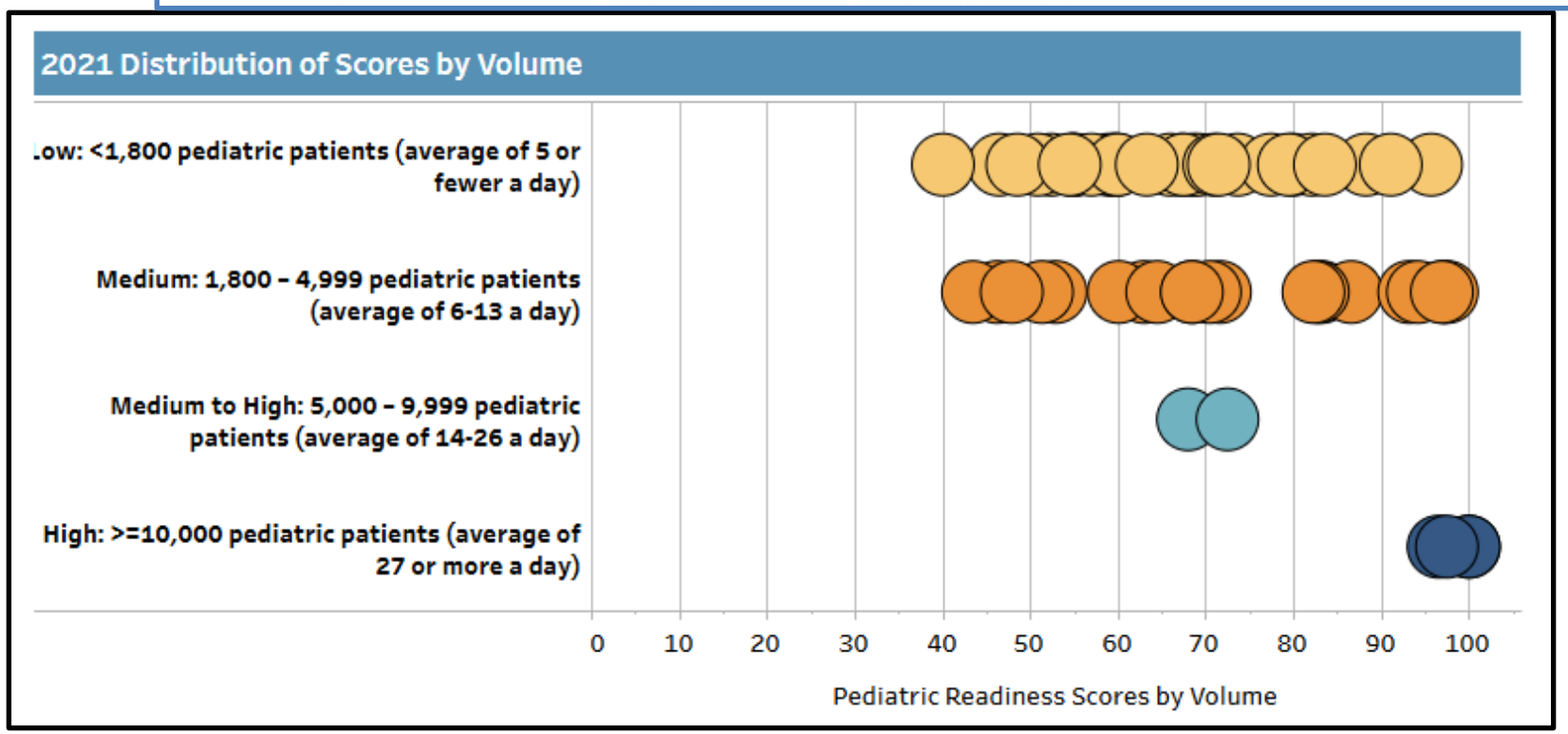


Breakdown of Scores by Volume Type: Urbanicity: (All)

Annual Pediatric Volume	# of Hospitals	Avg. Score	Median Score	Min. Score	Max. Score
Low: <1,800 pediatric patients (average of 5 o fewer a day)	31	66	66	40	96
Medium: 1,800 – 4,999 pediatric patients (average of 6-13 a day)	21	72	71	44	98
Medium to High: 5,000 – 9,999 pediatric patients (average of 14-26 a day)	2	70	70	68	73
High: >=10,000 pediatric patients (average of 27 or more a day)	4	99	99	97	100
Grand Total	**58**	**71**	**69**	**40**	**100**

NOTE: There are 1 records in this dataset that did not have answers to all the scored questions and are not included in the scores shown above.


DISTRIBUTION OF *STATE* SCORES FOR EACH VOLUME TYPE:
Low (<1800 patients)
Medium (1800-4999 patients)
Medium High (5000-9999 patients)
High (>=10000 patients)
0
10
20
30
40
50
60
70
80
90
100
Score


2021 Distribution of Scores by Volume
.ow: <1,800 pediatric patients (average of 5 or fewer a day)
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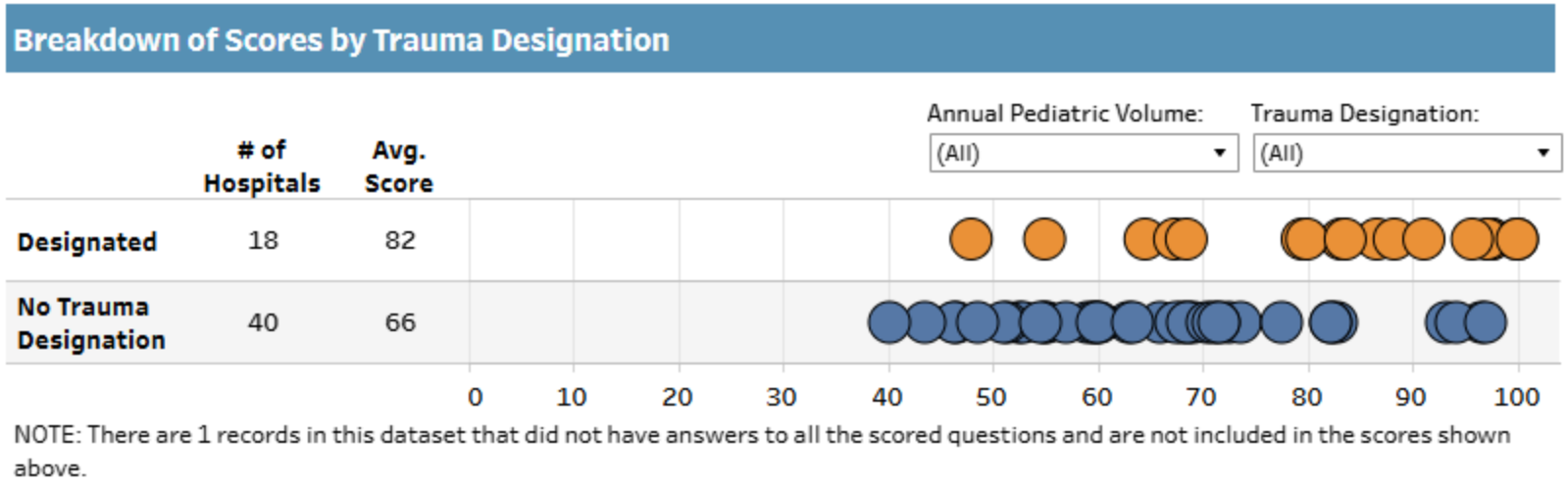
0
10
20
30
40
50
60
70
80
90
100
Pediatric Readiness Scores by Volume

KY and the 2021 NPRP



Adult trauma designation does not guarantee high pediatric readiness

Hospitals raise pediatric ready scores when preparing for site visits.
Some have had significant drops in pediatric readiness with personnel changes or if new pediatric coordinators are not identified.
Without oversight, pediatric ready scores drop.

2024 Kentucky Peds Ready EDs

- Norton Children’s Hospital
- St. Claire Regional Medical Center
- University of Kentucky Makenna David Pediatric Center
- Ephraim McDowell Regional Medical Center
- Pikeville Medical Center
- Ephraim McDowell James B. Haggin Hospital
- Ephraim McDowell Fort Logan
- Taylor Regional Hospital
- University of Louisville Hospital
- Owensboro Health Regional Hospital
- UK Good Samaritan Hospital

New
2024-2025 Kentucky Peds Ready EDs

- Morgan County ARH
- Baptist Health Hardin
- Owensboro Health Twin Lakes Medical Center
- Med Center Bowling Green

Community Engagement

ACCESS TO CHILDREN'S CARE
Environmental Scan

Everyday care Clinics, Health Centers, Pediatric/FP offices	Emergency care "pediatric readiness"	Referral patterns
Workforce	Insurance plans	Geography
Weather/Climate concerns and preparation	Transportation including EMS staffing	Chapters AAP, AAFP, ACEP, ACS, AHA

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My Guests Are Ready for ???s

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