



Emergency Medical Services for Children



Texas EMSC State Partnership



Baylor  
College of  
Medicine

# Texas Emergency Department Pediatric Readiness

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# National Pediatric Readiness Project (NPRP)

- Quality improvement effort for pediatric care in Emergency Departments (EDs)
- Based on 2009 “Guidelines for the Care of Children in the Emergency Department”
- Voluntary, confidential, and web-based

# National Pediatric Readiness Project (NPRP)

- Texas data collection Jan-Mar, 2013
- National assessment complete
- Participating hospitals received
  - Immediate feedback
  - Comparison to similar hospitals
  - Individual gap analysis to assist with accreditation goals

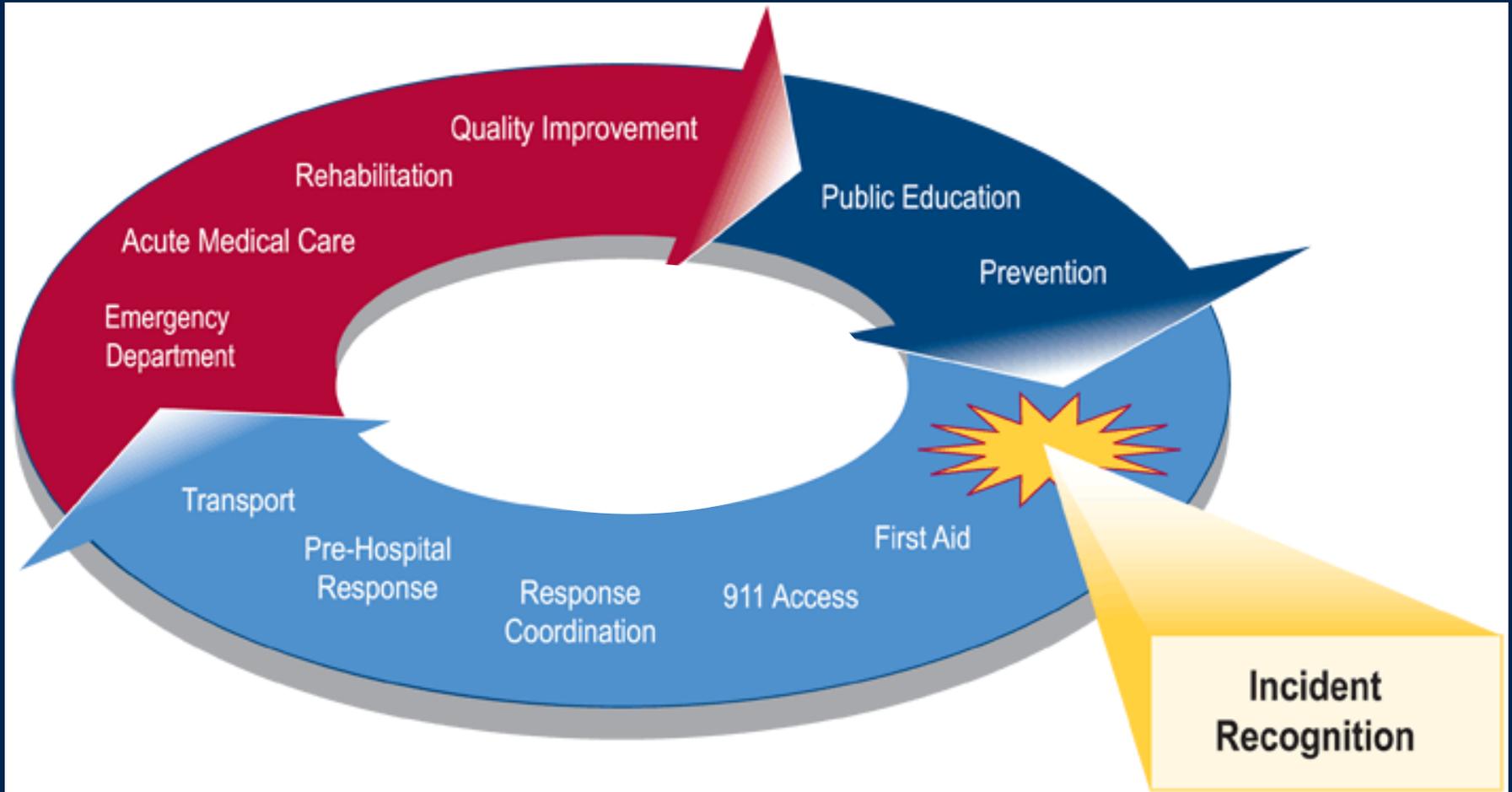
# Information Gathered

- Assessment of EDs open 24/7
- Gathered demographics about:
  - Accreditation
  - ED configuration
  - Inpatient pediatric capabilities (PICU, NICU...)
  - Pediatric age cut-offs for medical and trauma

# Why Does This Matter?

- 30 million ED visits per year for children in the US
  - 1 in 3 ED visits are for a child
- Most children are not seen at children's hospitals
  - Every ED needs to be prepared for children
- 2 million children per year arrive to EDs via EMS
  - That's a lot of kids!
- 1 in 6 children who use EMS get admitted
  - Higher acuity relative to rest of ED users

# Relevance to EMS



FUTURE OF EMERGENCY CARE

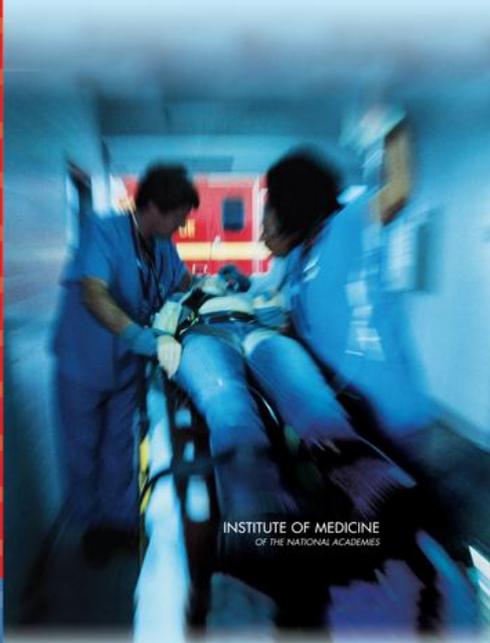
# EMERGENCY MEDICAL SERVICES AT THE CROSSROADS



INSTITUTE OF MEDICINE OF THE NATIONAL ACADEMIES

FUTURE OF EMERGENCY CARE

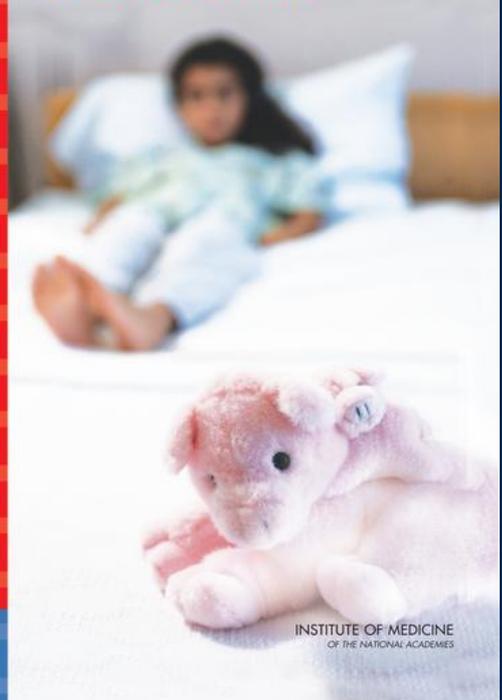
# HOSPITAL-BASED EMERGENCY CARE AT THE BREAKING POINT



INSTITUTE OF MEDICINE OF THE NATIONAL ACADEMIES

FUTURE OF EMERGENCY CARE

# EMERGENCY CARE FOR CHILDREN GROWING PAINS



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## COORDINATION

## REGIONALIZATION



[www.bcm.edu/pediatrics/emsc](http://www.bcm.edu/pediatrics/emsc)



# COORDINATION

Limited communication with receiving hospitals

Lack of access to the patient's medical history

Disconnected communication between dispatch, EMS, ED, and public health systems

Few interfacility transfer guidelines and agreements

Independent planning for adult and pediatric care

Lack of common radio frequencies and protocols

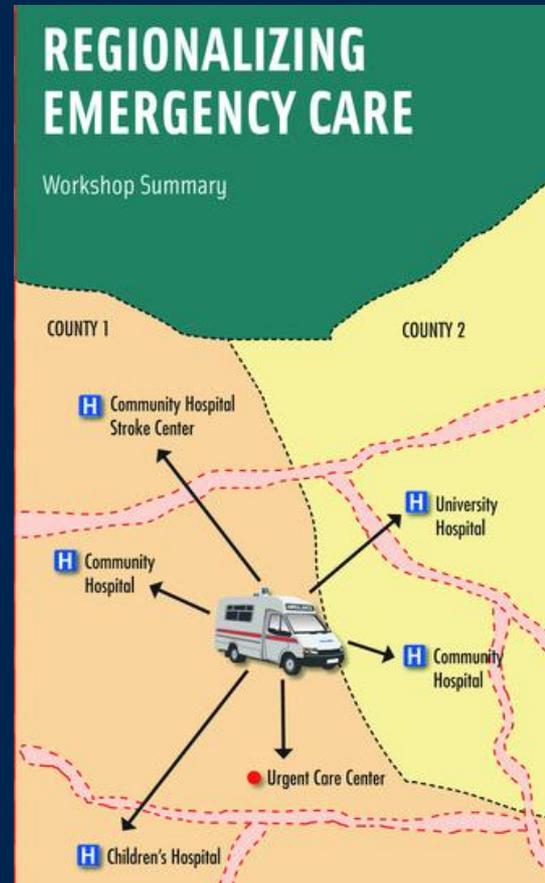
Institute of Medicine. *Emergency Care for Children: Growing Pains.* 2007

# REGIONALIZATION

Goal: To direct critically ill and injured patients to facilities within a community with the personnel and resources to deliver high-level emergency care

## Adult successes:

- Cardiac care
- Stroke
- Trauma



## Pediatric opportunities:

- Trauma
- Critical care
- Emergency care



# Statewide and Regional Data

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# Domains Assessed by NPRP

- Administration and coordination (19)
- Health care providers (10)
- Quality/process improvement (QI/PI) (7)
- Patient safety (14)
- Policies, procedures and protocols (17)
- Equipment, supplies, and medications (33)

# Overall Response and Score

## National Pediatric Readiness Project: National Results

The following results represent a national initiative sponsored by the federal Emergency Medical Services for Children Program (EMSC) to ensure that **emergency departments (EDs)** are ready to care for children. EDs were asked to take an assessment regarding available resources for the care of children and received a score based on a **100 point scale**.

Rev. 8/29/2013 - 14:53 MDT (Updated Daily)

**TX response = 60.5% (305/504)**

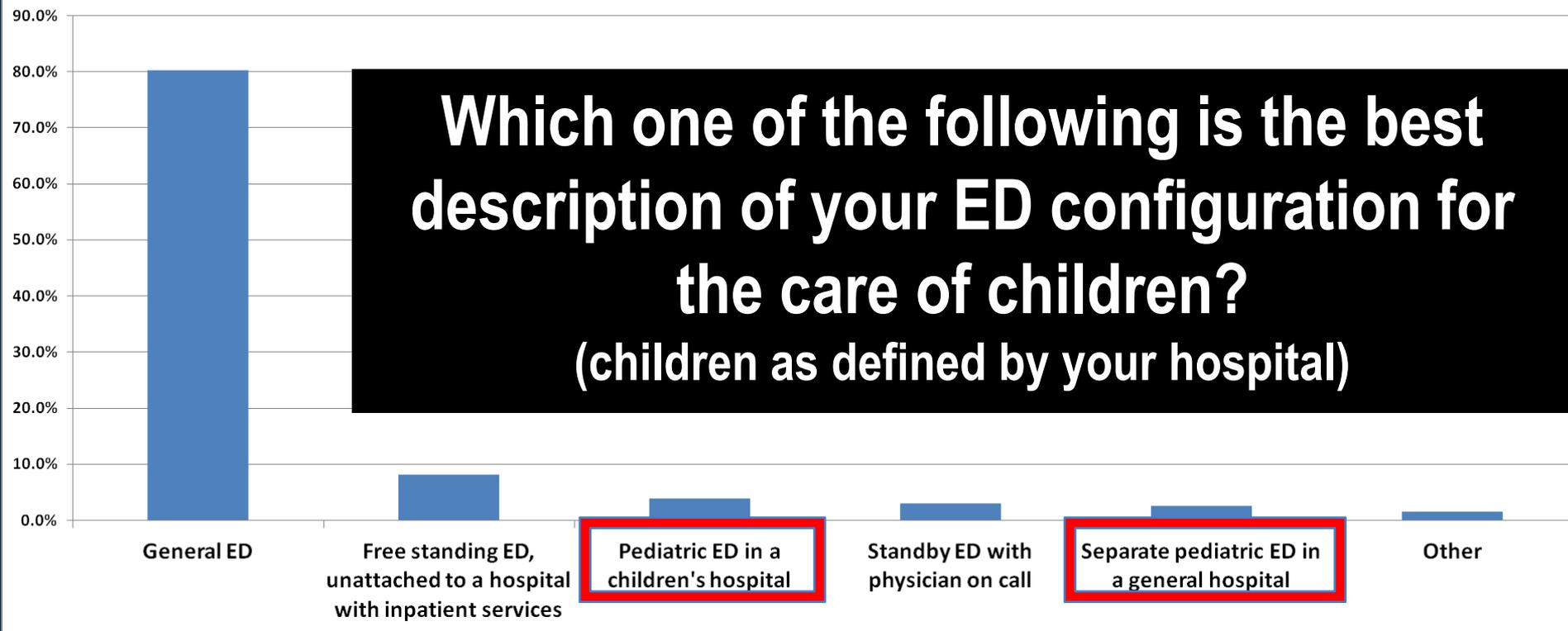
**Average Pediatric Readiness Scores TX average score = 70**

Low Volume (<1800 patients)	Medium Volume (1800-4999 patients)	Medium to High Volume (5000-9999 patients)	High Volume (>=10000 patients)	All Participating Hospitals
<b>62</b>	<b>70</b>	<b>74</b>	<b>84</b>	<b>69</b>
n = 1,632	n = 1,241	n = 707	n = 563	n = 4,143

- As annual pediatric ED volume ↑, hospital pediatric readiness scores ↑
- Texas scores were similar to national scores for all hospital volume categories

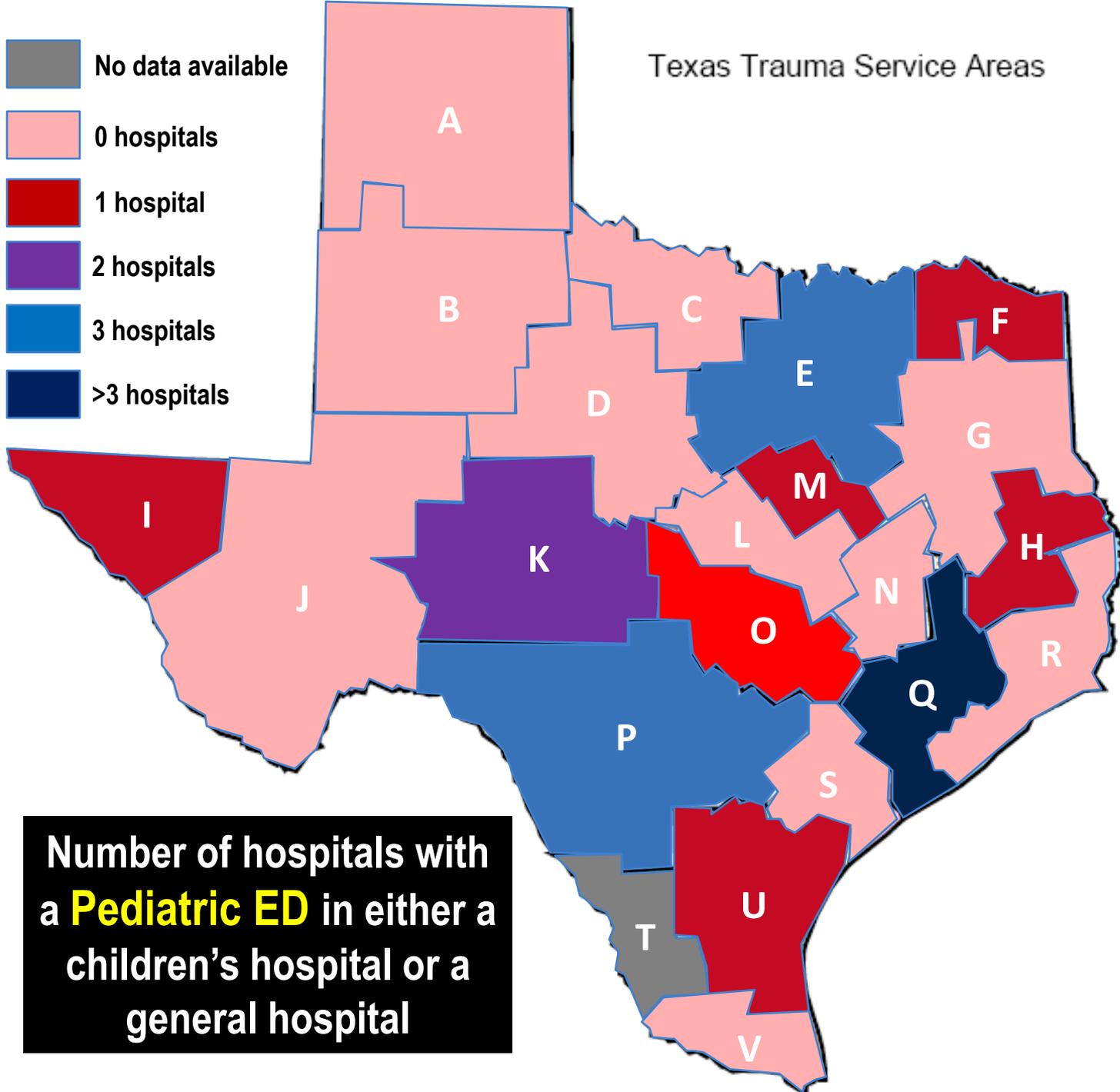
# ED Demographics

Emergency Department Type



# Texas Trauma Service Areas

- No data available
- 0 hospitals
- 1 hospital
- 2 hospitals
- 3 hospitals
- >3 hospitals

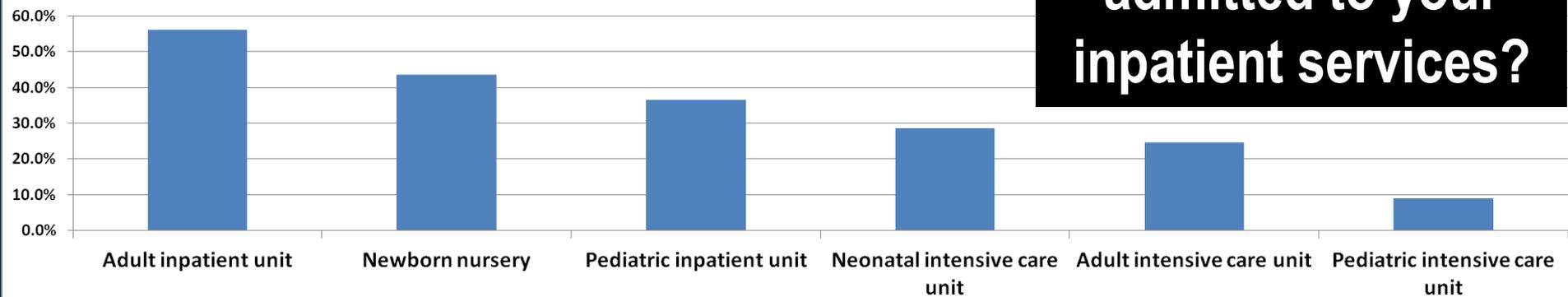


Number of hospitals with a **Pediatric ED** in either a children's hospital or a general hospital

# Inpatient Demographics

Are any children admitted to your inpatient services?

Inpatient Services that Admit Children

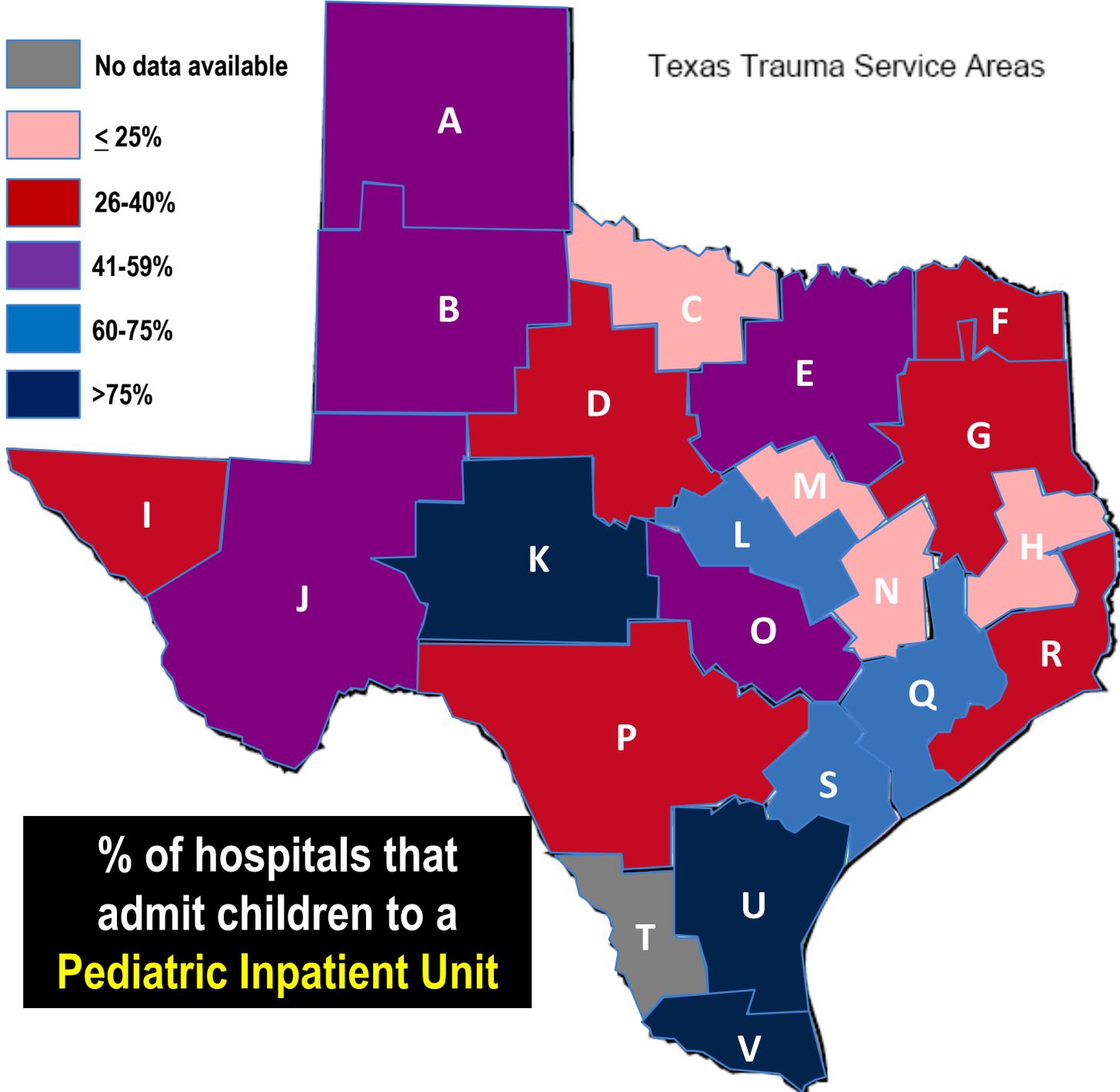
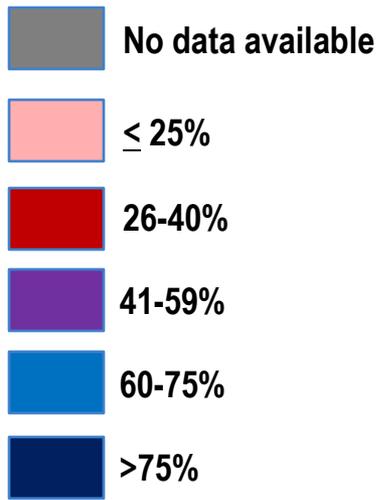


## Importance of this info:

- Guide EMS in regional destination plans
- Avoid unnecessary transfers
- Anticipate surge capabilities in disasters

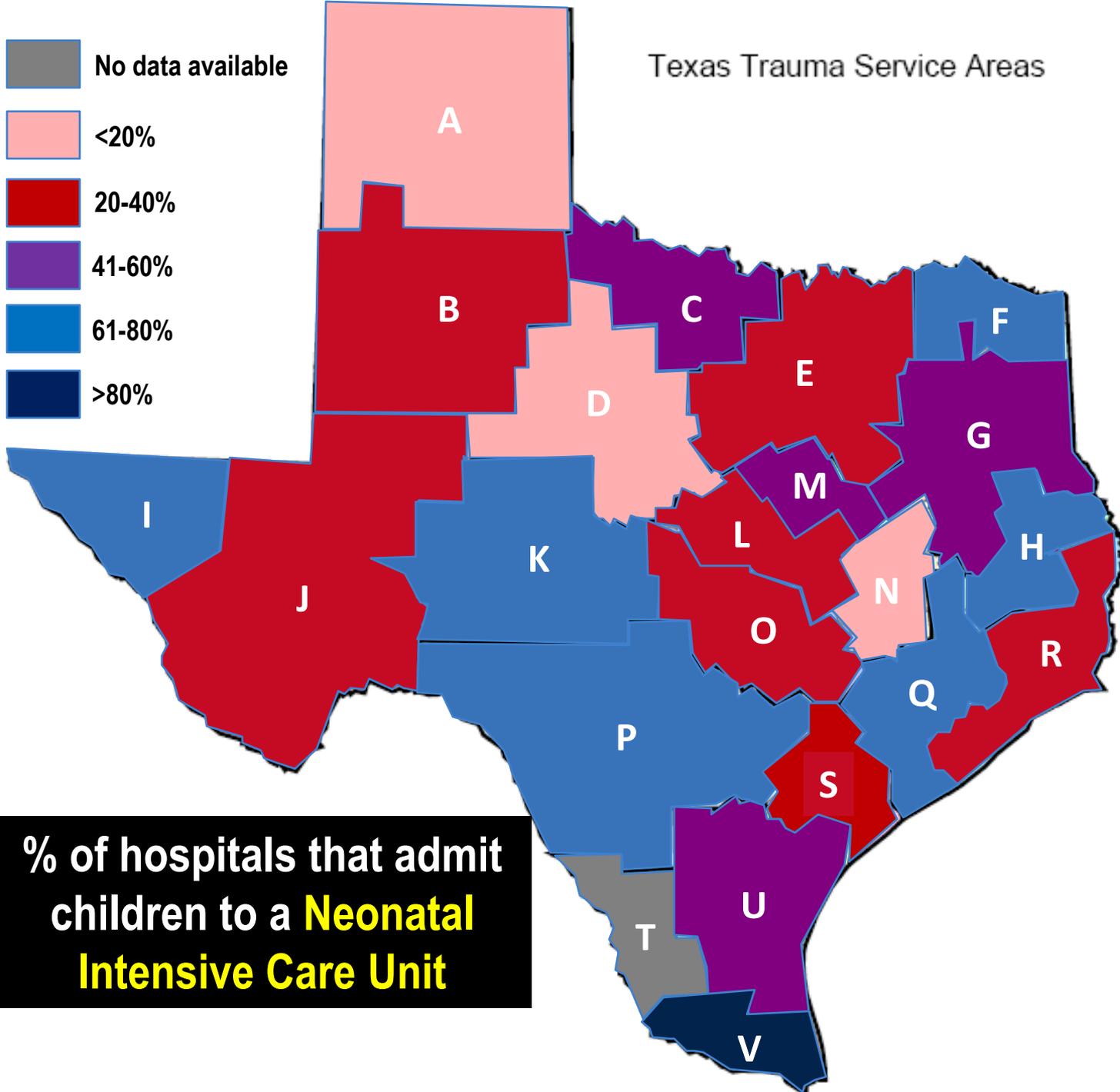
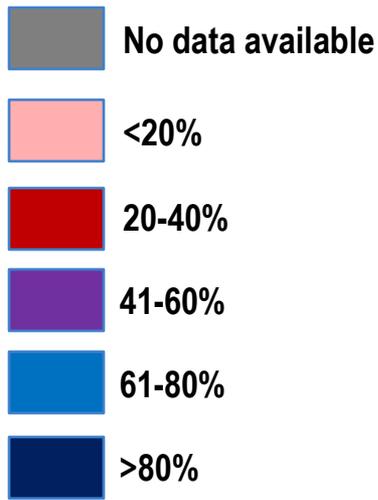
Inpatient Services that Admit Children	%	N
Adult inpatient unit	56.1%	171
Newborn nursery	43.6%	133
Pediatric inpatient unit	36.4%	111
Neonatal intensive care unit	28.5%	87
Adult intensive care unit	24.6%	75
Pediatric intensive care unit	8.9%	27

# Texas Trauma Service Areas



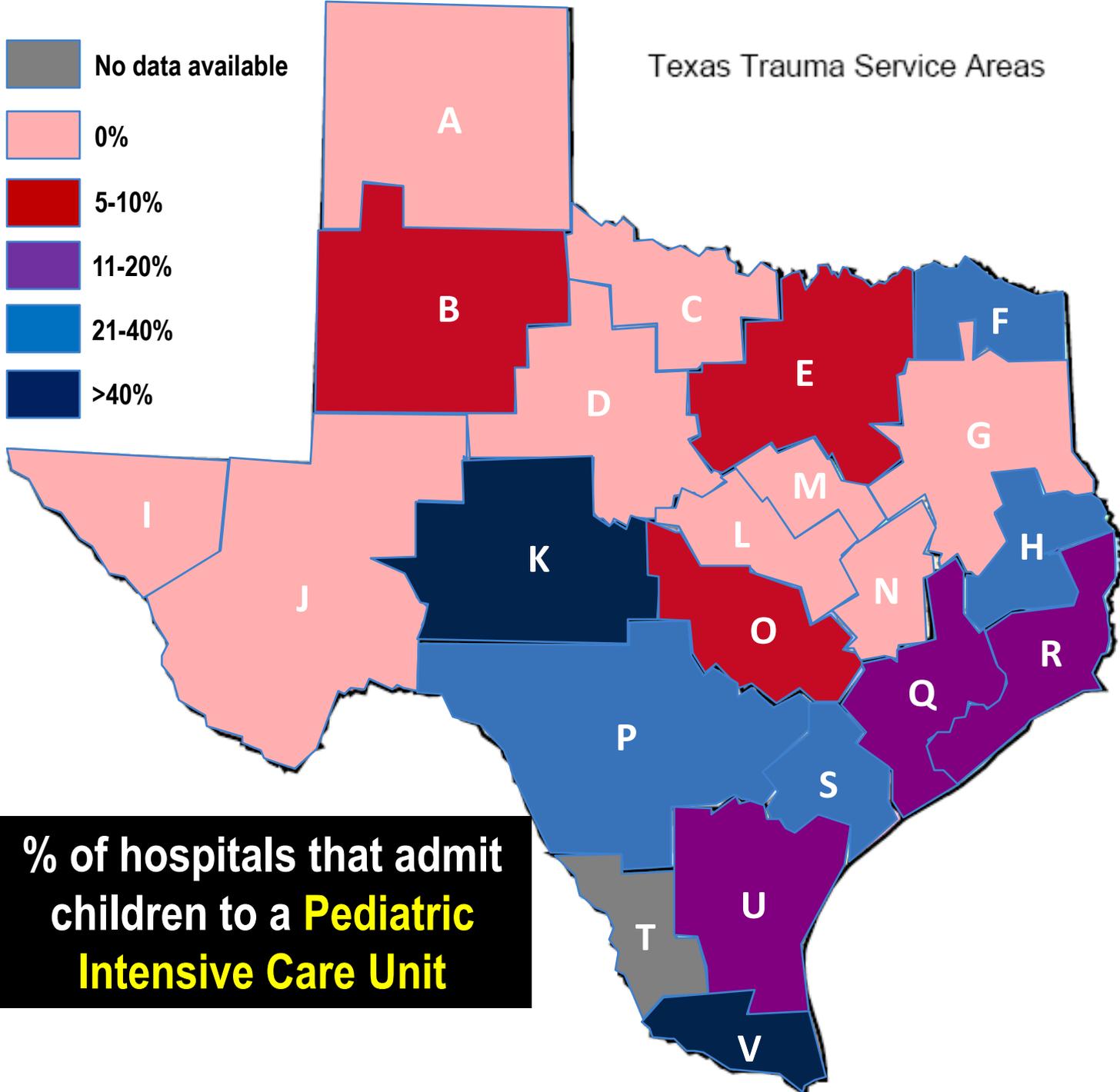
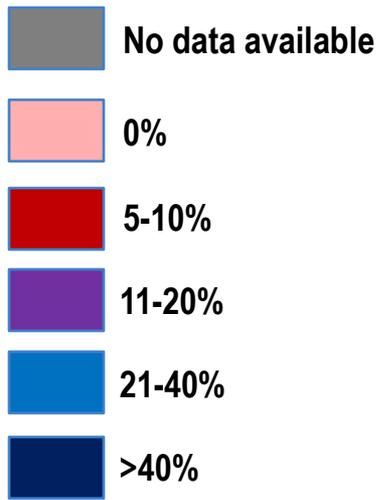
**% of hospitals that admit children to a Pediatric Inpatient Unit**

# Texas Trauma Service Areas



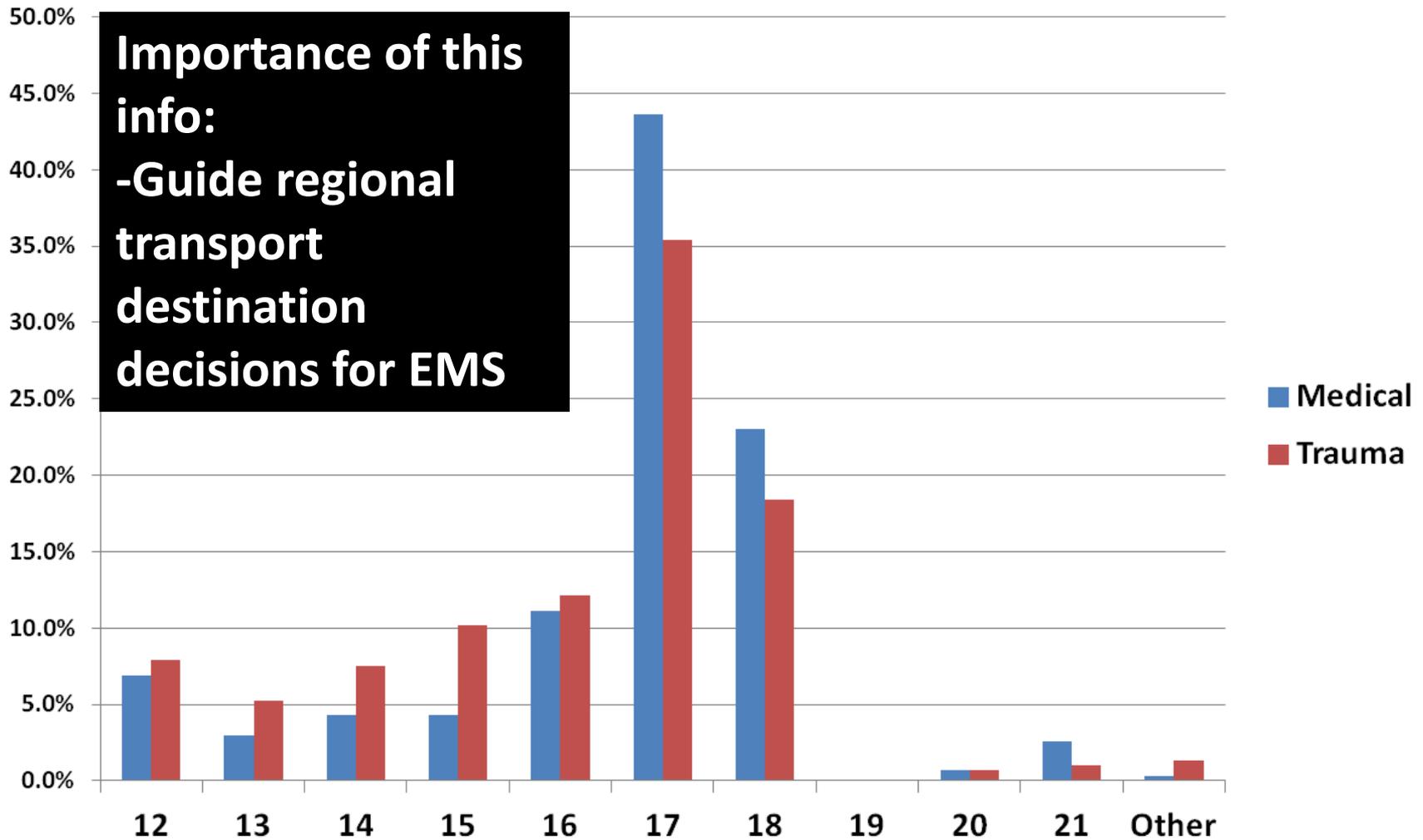
**% of hospitals that admit children to a Neonatal Intensive Care Unit**

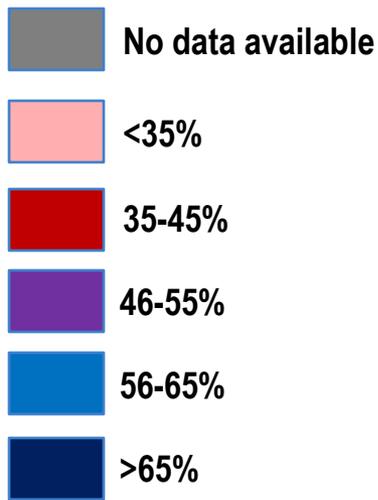
# Texas Trauma Service Areas



**% of hospitals that admit children to a **Pediatric Intensive Care Unit****

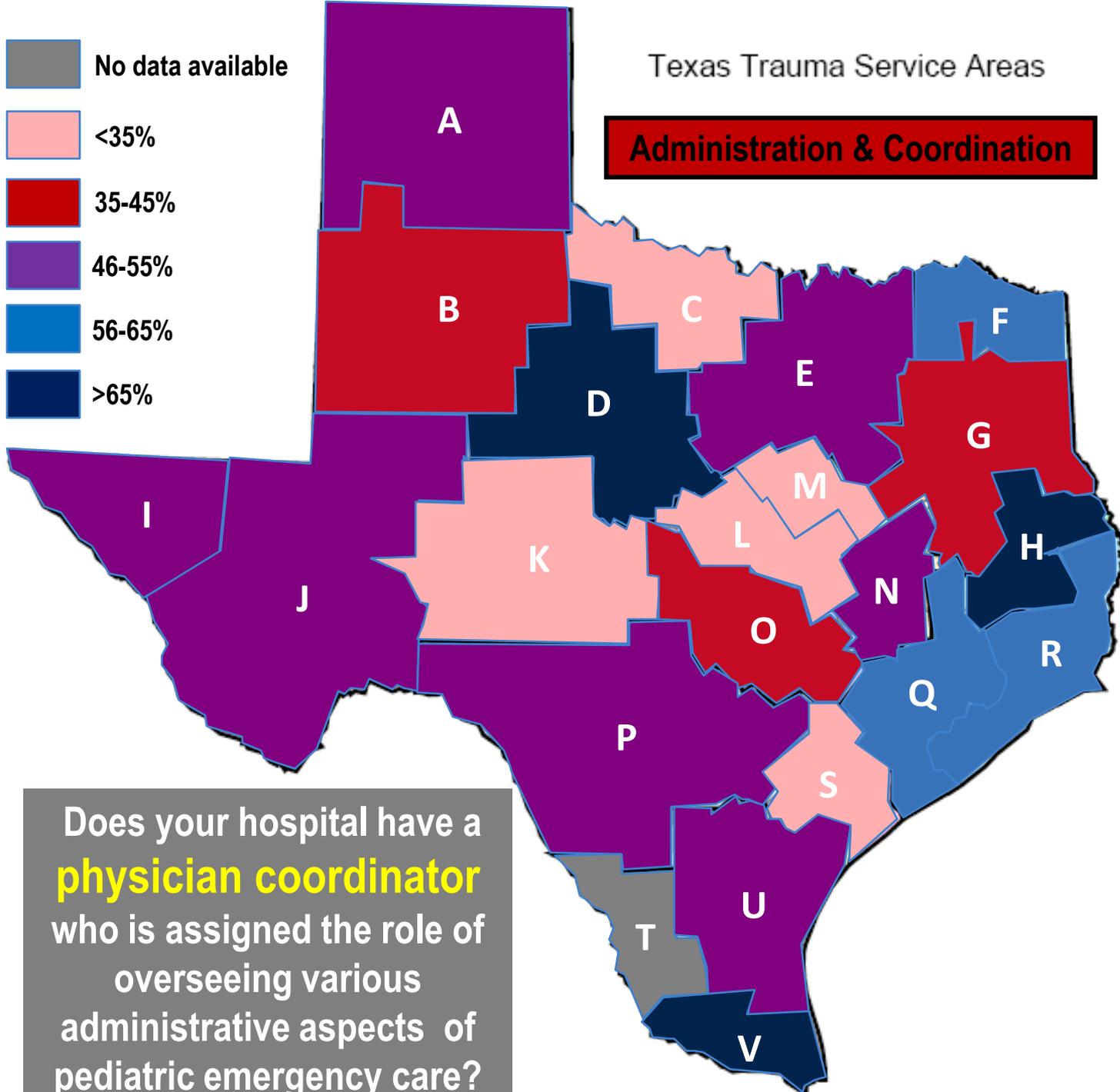
# ED Pediatric Age Cut-Off





## Texas Trauma Service Areas

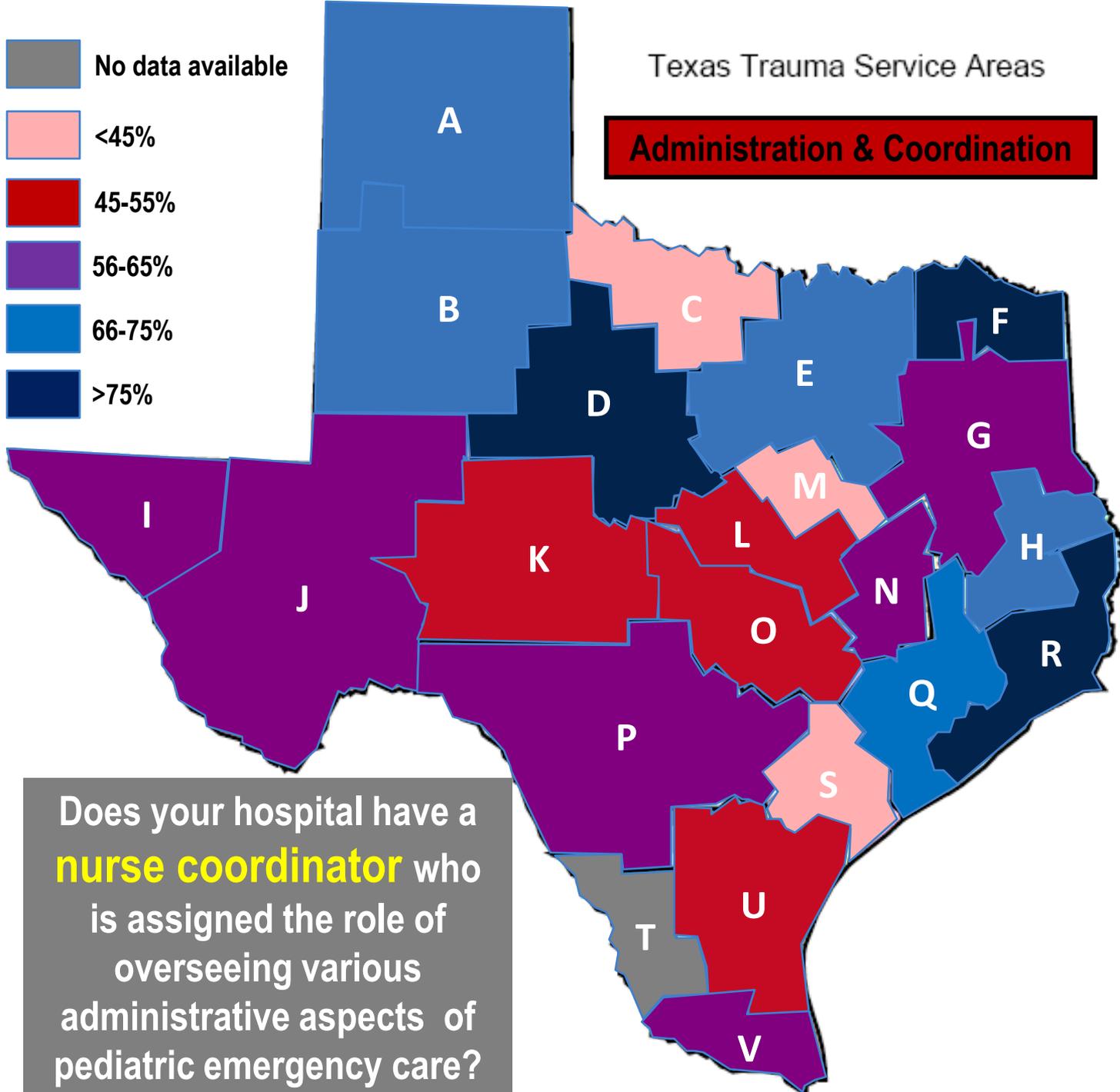
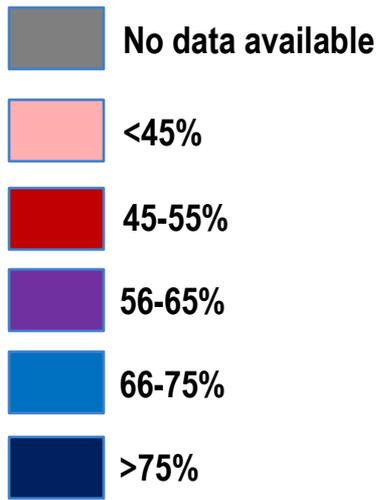
### Administration & Coordination



Does your hospital have a **physician coordinator** who is assigned the role of overseeing various administrative aspects of pediatric emergency care?

# Texas Trauma Service Areas

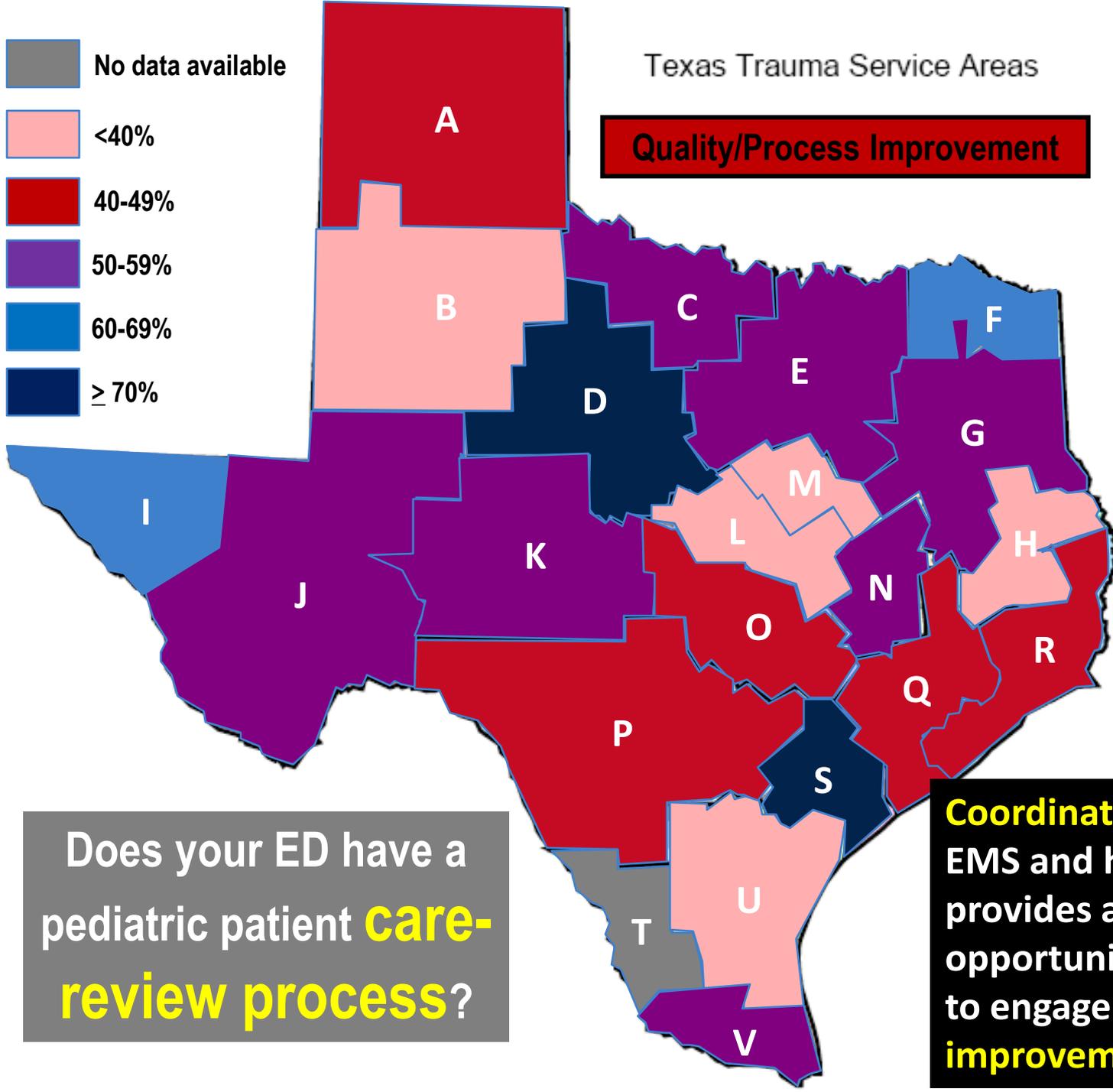
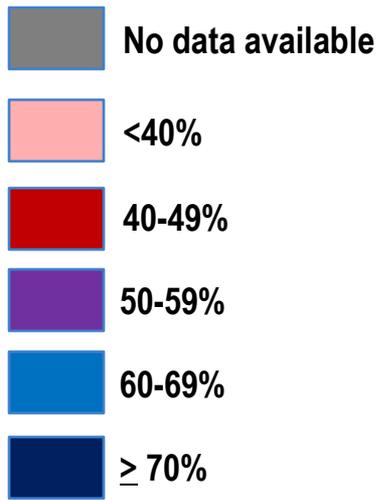
## Administration & Coordination



Does your hospital have a **nurse coordinator** who is assigned the role of overseeing various administrative aspects of pediatric emergency care?

# Texas Trauma Service Areas

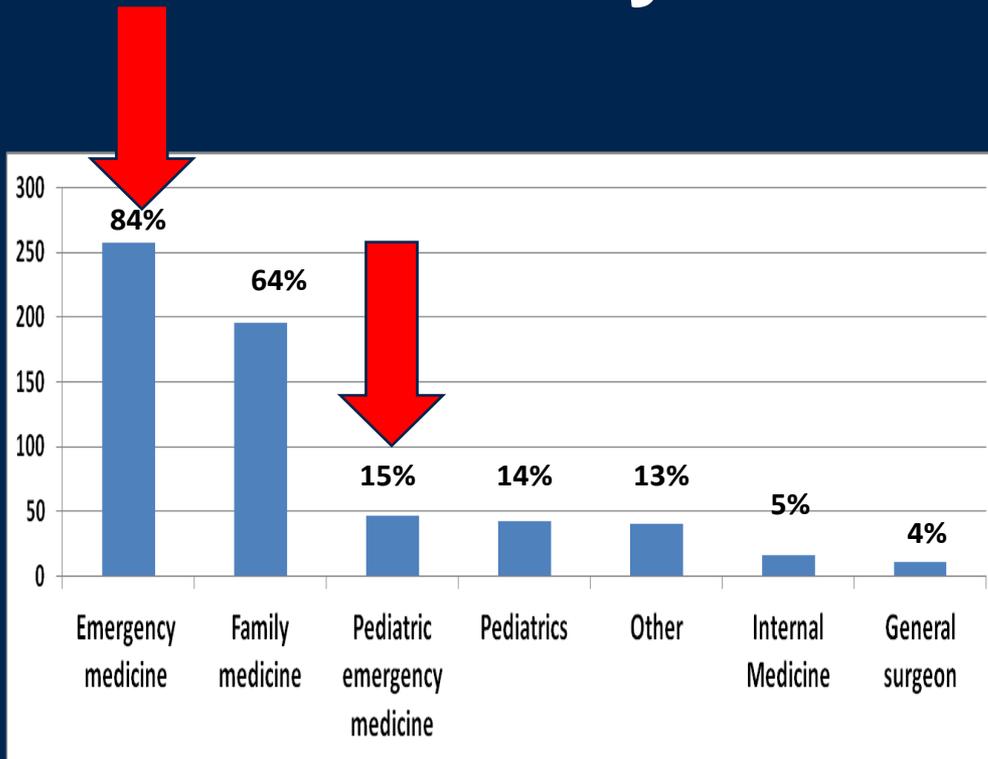
## Quality/Process Improvement



Does your ED have a pediatric patient **care-review process**?

**Coordination** between EMS and hospital EDs provides an opportunity for both to engage in **process improvement**

# Physician Training

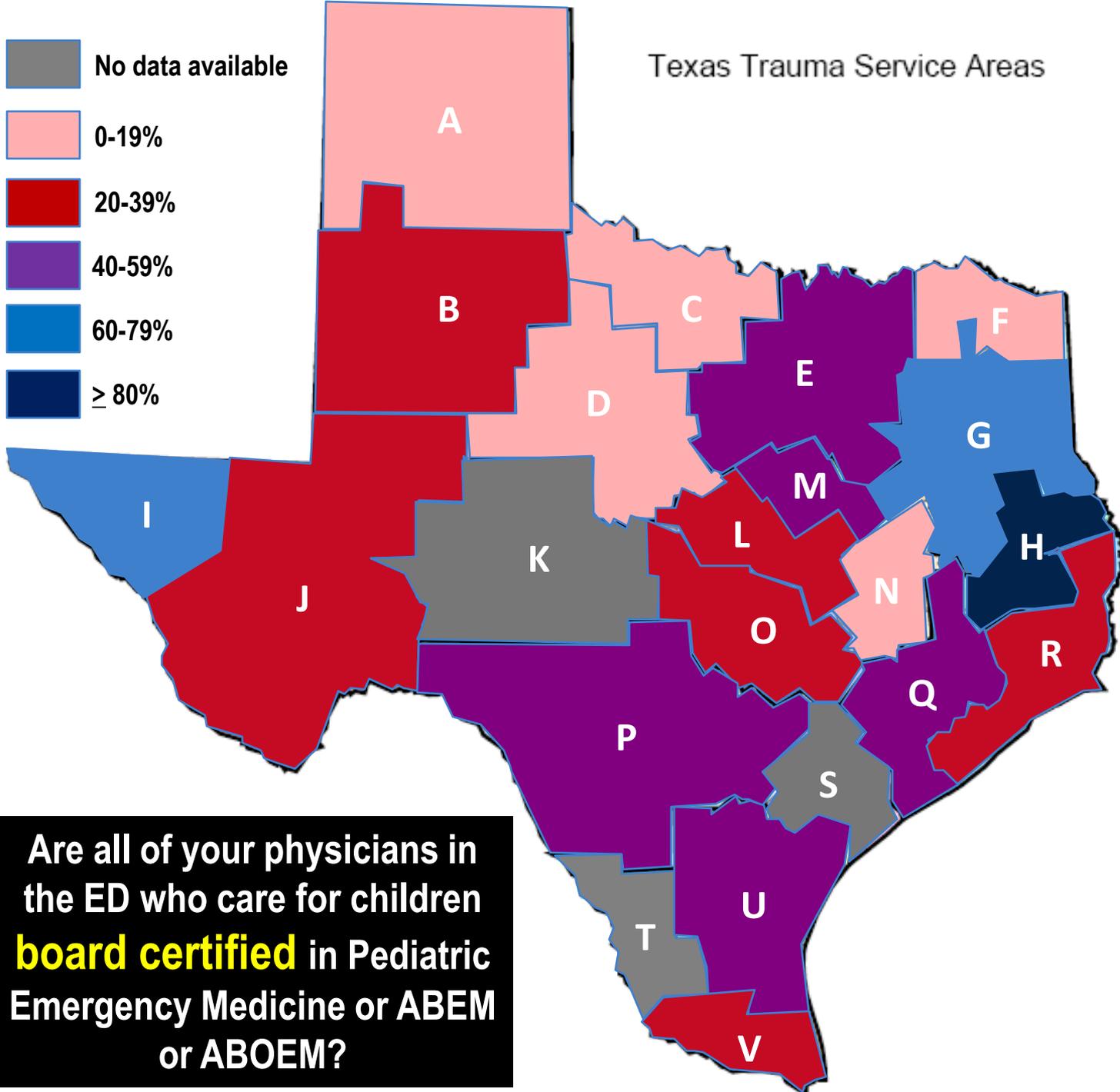
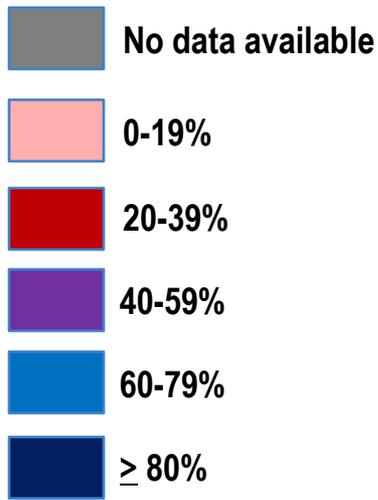


Thinking of the physicians who currently staff your ED and care for children, what types of training are represented?

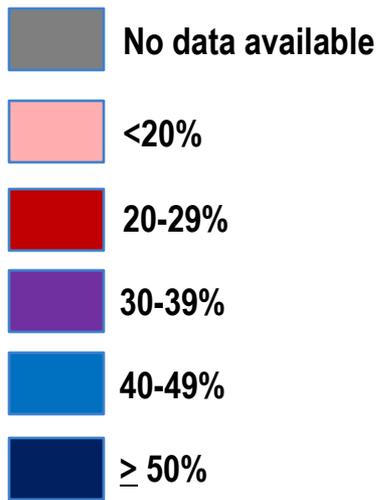
• <1% of each of the following:

- Obstetrics/gynecologist
- Anesthesiologist
- Critical care/pulmonologist
- Gastroenterologist
- General practitioner
- Orthopedics
- Pediatric critical care

# Texas Trauma Service Areas

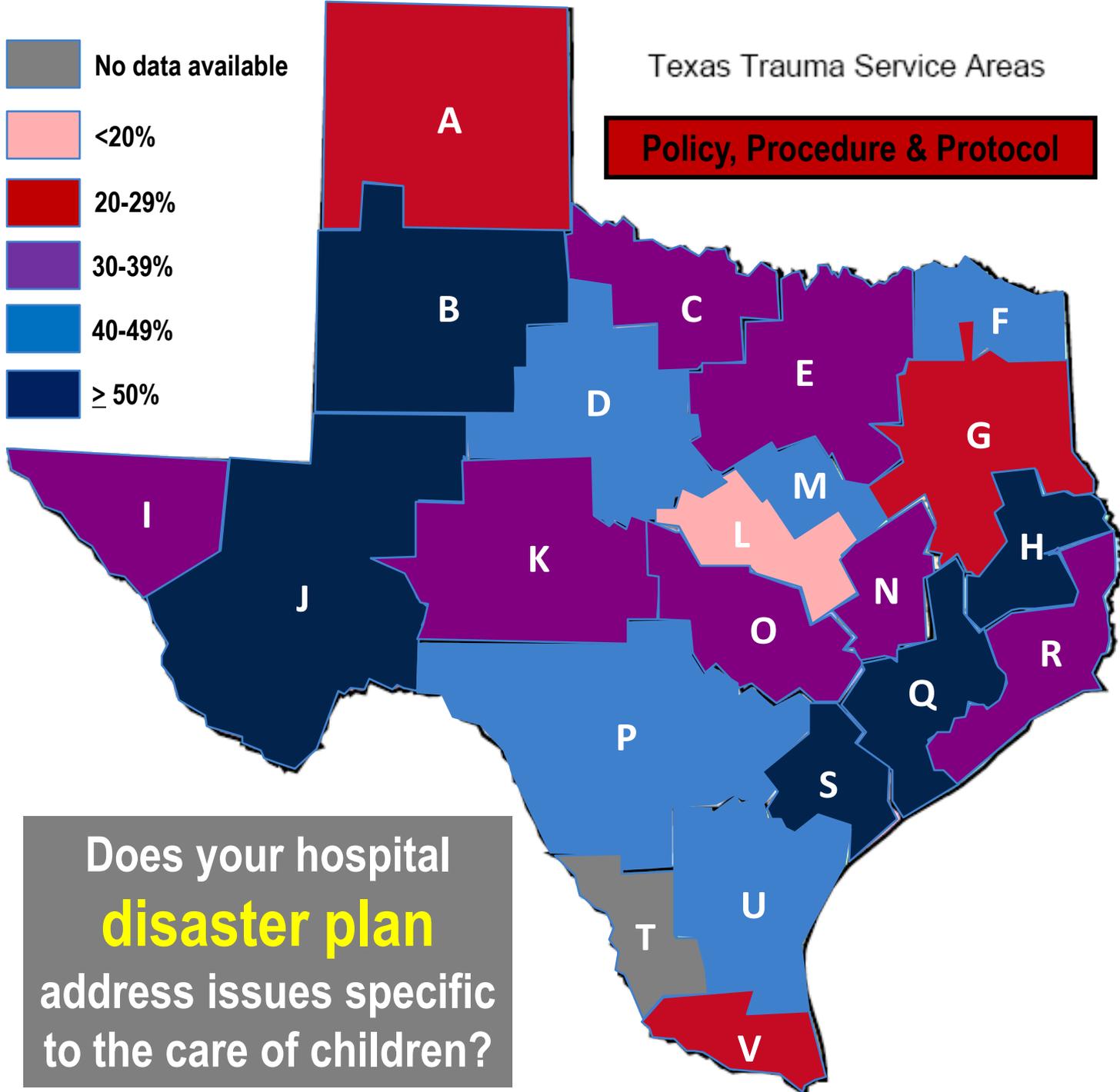


Are all of your physicians in the ED who care for children **board certified** in Pediatric Emergency Medicine or ABEM or ABOEM?

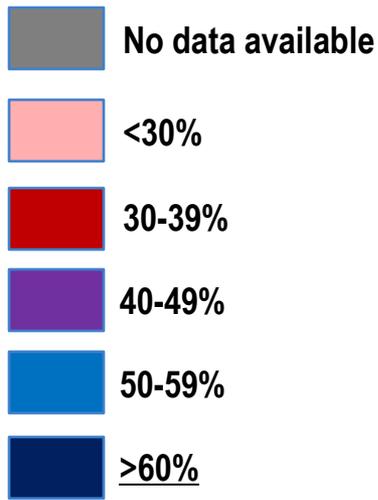


## Texas Trauma Service Areas

**Policy, Procedure & Protocol**

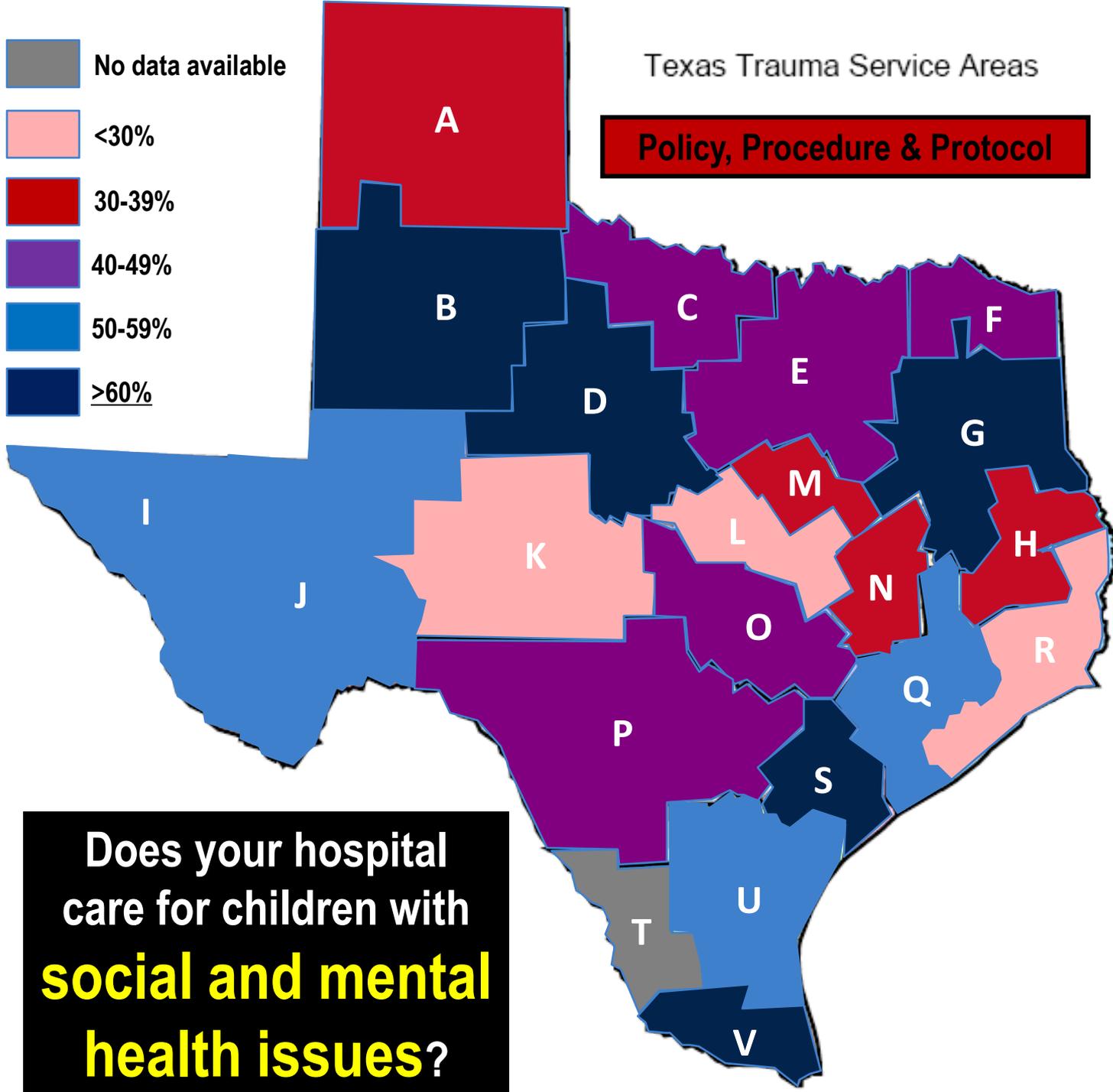


Does your hospital **disaster plan** address issues specific to the care of children?

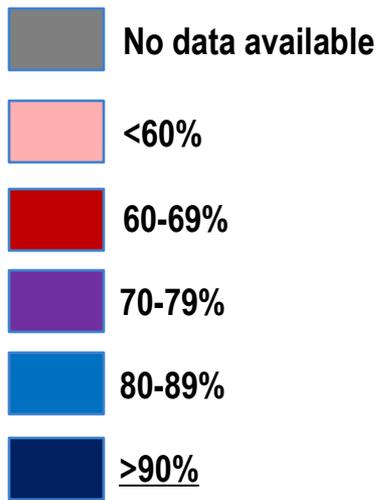


Texas Trauma Service Areas

**Policy, Procedure & Protocol**

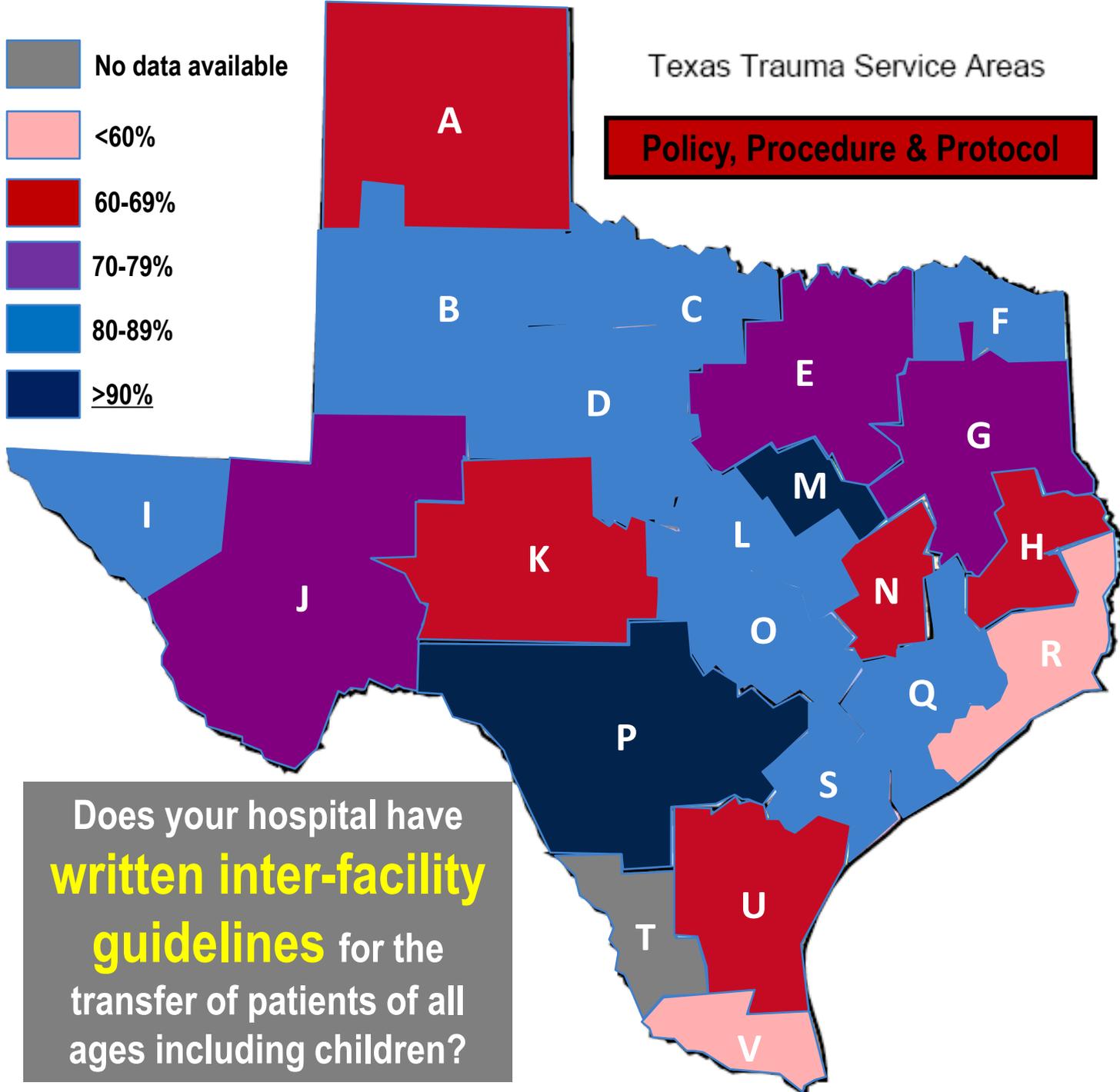


Does your hospital care for children with **social and mental health issues?**



## Texas Trauma Service Areas

**Policy, Procedure & Protocol**



Does your hospital have **written inter-facility guidelines** for the transfer of patients of all ages including children?

# Equipment, Supplies, and Medications

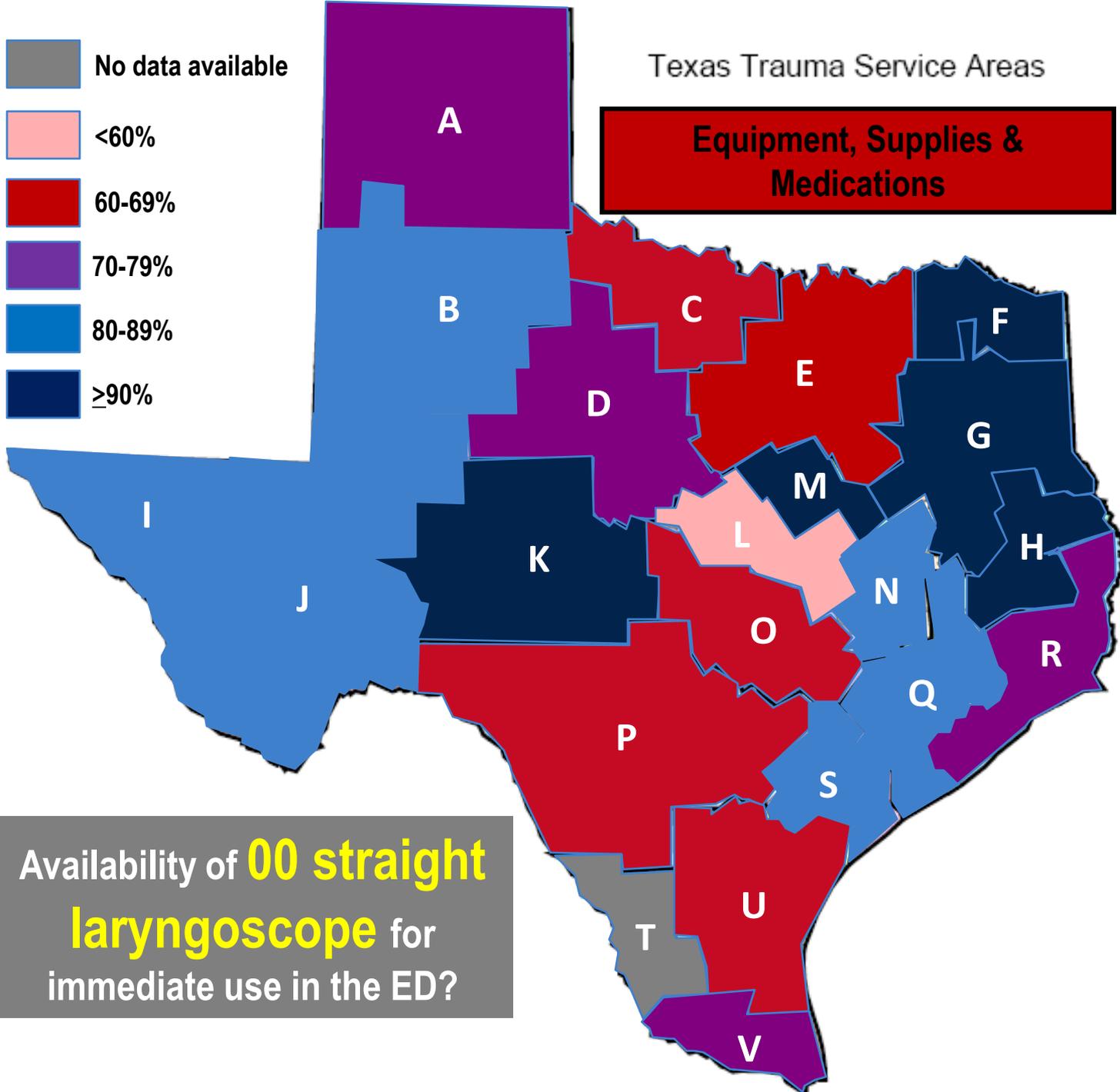
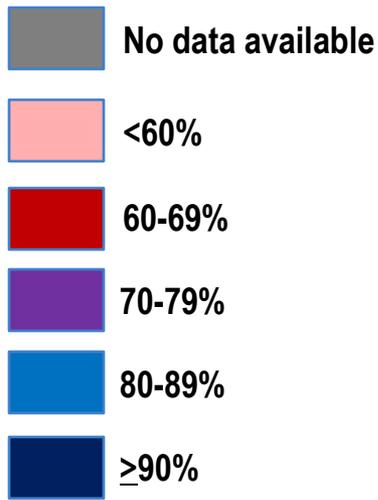
- Most TX EDs were equipped with >90% of the equipment, supplies, and medications
- TX EDs were within 3% of the national average on the availability of these items

## Essential Items Missing

- **Laryngoscope** (straight 00: 76%)
- **Continuous end-tidal CO<sub>2</sub> monitoring** (80%)
- **Pediatric Magill forceps** (82%)
- **Non-rebreather masks** (infant: 84%)

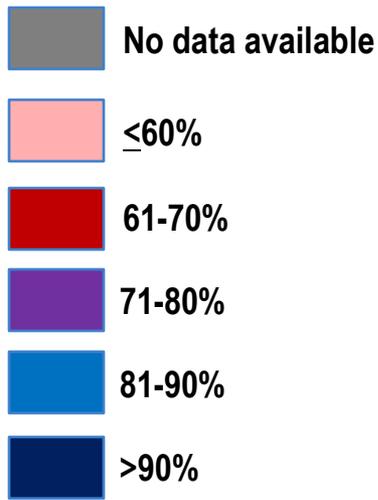
# Texas Trauma Service Areas

**Equipment, Supplies & Medications**

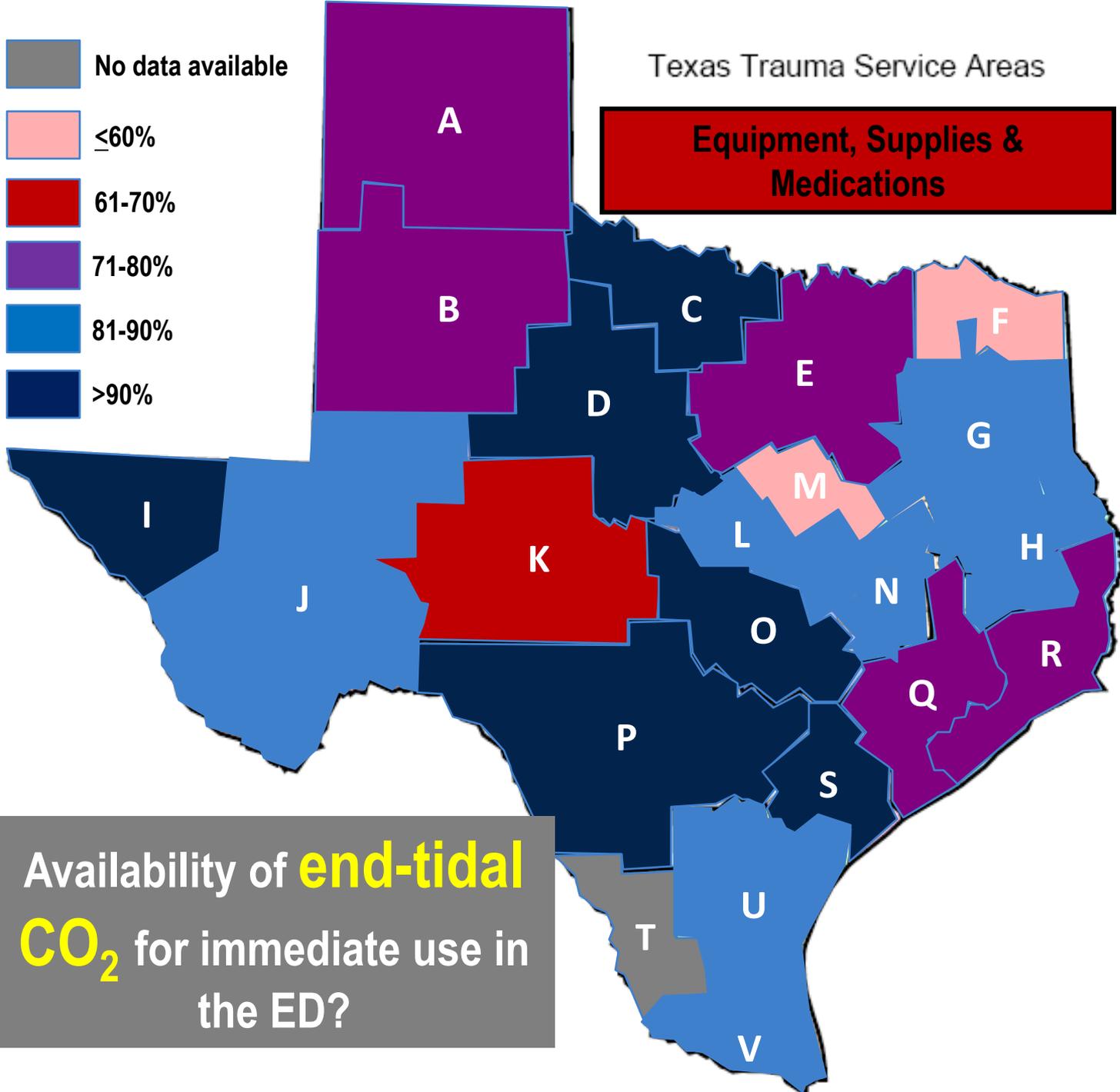


Availability of **00 straight laryngoscope** for immediate use in the ED?

# Texas Trauma Service Areas

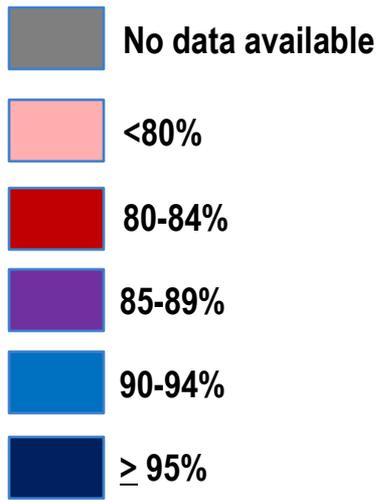


**Equipment, Supplies & Medications**

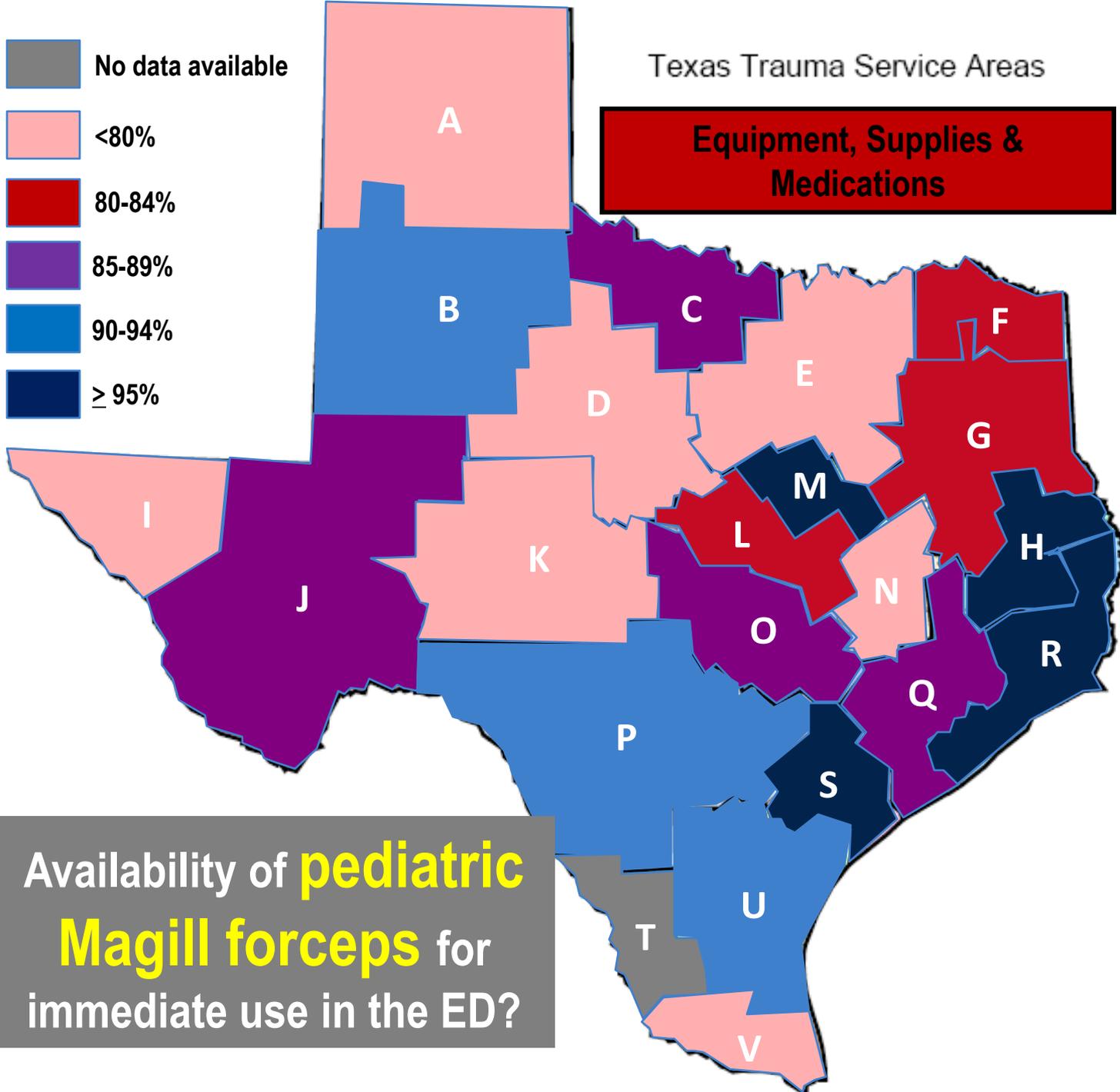


Availability of **end-tidal CO<sub>2</sub>** for immediate use in the ED?

# Texas Trauma Service Areas



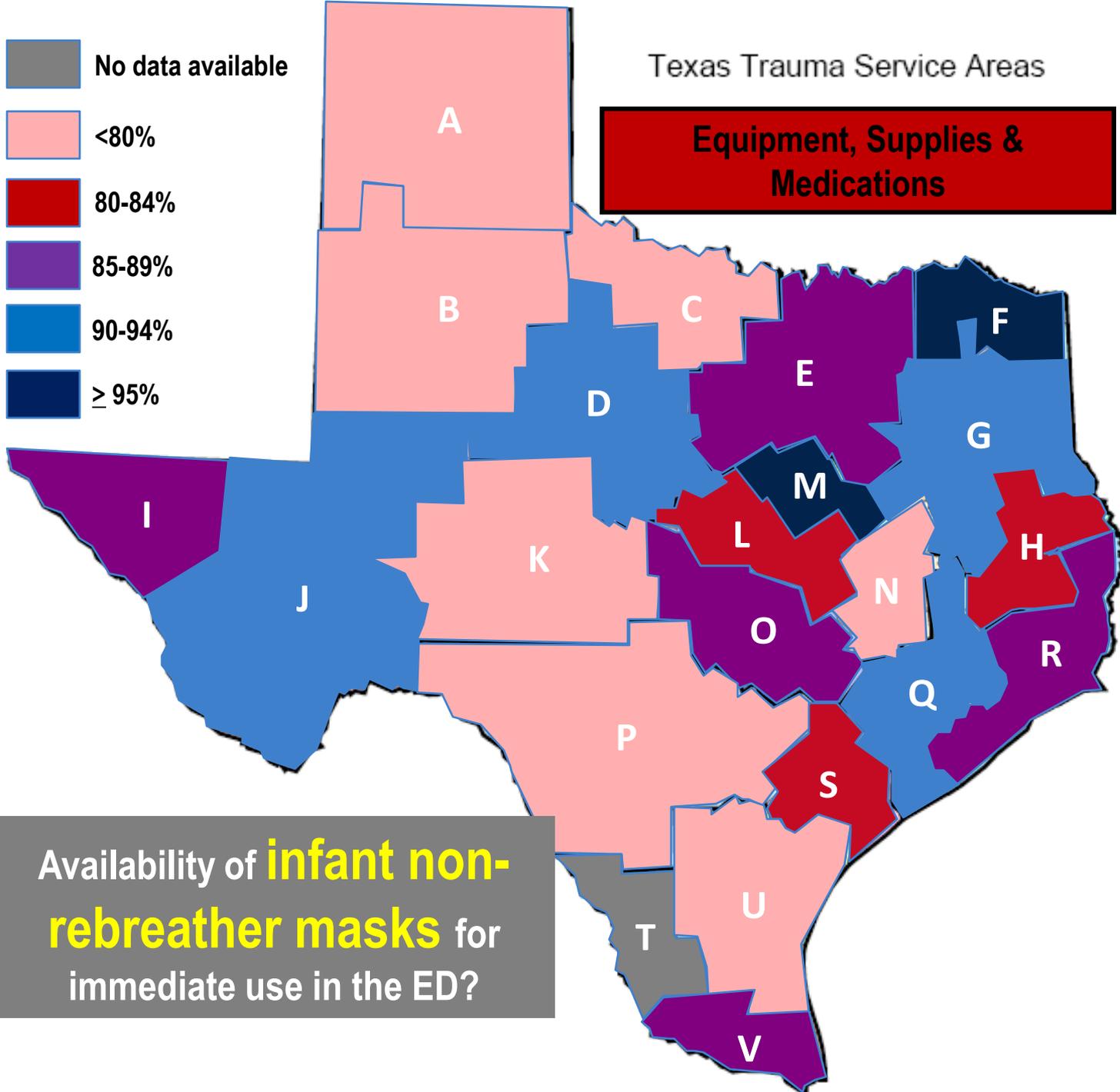
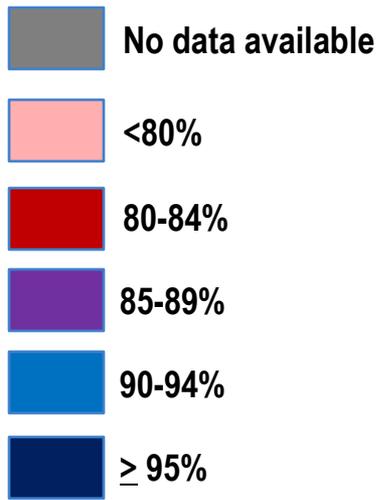
**Equipment, Supplies & Medications**



Availability of **pediatric Magill forceps** for immediate use in the ED?

# Texas Trauma Service Areas

**Equipment, Supplies & Medications**



Availability of **infant non-rebreather masks** for immediate use in the ED?

# Barriers to Readiness

- Lack of **educational** resources (48%)
- Lack of a QI **plan** (47%)
- Lack of pediatric-specific **policies** (46%)
- Not **aware** of the guidelines (45%)
- Cost of training personnel (43%)
- Lack of a disaster plan (42%)
- Lack of trained nurses (40%)
- Lack of trained physicians (36%)
- Lack of administrative support (15%)
- Not interested (9%)
- Low pediatric volume (1%)

Common barriers are not due to cost, personnel, interest or support of administration

# Next Steps

## • EMS for Children State Partnership

- Share this data with more stakeholders (TCEP, ENA, TPS, CHAT, SORH, statewide webinar)
- Compile a statewide resource document for hospitals
- Pursue development of a voluntary, pediatric facility recognition program in collaboration with stakeholders
- Pilot the program in several interested RACs prior to statewide implementation

## • Requests for the GETAC Pediatrics Committee

- Support the development and implementation of the following in the GETAC strategic plan:
  - A voluntary pediatric **facility recognition** program for **hospitals**
  - A voluntary pediatric **equipment recognition** program for **EMS agencies**