

Collaborative Session #1

Quality Improvement

August 15, 2023

Acknowledgments

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Key Reminders



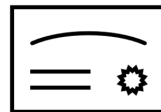
Today's Session Will Be Recorded

- Available in Archives of PRQC Website



Use Chat Function to Ask Questions

- Dedicated Time for Q&A at End of Session



Seeking Nursing/Social Work Credit

- Enter Name in Chat Box

Objectives

After participating in this session, attendees will be able to:

- Give examples of how to implement quality improvement to improve pediatric readiness
- Describe the data sampling and its role in QI
- Be familiar with resources that are available as you embark on your QI journey

Speakers

Katherine (Kate) Remick, MD, FAAP, FACEP, FAEMS

Associate Professor, Department of Pediatrics and Surgery

Associate Chair for Quality, Innovation, and Outreach

Co-Director, National EMS for Children Innovation and Improvement Center

Medical Director, San Marcos Hays County EMS System

Executive Director, National Pediatric Readiness Quality Initiative



Krystle Bartley, MA

Assistant Director of Quality | Department of Pediatrics

Dell Medical School

Director of Quality Improvement Initiatives

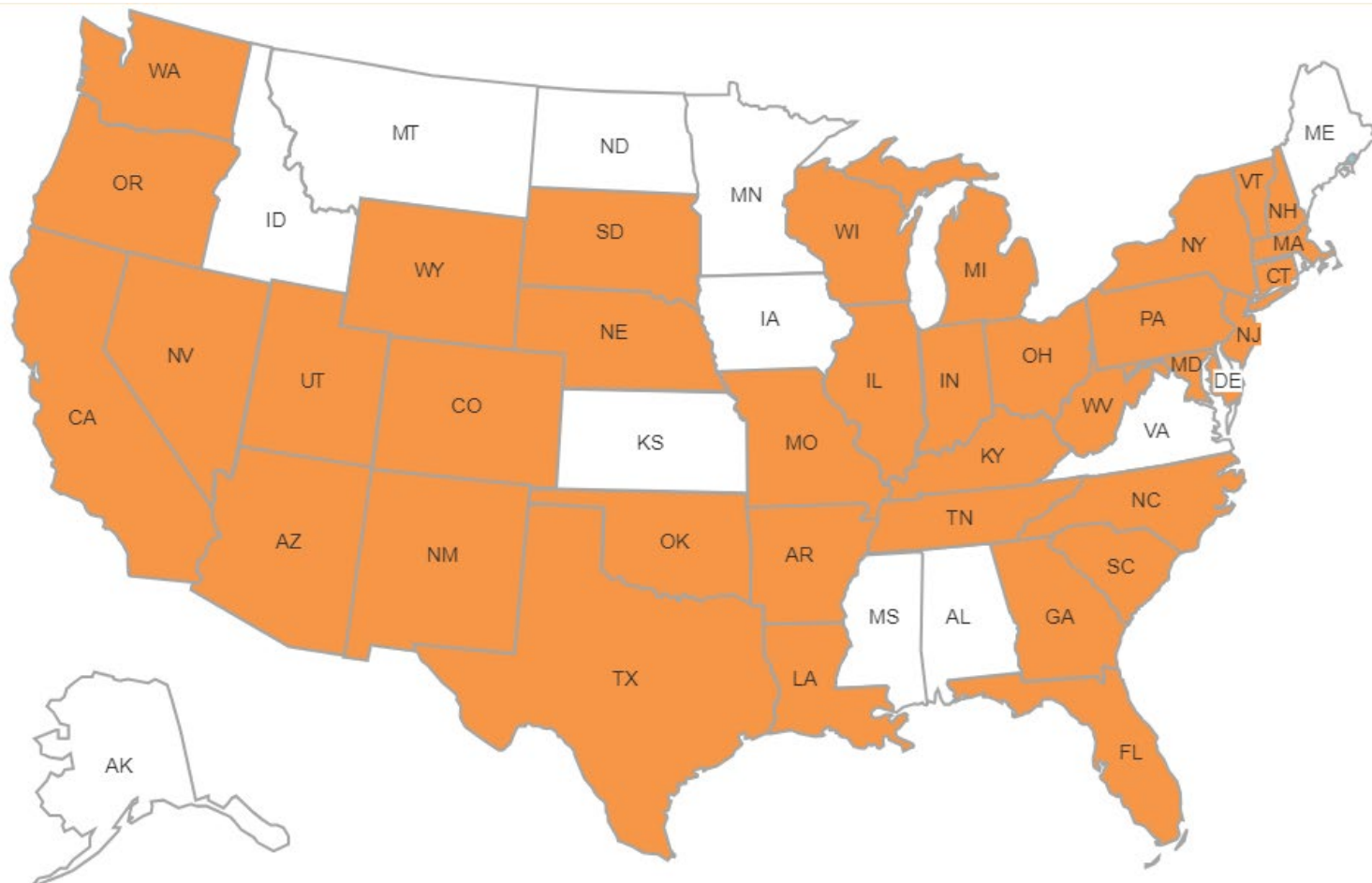
National Pediatric Readiness Quality Initiative



PRQC 2023 Cohort



PRQC Sites: Who We Are



- 189 Sites
- 9 EMSC State Partnership Program Managers

Additionally, sites from the following territories or freely associated states have registered: District of Columbia, Northern Mariana Islands, Palau, Puerto Rico, U.S. Virgin Islands.



Demographics Survey



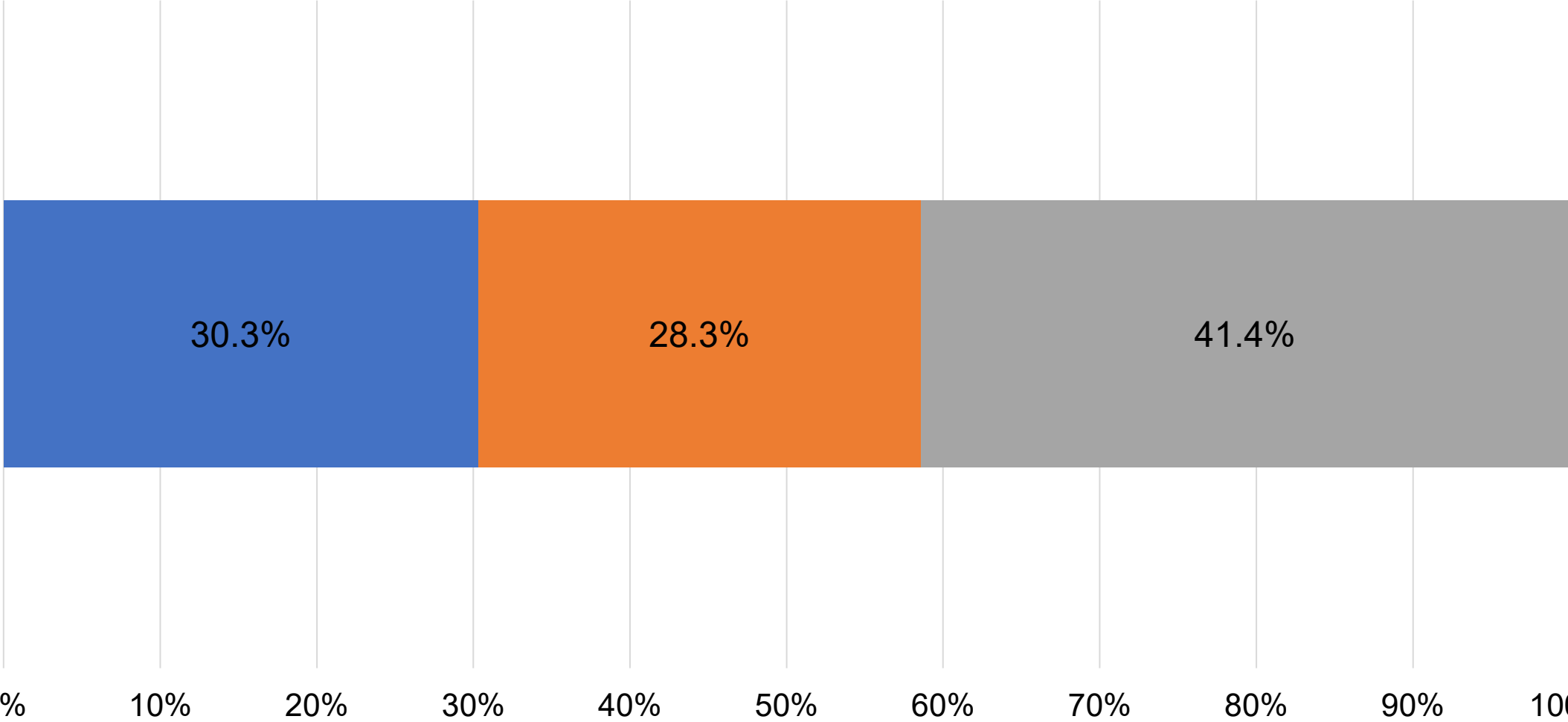
- We look forward to learning more about you as we start building our PRQC community.
- Complete by 8/23



PRQC Enrollment Updates

NPRQI Registration and
Participant Organization Agreements (POAs)

PRQC POA Status Snapshot



■ POAs Executed

■ NPRQI Registration in Progress

■ NPRQI Registration Not Started



PRQC POA Snapshot (A-J)

Executed POAs	Executed POAs
Adventist Health White Memorial	Elliot Hospital
Advocate Good Shepherd Hospital	Encino Hospital Medical Center
Antelope Valley Medical Center	Eureka Community Health Services Avera
Appalachian Regional Healthcare	Georgetown Community Hospital
Baptist Health Hardin	Glendale Memorial Hospital and Health Center
Cedars Sinai Medical Center	Golisano Children's Hospital of Southwest Florida
Children's Hospital Los Angeles	Good Samaritan Hospital
Clark Regional Medical Center	Graham Regional Medical Center
Covenant HealthCare	Henry Mayo Newhall Hospital
Deaconess Union County Hospital	Huntington Hospital
Dignity Health	Jacobi Medical Center
Dignity Health - St. Mary Medical Center	
Dignity Health Northridge Hospital Medical Center	

PRQC POA Snapshot (K-T)

Executed POAs	Executed POAs
Kaiser Permanente (KP)	Pomona Valley Hospital and Medical Center
La Palma Intercommunity Hospital	Princeton Community Hospital
Lake Cumberland Regional Hospital	Providence Holy Cross Medical Center
Lake Regional Health System	Providence Little Company of Mary Medical Center
Lawrence + Memorial Hospital	Saunders Medical Center
Littleton Regional Healthcare	Scheurer Health
Los Robles Regional Medical Center	Sherman Oaks Hospital
Morristown Medical Center	South Lincoln Hospital District
NYC Health + Hospitals - Lincoln	SSM Health St. Joseph Hospital - Lake Saint Louis
Olive View UCLA Medical Center	St. Francis Medical Center
OSF Saint Elizabeth Medical Center	Summit Healthcare Medical Center
Owensboro Health	Tampa General Hospital

PRQC POA Snapshot (T-W)/Health System/Network

Executed POAs

Texas Health Hospital Mansfield

Torrance Memorial Medical Center

UMMS University of Maryland Baltimore Washington Medical Center

USC Arcadia Hospital

Vista Medical Center East

West Hills Hospital and Medical Center

Health System/Network Executed POAs

Orange County Global Medical Center

Riverview Health

PRQC POA Snapshot

EMSC State Partnership Program

Arkansas Department of Health

Children's Emergency Care Alliance (Tennessee)

Pennsylvania Emergency Health Services Council (PEHSC)

University of South Dakota Sanford School of Medicine

Utah Department of Health

POAs Under Review

Catawba Valley Medical Center

Charleston Area Medical Center

CHI Health St. Francis

Grand Strand Regional Medical Center

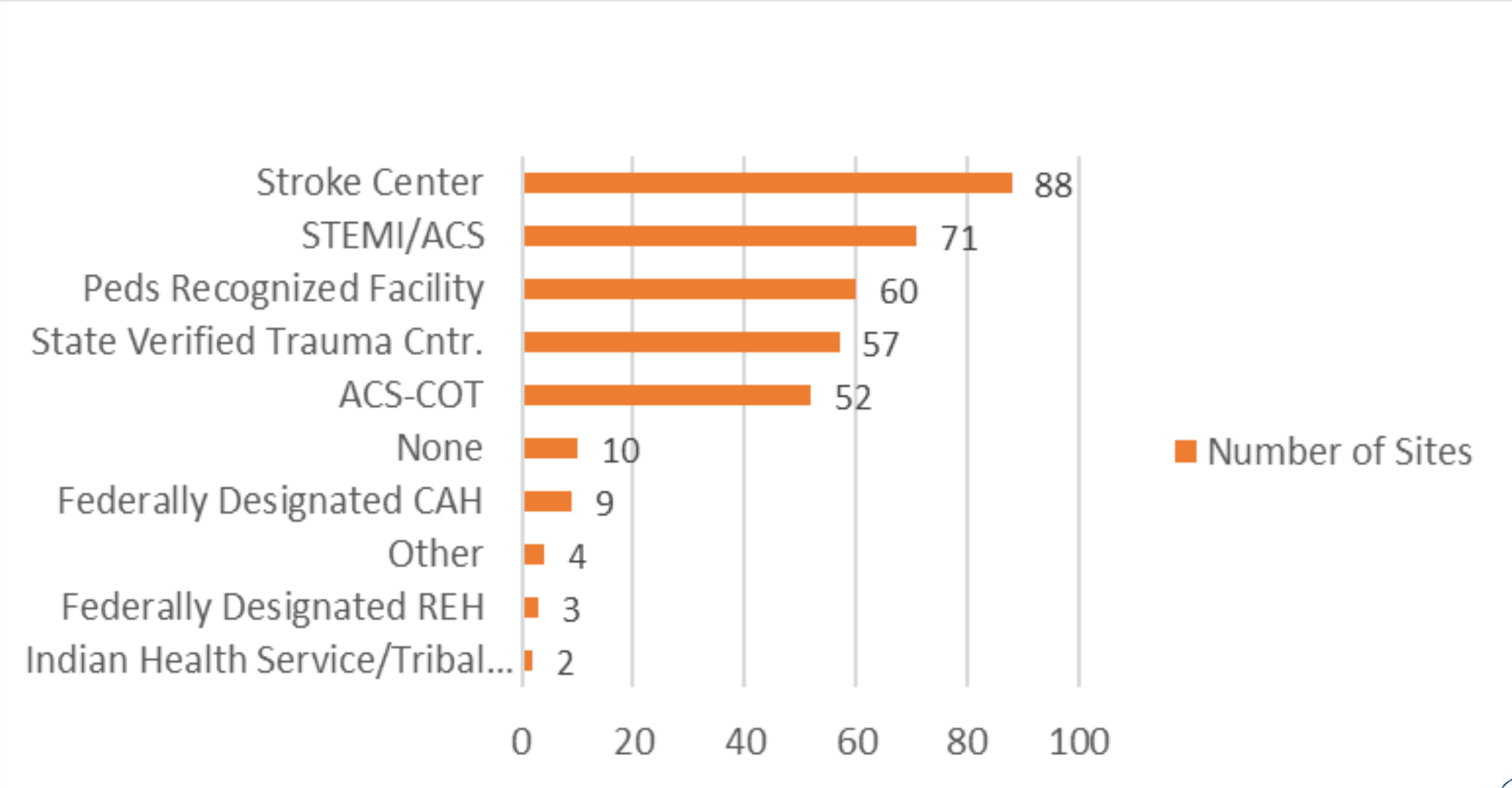
Memorial Hospital South Bend



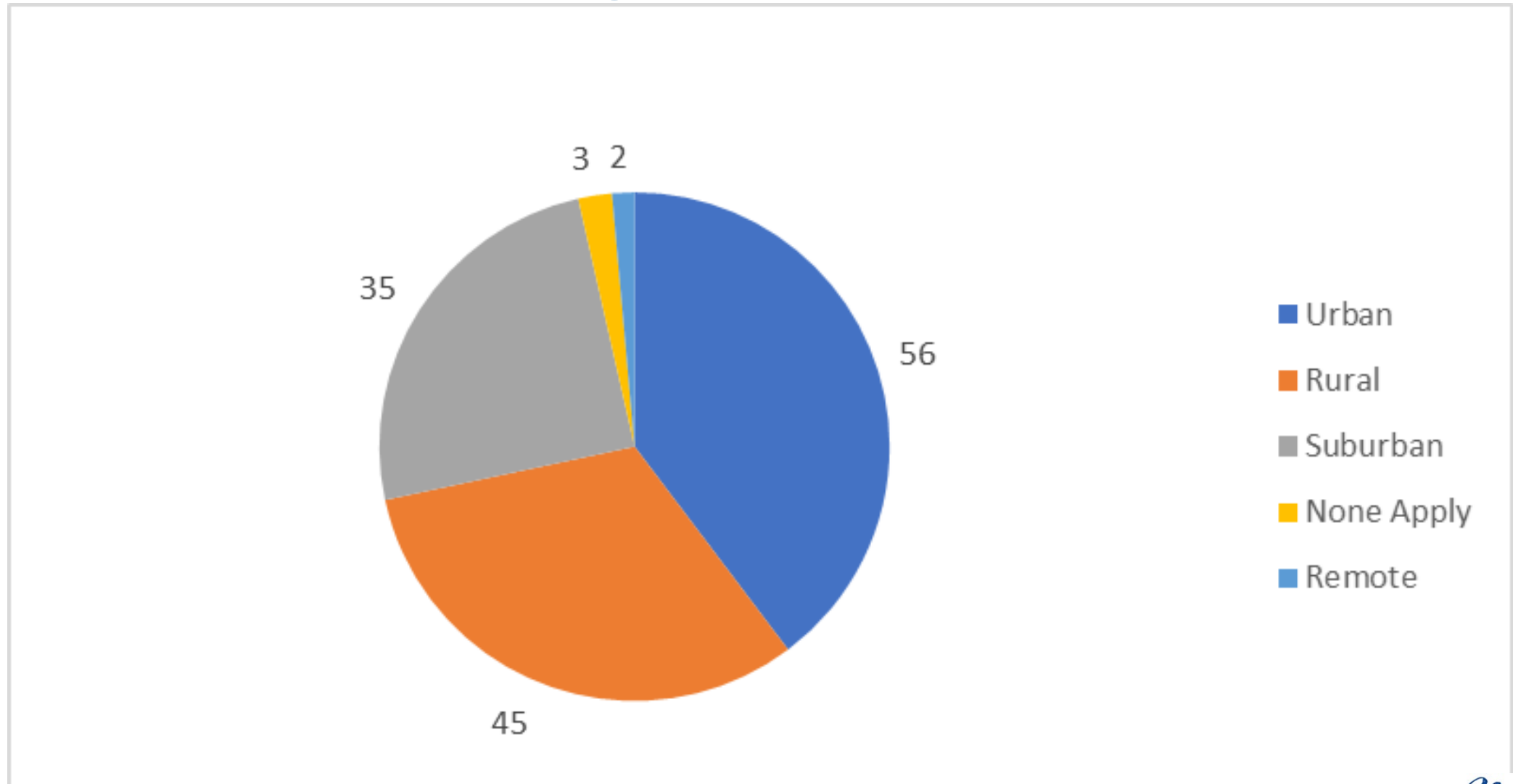
Data Portal Users



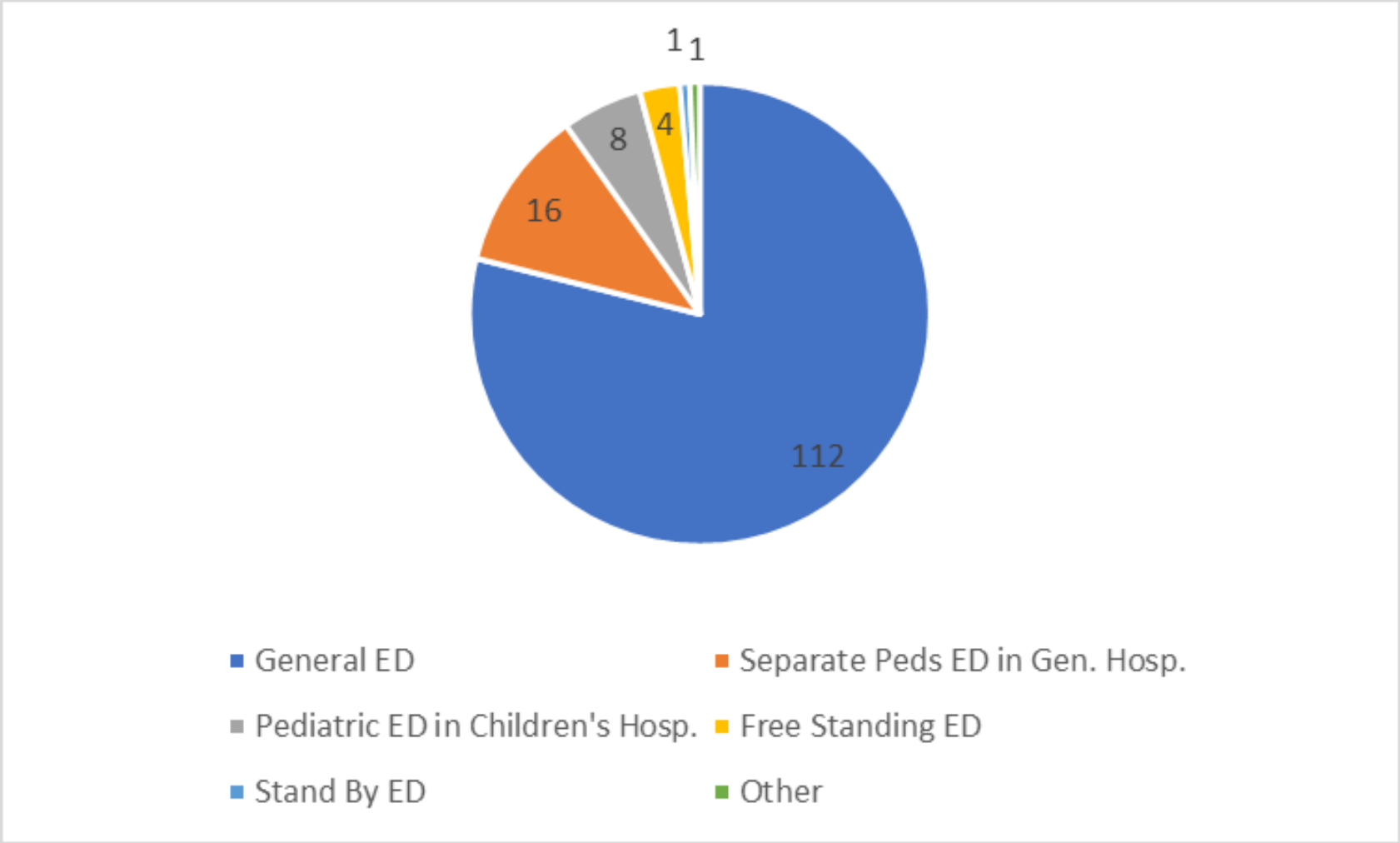
NPRQI Sites: Specialty Center Status



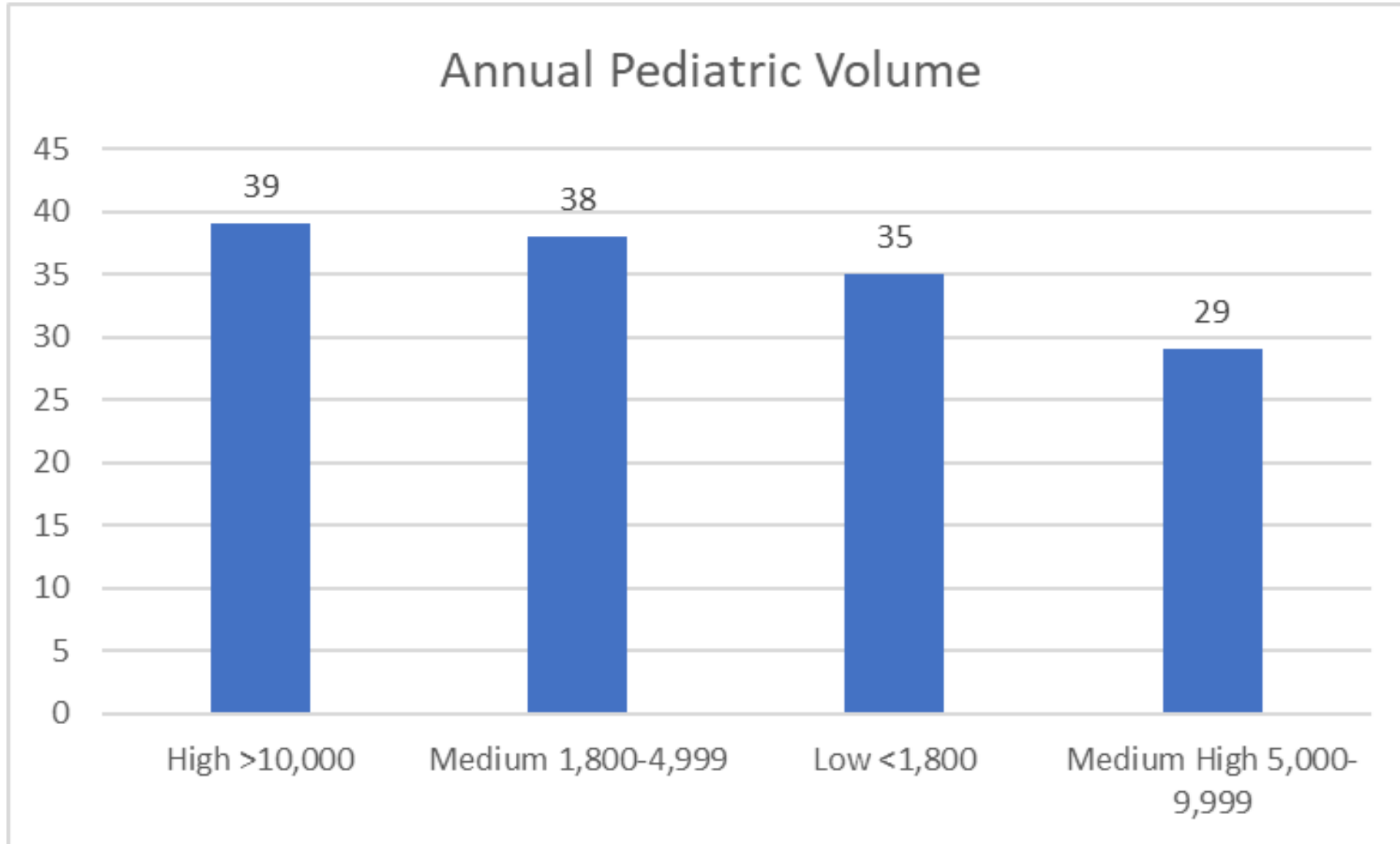
NPRQI Sites: Geographic Representation



NPRQI Sites: ED Configuration



NPRQI Sites: Annual Pediatric Volume



Integration of Quality Improvement into Your Local Pediatric Emergency Care Initiative



Level Setting

	Quality Improvement	Research/Clinical Evidence
Purpose	Assess and improve a process or system based on established standards	Test hypothesis, establish clinical practice standards when none are available/accepted
Starting Point	Current performance	Hypothesis
Benefits	Knowledge gained benefits current patients, process, and system	Knowledge obtained used for future practice
Risks	Very low risk to patients except confidentiality/privacy	Patients may be at risk of harm/adverse event
Data Collection	Uniform data collection, sequential tests	Systematic, randomized, blinded single test
End Point	Improvement in system or process	Establish evidence base
Analysis	Compare system or process to established standard, not generalizable	Statistically prove or disprove

The Pediatric Readiness Quality Collaborative

- Pediatric Champions, Subject Matter Experts, QI Experts combining their expertise and unique experiences
- Foundation of work based on evidence-based practices
 - Areas of Focus: Patient Safety | Assessment/Re-Assessment | Pain Management | Suicide
- Networking and educational opportunity
- Offers plethora of resources and a robust data platform



PRQC's Data Platform

Measure ▪ Reflect ▪ Improve Pediatric Care

Evaluates care along the ED encounter

- Assessment
- Diagnostics
- Interventions
- Disposition

Reflect

- Performance over time
- Comparison/Benchmark against peers
- Stratify data based on key patient demographics (age, triage level, gender, race, payor source)

Pediatric-Specific Quality Measures

- Patient Assessment/Re-Assessment
- Patient Safety
- Pain Management
- Suicide

Facilitates **improvements** in care

- Real-time feedback on group performance (transparency)
- Shortens time from measurement to ability to act upon data



Explore Strategies

- Convening Your Team of Stakeholders
- Understanding Your ED's Structure
- Creating a QI Plan
- Implementing a QI Plan



Convene Your Team



Composition

- Key stakeholders impacted by the PRQC improvement efforts or engaged in care of pediatric patients

Expertise

- Experience in QI/patient safety (A+), knowledgeable about ED/hospital workflows, early adopters

Orientation Session

- Overview of PRQC
- Outline resources available and commitment of ED/hospital leadership
- Seek feedback on enablers/barriers to pediatric readiness in your ED
- Decide level of involvement and time commitment (listservs, PRQC invites, access to data platform, internal meetings)

Evaluate the Inner-Workings of Your ED



Select your intervention bundle

- Known deficiencies
- Quick-win / proof of concept for ED

Complete PRQC environmental scan

- Structure of the ED and care team
- Policies/procedures
- Resources
- Technologies

Assess baseline performance using data platform

Create Your QI Plan

Elements of The Plan

Three Questions – Four Steps!



Elements of QI Plan

Content will be vetted by your improvement team and appropriate leadership

- Aim Statements
- Proposed Interventions/Change Strategies
- Key Measure(s)
- Timeline
- Anticipated Barriers with Solutions (if applicable)

Three Little Questions, Four Simple Steps

- What are we trying to accomplish?
- What change can we make that will result in an improvement?
- How will we know that change is an improvement?



Question 1: What Are We Trying to Accomplish?

Action Items:

- Look at the gaps/deficits from the environmental scan
- Look at the performance during the baseline period

What Are We Trying to Accomplish?

SET an AIM for the IMPROVEMENT EFFORT!

S – Specific (clearly stated)

M – Measurable (quantifiable numeric goals)

A - Actionable/Attainable (within the control/influence of your team)

R - Relevant (aligned with the hospital/network's priorities)

T – Time bound (specifies a time frame)

Format of Aim Statement

By doing an intervention on the system, we will change some part/all of the system, which will result in these outcomes (i.e., metrics), by time-period/date.



Within three months of implementing an abnormal vital signs alert in our EMR, the time from vital sign documentation to first intervention will decrease by 10 minutes.

Step 2: Which intervention should we select?



- Intervention that addresses a known deficiency
 - PRQC offers categories: Policies/Procedures, EMR Optimization, Education, Knowledge-Reinforcement, Patient-Centered Strategies
- Quick-win that serves as proof of concept for ED
- Create a process map/workflow and seek team's feedback

Process Map / Workflow Example

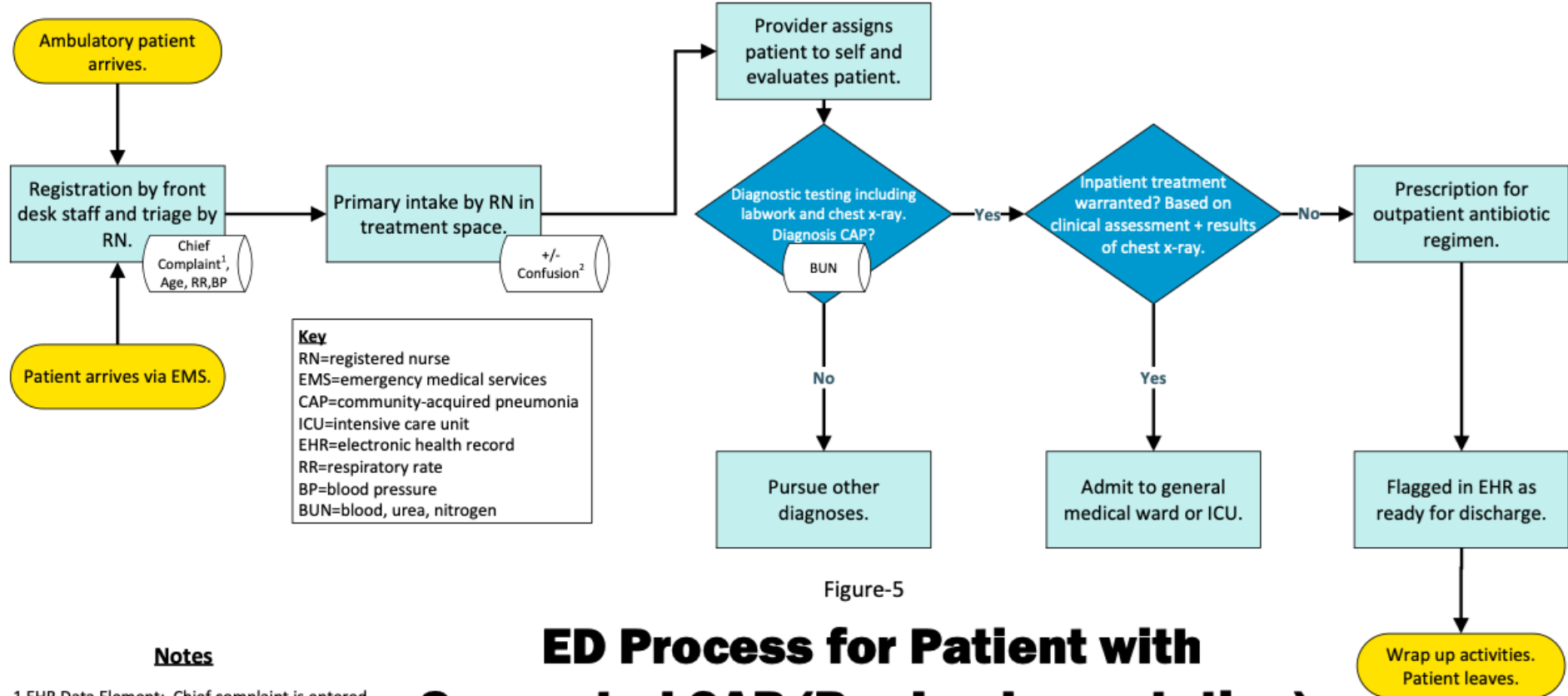


Figure-5

ED Process for Patient with Suspected CAP (Pre-Implementation) with Data Elements

Notes

1 EHR Data Element: Chief complaint is entered either as free text (unstructured) or selected from a drop down list (structured).
 2 EHR Data Element: Confusion may be selected (structured data) by intake nurse in disability or fall risk sections, unclear how often this is actually done.



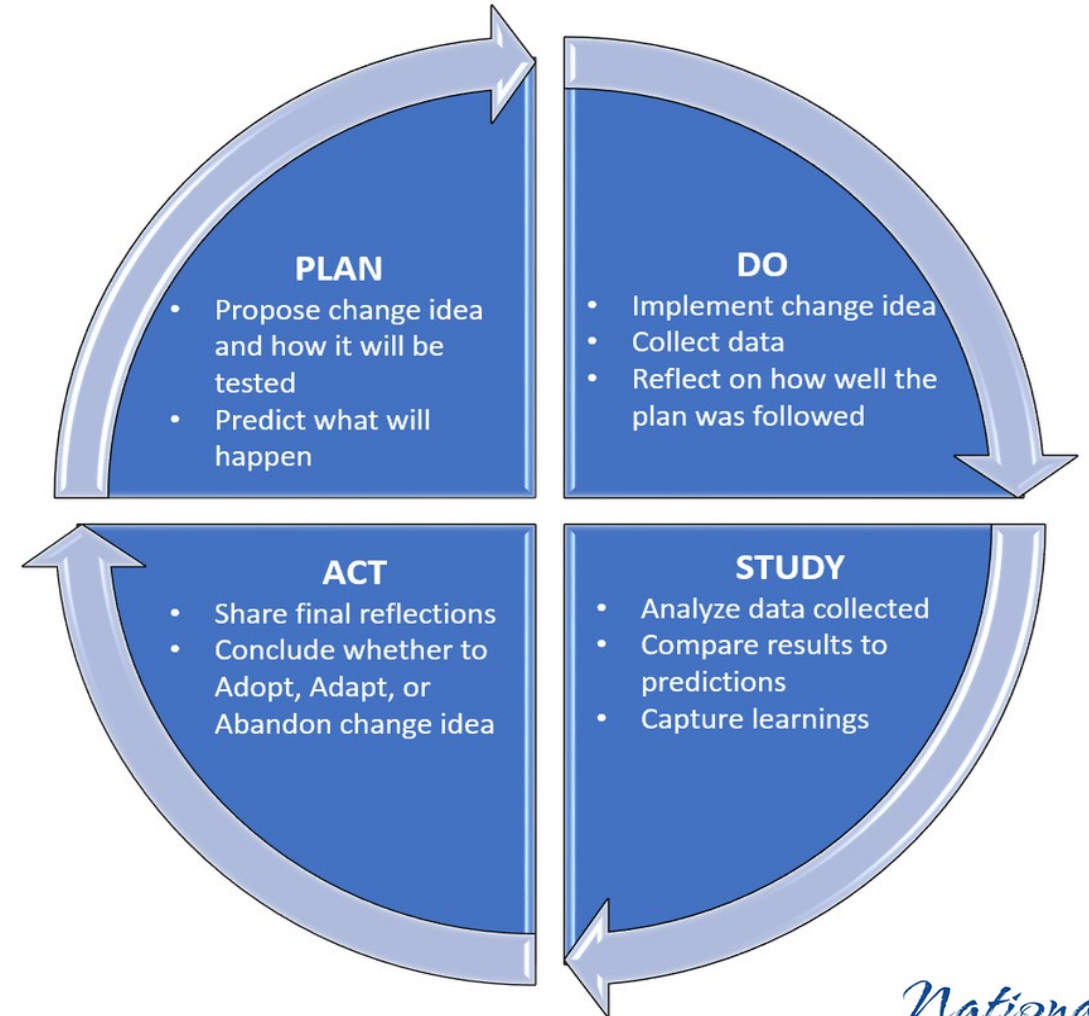
Question 3: How will we know that change is an improvement?



Upcoming Workshop:
Data Interpretation with Dr. Sanjia Desai

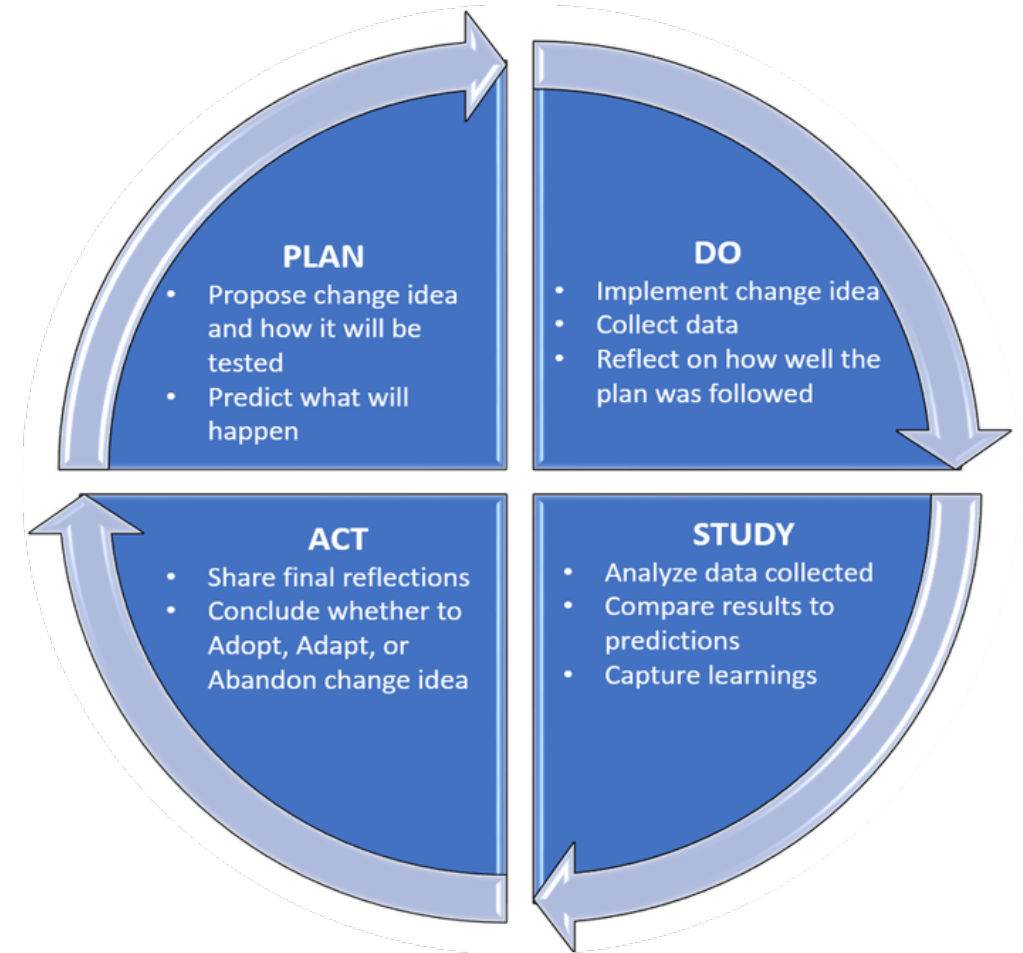
Step 2: “Do” Phase

- Based on PRQC’s timetable
 - Begin September 2023
- Length of time to implement interventions varies by site
- Learning sessions to support efforts
- Sharing best practices across participating sites



Step 3: “Study” Phase

- Full use of PRQC’s data platform
 - Patient Safety Bundle
 - (1) measure
 - Assessment/Re-assessment
 - (4) measures
 - Pain Management
 - (1) measure
 - Suicide
 - (4) measures



Performance Report from 2021 Q4 to 2023 Q4 for All Patients (Core Measures)

Measures with fewer than 10 records will not be displayed

*Cohort performance represents the average of site performances for sites within the same patient volume category (displayed with minimum of 5 sites)

**National performance represents the average of site performances across all participating sites (displayed with a minimum of 5 sites)

[Back to Landing](#)

Last Dataset Refresh:
4/25/2023 3:54:52 PM
Last Patient Included:
12/1/2023

Patient Volume
Medium: 1,800 - 4,999 pediatric pa.

Bundle	# of Sites	# of Records	Quality Measure	Your Performance	National Performance **	Cohort Performance *	
ASSESSMENT	1	28,310	% of pediatric patients with weight documented in kilograms only	22.1 %	22.2 %	22.2 %	
			% of pediatric patients with pain assessed	78.5 %	77.0 %	77.0 %	
			Median ED length of stay	163.0 minutes	163.0 minutes	163.0 minutes	
ABNORMAL VITAL SIGNS	1	17,670	% of high acuity pediatric patients with vital signs re-assessed	82.8 %	84.5 %	84.5 %	
			Median time from triage to first intervention	10.0 minutes	10.0 minutes	10.0 minutes	
TRANSFER OF PATIENTS	1	7,980	% of transferred pediatric patients who met site-specific transfer criteria	100.0 %	100.0 %	100.0 %	
			Median time from triage to transport	253.5 minutes	253.5 minutes	253.5 minutes	
			% of transferred pediatric patients who were discharged from the receiving ED	9.5 %	9.5 %	9.5 %	

Patient Demographics

- Age Category: (All)
- Triage Level: (All)
- Ethnicity: (All)
- Race: (All)
- Gender: (All)
- Payor Source: (All)

Please return to the Landing Page and select different filters

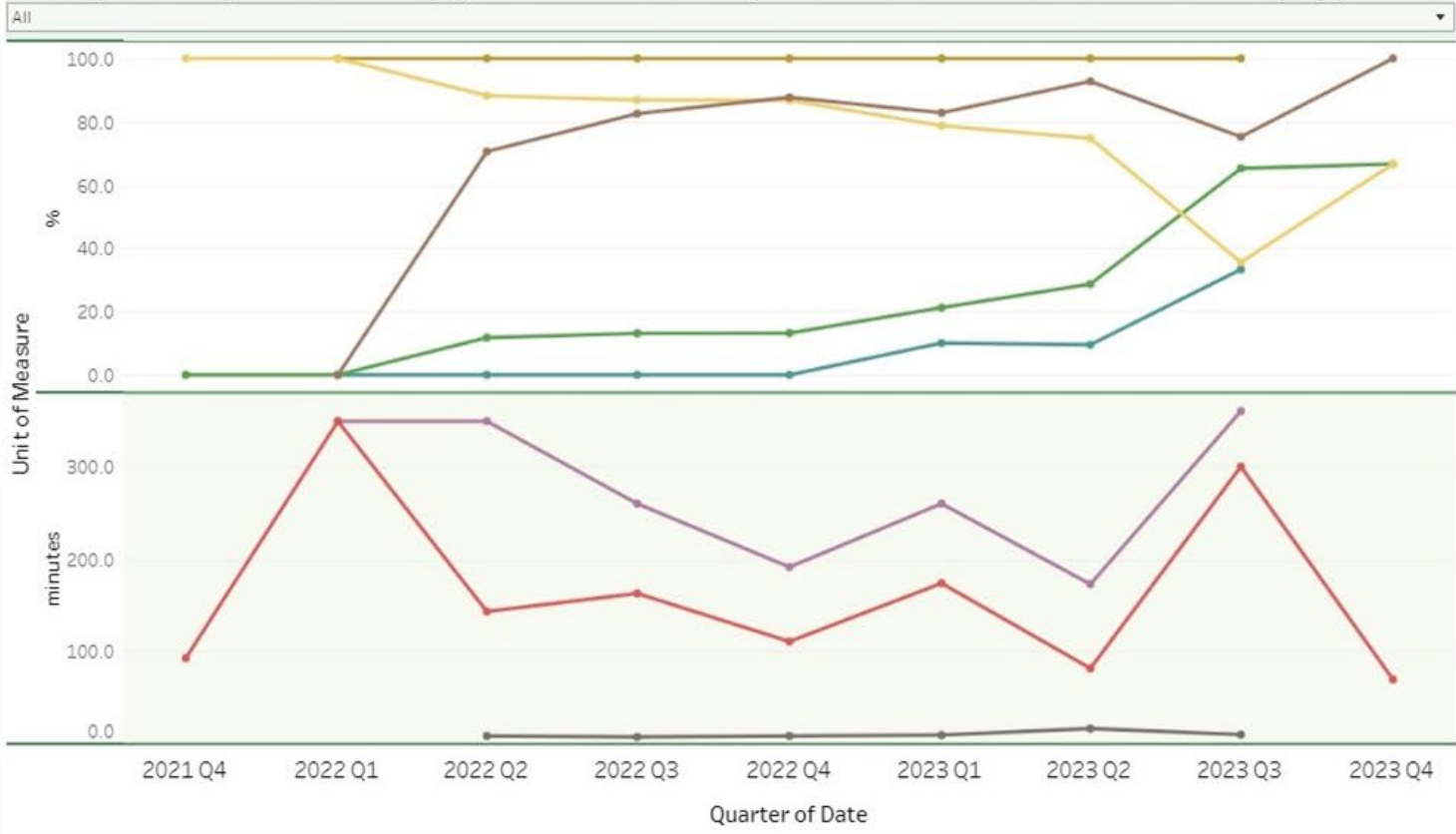
Performance Report from 2021 Q4 to 2023 Q4 for All Patients (Core Measures)

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[Back to Landing](#)

Last Dataset Refresh:
4/25/2023 3:54:52 PM
Last Patient Included:
12/1/2023

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



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: General ED (pediatric and adult patients seen in the same area) | Specialty Center Status: All
 Age Category: All | Triage Level: All | Ethnicity: All | Race: All | Gender: All | Payor Source: All

CLARIO.

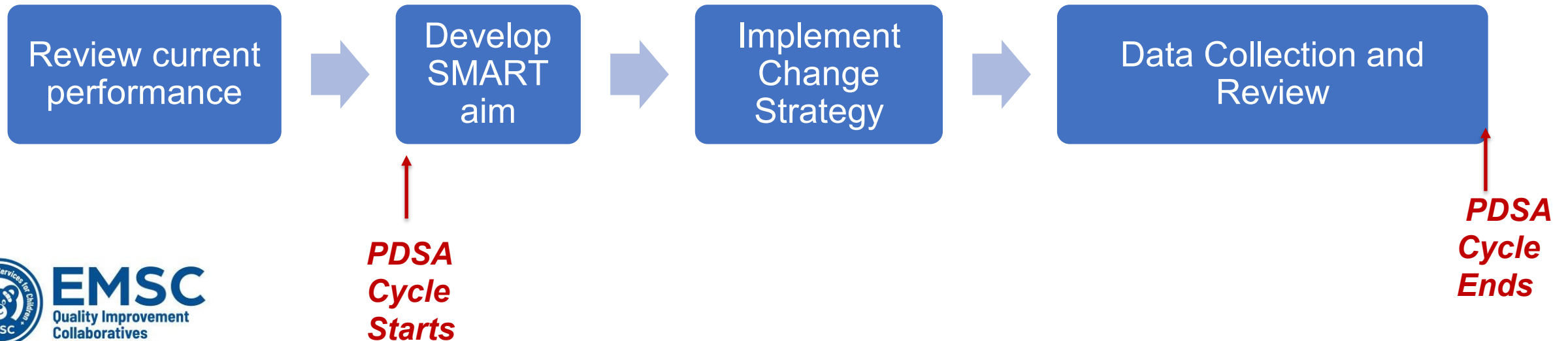
The NPRQI is supported by the Health Resources and Services Administration (HRSA) of the U.S. Department of Health and Human Services (HHS) as part of an award totaling \$1.2M with 0% percentage financed with nongovernmental sources. The contents are those of the author(s) and do not necessarily represent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



Data Sampling and Planning 1st PDSA Cycle

Data Collection and the PDSA Cycle

- Most PDSA cycles will take 1 month or more
- Depends on volume of patients seen* and local buy-in
- Aim for 30 charts/cycle minimum to assess for trends
- Gather baseline data **before** beginning PDSA cycle



SELECTING INTERVENTION BUNDLES

Step 1

- Review Pediatric Readiness Assessment score and gap report

Step 2

- Complete environmental scan to better understand specific gaps and potential drivers

Step 3

- Convene group of local stakeholders to evaluate care team's perspective and ensure buy-in
- Collect baseline data to evaluate current/prior performance

Baseline Data Collection

- **Importance:**
 - Assess current performance prior to implementing change strategies
 - Measure impact of change strategies/efforts
 - Complete prior to obtaining buy-in or educating staff on project to avoid Hawthorne effect

Your success depends, in part, on your ability to tell a story.

Baseline data is the basis for any demonstration of impact.



Preparation for Baseline Data: Defining Population of Interest

- **Select your intervention bundle(s)**
 - Local interest
 - Recent concerns/known performance gaps
 - New awareness or evidence
- **Intervention bundle population**
 - Start broad => focus on disparities after global performance improved

Intervention Bundle	Broad Focus (esp. for low-volume sites)	Narrow Focus (examples only)
Weight in Kg	All pediatric patients	Only high acuity patients
Pain Assessment	All pediatric patients	Only patient with long-bone fractures
Recognition of Abnormal Vitals	All pediatric Patients	Diagnosis specific (sepsis)
Suicide	All pediatric patients > 10 years	Only patients with "high" suicide risk

Preparation for Baseline

How many charts should I enter?

- Considerations:
 - Select at least 25-30 patient encounters that occurred between **1/1/2023** and present (up until first change strategy)
 - Encounters should reflect a period of status quo (i.e., no formal interventions introduced)
 - Monitor performance until additional entries result in minimal changes in overall measure performance
 - Actual number of charts entered may vary from site to site



Bundle Considerations

- The smaller the patient population of interest, the longer to assess performance
- **Lower volume sites** may experience slower PDSA cycles
 - However, interventions may be implemented more easily

Preparation for Baseline: Chart Selection and Identification

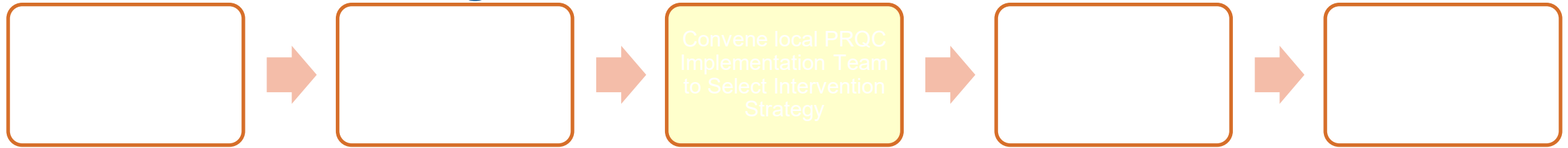
- Prospective log (maintain list of patients based on patient criteria)
- Retrospective search of EHR (by dates and patient criteria)
- IT support (automated pull by patient criteria)

Consider what age range your site uses to define "pediatric."

PREPARING FOR PDSA Cycle #1

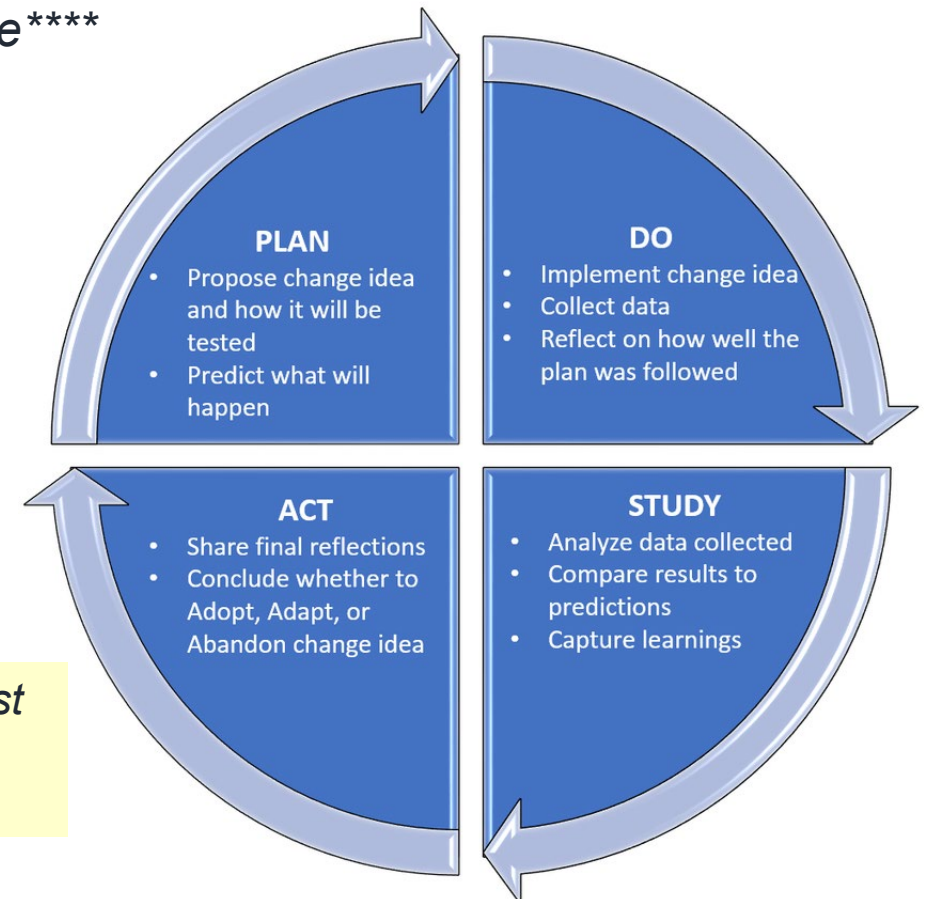
- Review your baseline performance on the dashboard => create your aim statements
- **Global aim** – what you strive to complete by the end of the collaborative
- Craft your “SMART” aim statement for the 1st PDSA cycle
 - Align with quality measures for intervention bundle
 - *SMART = Specific, Measurable, Achievable, Relevant, Time-bound*

1st PDSA Cycle



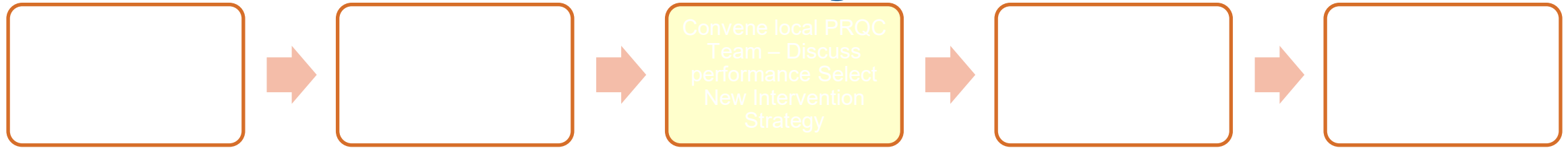
****Start date for 1st PDSA cycle****

- First patient encounter in PDSA cycle may occur on or after PDSA cycle start date.
- Any discussion of gaps/needs/change strategies may influence performance



Recommend starting with only 1 intervention bundle for first PDSA cycle. May choose to work on multiple intervention bundles once first cycle completed successfully.

Subsequent PDSA Cycles



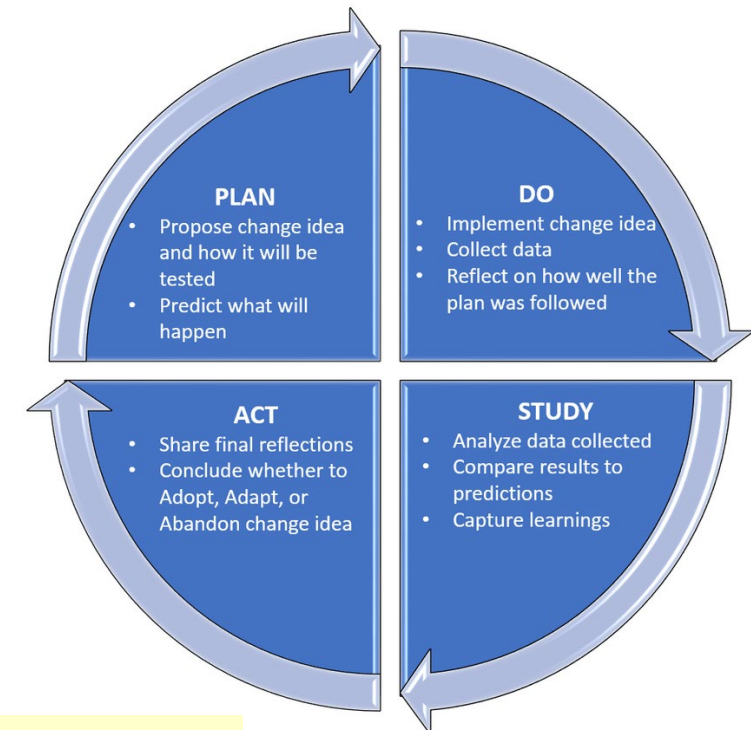
****Start date for next PDSA cycle****



Monitor performance and discuss with local team to decide when to close out cycle.

Decision Point: To the intervention result in improvement? (Keep, Adapt, Abandon)

- Work closely with local team, PRQC team to decide when to move to next PDSA cycle.
- PDSA cycles may occur rapidly (every month) or may take more time (every 3-4months)



Previous PDSA Cycle must be closed out before moving on to next. Will be asked whether or not SMART aim achieved for given cycle.



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www.dilbert.com scottadams@aol.com

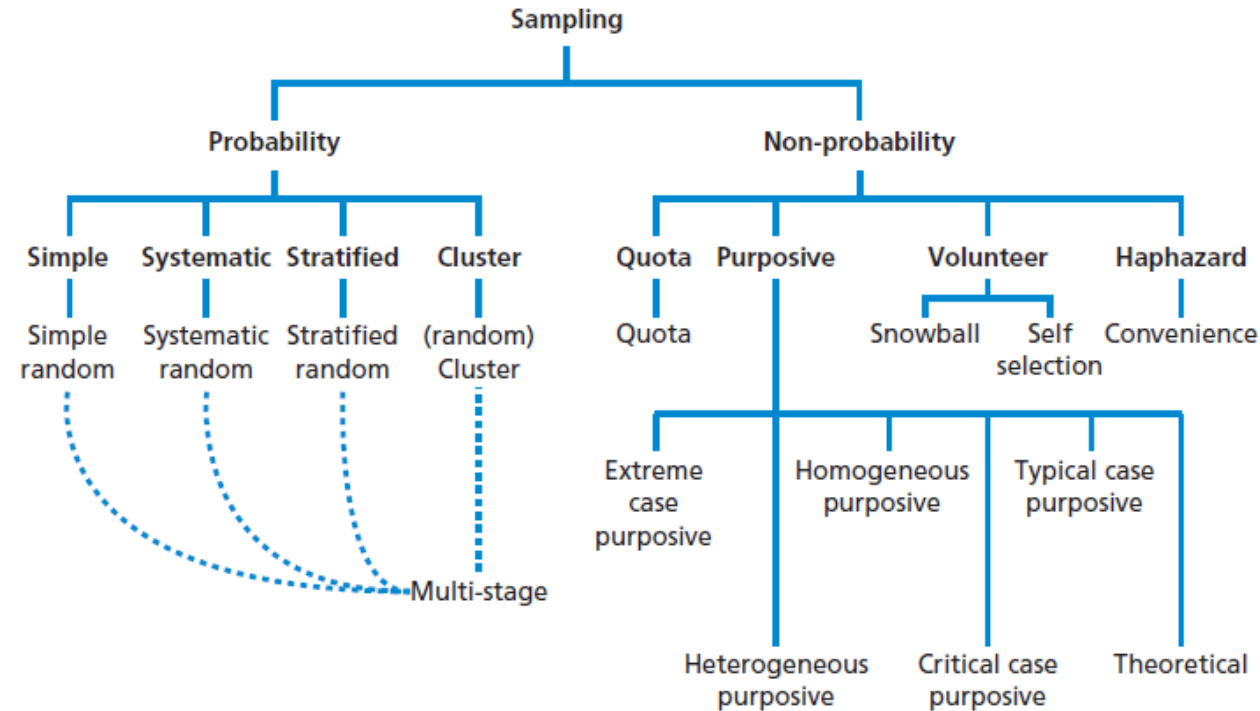


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Data Sampling: Scale and Scope

- Frequency of data collection (i.e. daily, weekly, etc.)
- Sampling strategy
 - May be bundle dependent
- Manual or automated sampling process
- Number of encounters anticipated
 - Estimate PDSA cycle length



Data Sampling

Technique	Definition	Advantages	Disadvantages
Random	Sample randomly selected	Likely to include are subgroups	Requires large sample size otherwise high likelihood of error
Stratified	Specific subgroup selected	Subgroups represented	Must know subgroups , can be complicated to apply
Systematic	Inclusion of every nth patient	Time efficient	Can cause bias if periodicity exists (e.g. every 7th day)
Judgement	Sampling done based on judgement of team lead	Time efficient	Personal bias, not representative
Quota	Sample selected based on numbers alone	Easy, reliable	Sampling error
Convenience	No requirements or stratification	Simple and easy	Selection bias and sampling error

Iterative Testing: Start Small, Grow Fast

- 1:1:1 Test
 - 1 provider : 1 patient : 1 encounter
 - May help to build confidence in change and garner support
 - Scale up with the “Five Times Rule”
 - May consider concurrent test cycles as you move forward

Data Collection: Who will be the data stewards?

- Obtain login information
- Pull and review charts based on data sampling strategy
- Understand data variables and how to locate them
- Work with pediatric champion to streamline processes for data collection
- Maintain patient log (link to MRN or DOB – not included in data collection)



“Do we really need to encrypt our data? Most of our communications are impossible to understand in the first place.”

Data Collection: Privacy and Patient Logs

- Patient Safety and Quality Improvement Act/Patient Safety Organization – Federal protections, HIPAA compliant
 - Limited PHI includes Date and Time of Arrival *only*
 - Participant Organization Agreement **required** prior to participation
- Patient Logs
 - Links Patient Medical Record to Data Entry System Identifier
 - Maintained by individual site/champion
 - Creates ease for data entry corrections/deletions

PDSA Cycle	Patient Visit Date	Patient Medical Record Number	Data Entry System Identifier
1	3/2/23	12345678	JKZ1234

Next Steps

Environmental Scan

- Survey to identify current gaps and clinical care processes existing in your ED
- Will help to identify which intervention bundle should be selected to focus QI efforts on



Environmental Scan

- REDCap Survey
- 4 sets of questions



Pain



Abnormal
Vital Signs



Weight in
Kilograms



Suicide



- Survey link will be sent to team leads Friday (8/18)
- Deadline for completion: September 1
- Please email collaboratives@emscimprovement.center with questions

Q&A Session



Please Complete Session Evaluation

Thank you!



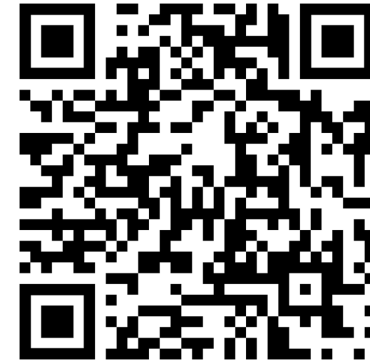
Complete Registration for the Data Platform

- *Share demographics*
- *Provide data platform users*
- *Include name, email, phone # of POA signatory*
- *Upload signed POA to data portal registration*



Register Your Sites Team

- *To receive calendar invites*
- *Newsletters and reminders*
- *Site specific messages*



Data Literacy in a QI Project



September 5, 2023

Engaging Leadership and Baseline Data Collection



September 19, 2023

Join us for Upcoming Sessions

Nursing - CE contact hours

Collaborative session #1 August 15, 2023

1. Enter your first and last name in the **chat** if you have not done so already
2. Scan the QR code/use link to access session evaluation
3. Submit completed evaluation by 1700 (Pacific) on **8/17/2023** to be eligible for CE hours



<https://bit.ly/PRQCCollaborative1>

If you have any questions, please contact Robin Goodman at
robin.goodmanrn@gmail.com



BRN CE Provider: Pediatric Liaison Nurses Los Angeles County.
Provider approved by the California Board of Registered Nursing,
Provider # 15456, for 1 Contact Hours



Social Work Professionals – CEU's Collaborative Session #1 August 15, 2023

1. Enter your first and last name in the **chat** if you have not done so already
2. Scan the QR code/use link to access session evaluation



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