



# Fireside Chat Patient Safety

February 6, 2024



# Acknowledgments

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Thank you for joining!



Session is being recorded and posted online along with slides



Utilize the Q&A feature to ask questions



Place your name in the chat for nursing and social work credit



Discussion will follow presentation

# Objectives

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

- Describe how these measures impact a sites pediatric readiness
- Be familiar with resources that are available to you as you embark on your QI journey
- Explain the importance of weighing and recording a pediatric patient's weight in kilograms

# Speakers

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Pediatric Nurse Coordinator

Henry Mayo Newhall Hospital



# Weighing Pediatric Patients; a Patient Safety Event

## Patient Safety Risks Unique to Children in the ED

- Weight-based rather than standardized dosing
  - Measurements in pounds requires calculation

A process to ensure pediatric weights are measured and recorded in kilograms





# Medication Errors: Little People, Big Problems

Children 3 times as likely to have medication errors in the ED

Types of medication errors specific to children:

1. Wrong weight – they grow!
2. Miscalculation – mg/kg; ml/kg; units/kg; mg/ml x ml/kg; etc...
3. Wrong units of measurement – Kilograms vs. Pounds

# Medication Errors: Little People, Big Problems

Estimates that 25% - 35% of medication errors come from mistaking pounds and kilograms (1kg = 2.2 pounds):

Pounds substituted for Kilograms

Really 22 kg but listed as 22 pounds give 0.4 x dose

Kilograms substituted for Pounds

Really 22 pounds but listed as 22 kg give 2.2 x dose



# Medication Errors: Little People, Big Problems

1kg = 2.2 pounds

30 kg = 66 pounds

If a patient is really is really 30 kg but is listed as 66 kg...

## Drugs with narrow TI

Levothyroxine  
Fosphenytoin  
Phenytoin  
Vancomycin  
Gentamycin  
Phenobarbital  
Amiodarone  
Carbamazepine  
Clonidine

## Opiates

Fentanyl  
Morphine

## Anxiolytics

Versed  
Diazepam  
Ativan

## Other

Heparin  
Insulin

# Review of Position Statement

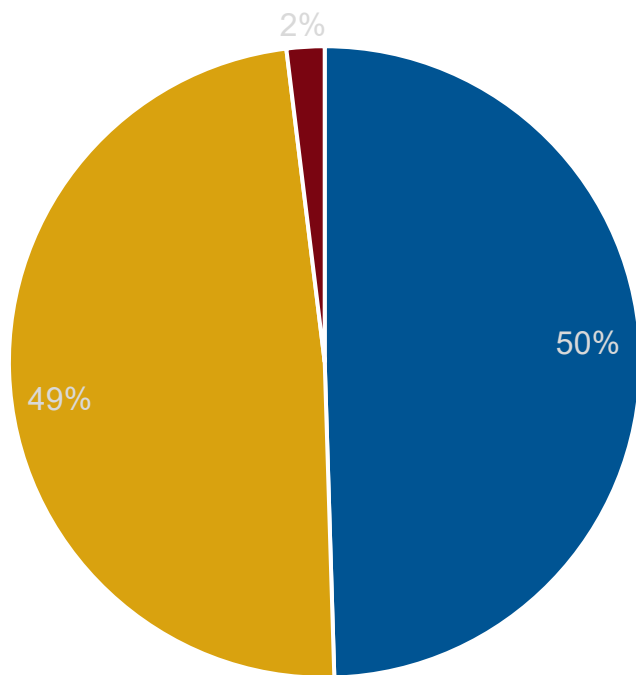
1. Patient weights are measured, recorded, and displayed in a prominent place on the medical record in kilograms only.
2. Multiple types of scales are available in the emergency setting, all configured to record weights in kilograms only (e.g., examples are stretchers with built-in scales, built-in floor scales, chair scales, and portable standing scales).
3. For patients under 18 years of age, clinical decision support (CDS) functions are used to compare entered weight with expected weight (e.g., based on growth charts) and provide real-time alerts whenever under-dose or overdose is suspected.
4. Electronic medical records (EMRs) only allow for weight entries in kilograms.
5. Institutions consider integrating digital scales with the EMR to eliminate or reduce the need for data entry.
6. The patient's actual weight is considered part of the mandatory nursing assessment, is taken at each visit, and is repeated as warranted in response to changes in the patient's condition unless life-threatening circumstances do not allow it.
7. The patient's weight in kilograms is included in all inter- and intra-disciplinary patient hand-offs.

The patient's weight in kilograms is included on any prescription issued for a patient



# Environmental Scan Results

How does your EHR record patient weights?



■ Kilograms Only ■ Kilograms and Pounds ■ Pounds Only

```

11/02/23 1616 *HEIGHT / WEIGHT Peds
Weight (Kilograms) 10.30 (Kilograms)
  * 22 (lbs)
  * 11.3 (oz)
Weight Measurement Method Bed Scale
Broselow Color Purple (10-11 Kg)
Height (Feet) 2 (feet)
Height (Inches) 7.00 (inches)
  * 78.74 (cm)
    
```

BP	Temp	Pulse
<b>135/68 !</b>	98.6 °F (37 °C)	107
Resp	SpO2	Wt
22	99%	42.2 kg (93 lb)

Peds-storyboard and Provider workup section

CHIEF COMPLAINT  
No chief complaint on file

BP	Temp	Pulse	Resp
—	—	—	—

SpO2	Wt
—	68 kg

### RN Documentation

0842 Vital Signs  
Ht/Wt  
Height: 121.9 cm (4') Weight: 68 kg BSA (Calculated): 1.52 BMI (Calculated): 45.79

▼ Displaying data from 0125 to 0925

Adult version

Resp	SpO2	Weight
11	98%	76.7 kg (169 lb)

### RN Documentation

0933 Vital Signs  
Ht/Wt  
Weight: **146.1 kg (322 lb) (!)**

▼ Displaying data from 0134 to 0934

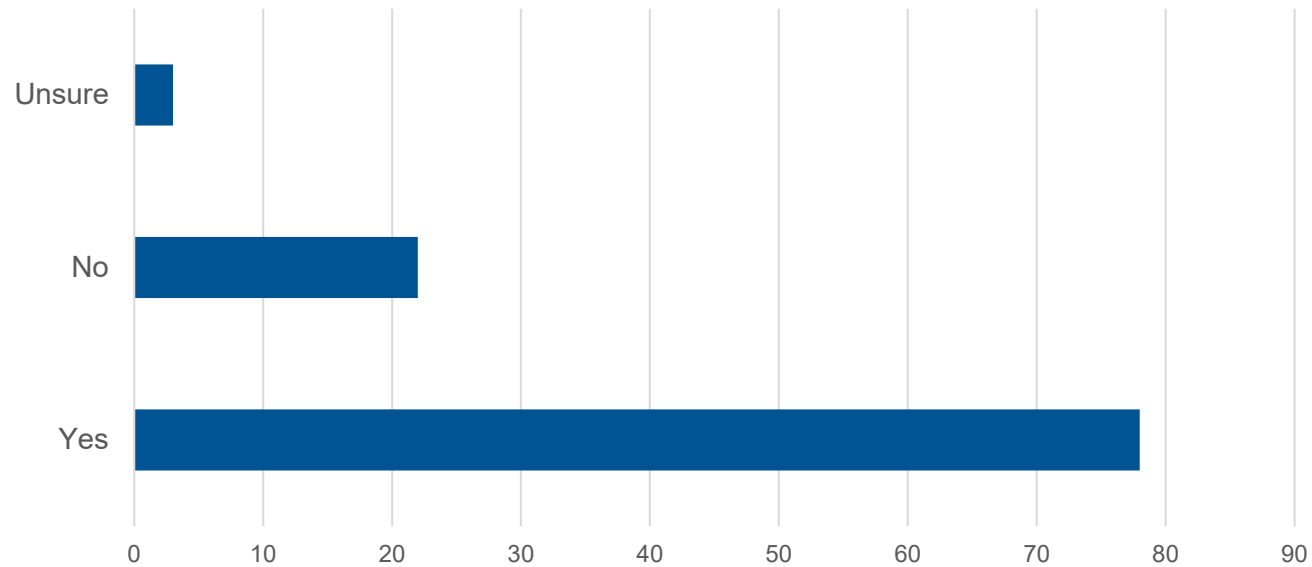


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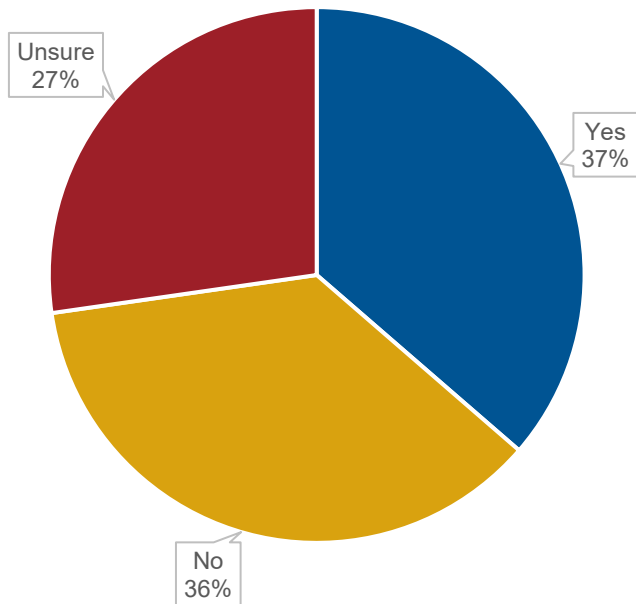
# Environmental Scan Results

Does your ED use a scale that measures children in kilograms only?

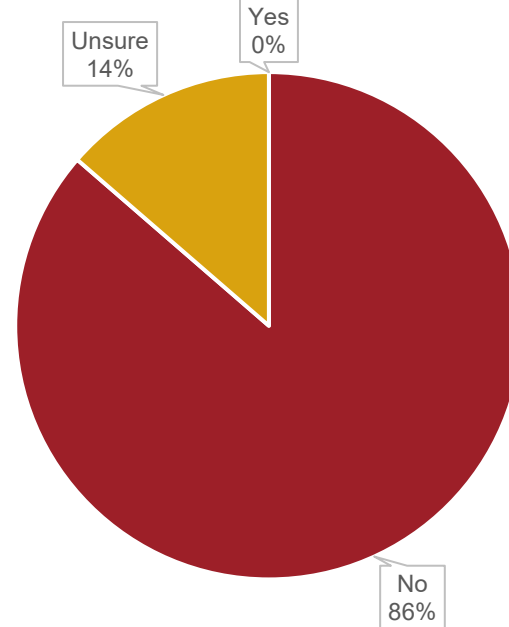


# 21% of respondents indicated that their sites scales didn't measure only in kilos

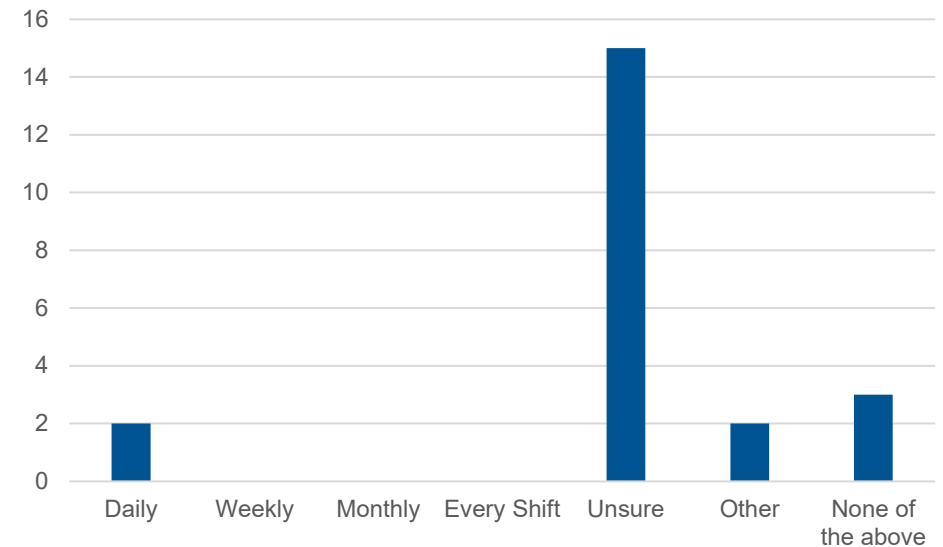
Can the scale be locked to kilograms only?



Is there a policy regarding the frequency of checking to ensure the scale is in kilograms?



How often are the scales checked?



# Patient Safety Initiative

Phase of Care	Quality of Measure
Assessment	Percentage of pediatric Patients with their weight documented only in kilograms.

- Why is accurate weight in KG so Important:
  - Medication errors
  - Treatment Issues



# All Patients (Core Measures) 2/1/24

Low: <1,800 Pediatric Patients

# of Sites	# of Records	Quality Measure	National Performance **	Cohort Performance *
16	868	% of pediatric patients with weight documented in kilograms only	60.1 %	43.4 %
		% of pediatric patients with pain assessed	77.6 %	76.2 %
		Median ED length of stay	193.8 minutes	107.5 minutes

Medium: 1,800-4,999 Pediatric Patients

19	1,023	% of pediatric patients with weight documented in kilograms only	60.1 %	61.2 %
		% of pediatric patients with pain assessed	77.6 %	80.3 %
		Median ED length of stay	193.8 minutes	153.6 minutes

Medium to High: 5,000- 9,999 Pediatric Patients

18	734	% of pediatric patients with weight documented in kilograms only	60.1 %	71.6 %
		% of pediatric patients with pain assessed	77.6 %	69.6 %
		Median ED length of stay	193.8 minutes	241.3 minutes

High: >10,000

25	1,521	% of pediatric patients with weight documented in kilograms only	60.1 %	61.6 %
		% of pediatric patients with pain assessed	77.6 %	82.1 %
		Median ED length of stay	193.8 minutes	245.4 minutes



# Question from Participating Facility:

- Policy is entering weights are in KG only but our EMR program **(systemwide is set up to show KG and lbs)**. On the dashboard it looks like we have zero weights in KG only. **Is there a way to display-% of pediatric patients with weight documented in kg and lbs to show we are compliant with documenting weight at triage?** Otherwise this dashboard does not reflect our performance and is not meaningful to our site.

# Question from Participating Facility:

- Our policy is reflective of EDAP Standard to lock scales in kg only, document in kg (which we do but system also displays lbs simultaneously) and use kg only for patient weight based dosing. The database patient form has an options for: weight documented in kg only, **kg and lbs**, no weight documented. We have been selecting **kg and lbs**, should I instead select KG only? If so I will have to go back and manual change all charts so our baseline is visible on dashboard?

# Boots on the Ground-Challenges

- Challenges
  - EMR in kg and lbs
  - “Stated Weights”
  - Transcription errors
  - Scales not locked in KG only
  - Human Error
  - Device Error
  - Staff Fatigue
  - Increased patient volumes
  - Inexperienced staff

**All of this can lead to increase in morbidity and mortality in our pediatric population that is preventable!**

# Boots on the Ground- Change Strategy Ideas

- Pediatric Specific Policies and Procedures
- Report errors to your Internal Incident Report System
- Share Medication Errors/Near Misses with staff
  - Daily Huddle
  - Staff Meetings
  - Safety Newsletter

# Boots on the Ground- Change Strategy Ideas-Stakeholders

- Administration
- ED Management
- Pediatric Champions RN & MD
- Frontline ED Staff
  - Observe staff in triage
  - Educate Staff
  - 1:1 Education with staff
  - Hands on simulations





# Boots on the Ground- Change Strategy Ideas

- Pharmacy
  - Medication Safety Coordinator
  - Medication Verification Program
  - Pre create medication resources and ensure they are available to front line staff
  - Standardized concentrations (when possible)

# Boots on the Ground- Change Strategy Ideas

- Information Technology
  - Can your EMR display weight in kg only
  - Create a pop-up warning in real time
  - Scales locked in kg
  - Is there a scale that integrates with your EMR

# System Changes

- National Organizations like ours are working on this issue
- Collectively work with EMR companies
- Create and adopt industry standard

## Remember

- When the stress is high...
  - Increased incidence of medication errors
  - Can lead to increased morbidity and mortality

# Patient Safety

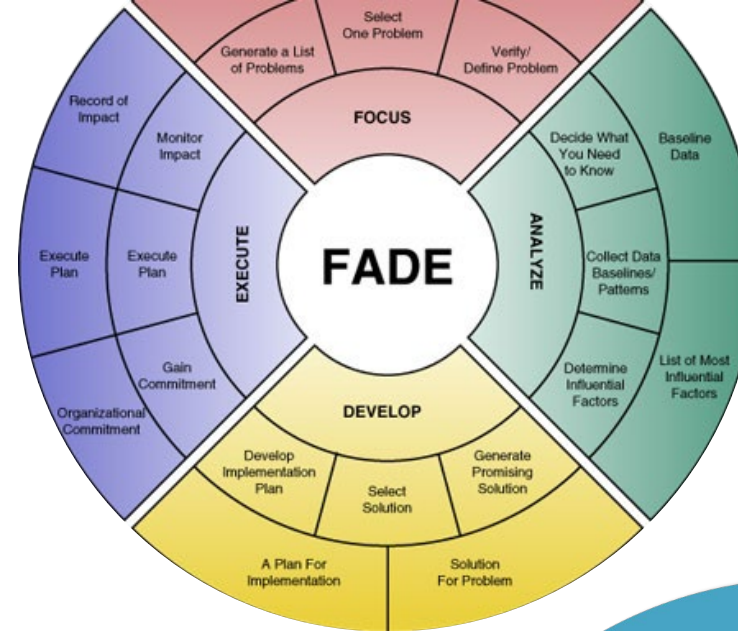


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# Plan

- How do you and your team plan to affect change on pediatric weight in kilograms at your facility?
  - Education
  - Checks and balances
  - Pediatric specific protocols



# Weight Kg Process Map

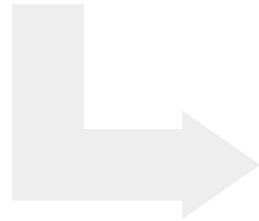
Measure

- Where does this occur?
- Are these scales locked in kilograms?
- Length-based measurement charts



Record

- EMR controls in place?
- Strategies for combating alarm fatigue



Interpret

- Conversion charts for staff/parents
- Does this number make sense:

MGH Method:		
Year	Weight (kg)	ETT
1	10	4.0
5	20	5.0
10	30	6.0





# Data Distribution

- Start with your core team
  - PECC RN and MD
  - ED Manager
  - ED Director
  - ED Charge Nurse
  - Pharmacy



# Data Distribution



- Branch out to other pertinent stakeholders
  - Emergency Services Committee
  - Emergency Department Staff Meeting
  - Pharmacy Staff Meeting
  - Pediatric Committee Meeting

# Q&A Session





# Collaborative Session #7: Sharing your QI Work



February 20, 2024

# Fireside Chat: A Closer Look at Suicide



March 5, 2024

# Collaborative Session #8: Addressing Barriers



March 19, 2024

# Join Us for Upcoming Sessions



# PRQC Data Entry Office Hours

February 14<sup>th</sup>

1:00 p.m. – 3:00 p.m.

**Central Time**

Sign up for 20-minute  
appointment

1:1 technical assistance with  
NPRQI Data Team





# *Thank you!*



# Nursing - CE contact hours

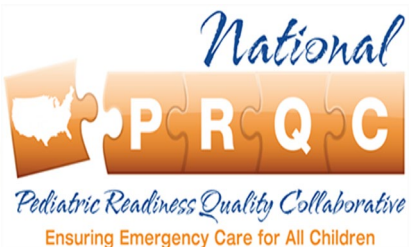
## Fireside Chat #8 February 6, 2024

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 **2/8/2024** to be eligible for CE hours



<https://bit.ly/PRQCFireside8>

If you have any questions, please contact Robin Goodman at  
[robin.goodmann@gmail.com](mailto:robin.goodmann@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