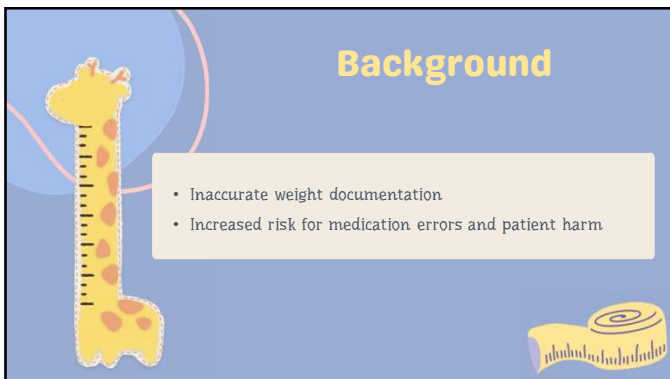




1



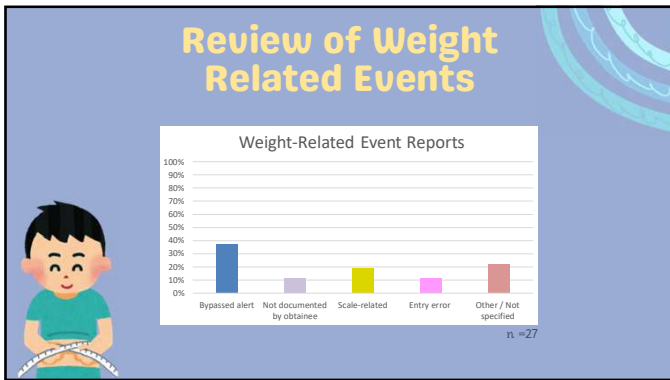
2



3



4



5

Time for some quality improvement!

Purpose Statement

To reduce the occurrence of weight-related medication safety events in the emergency department by at least 50% within a 6-month period.

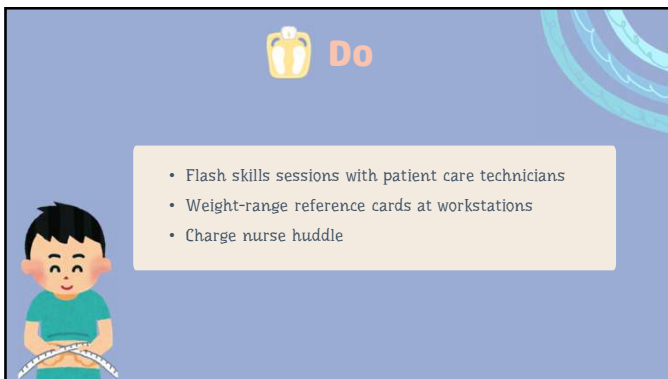
6



7



8



9

Do

Don't Forget To Double Check Your Weights!

Age	Average Weight by Age
Newborn	~7.5kg
1 year	~10kg
2 years	~12kg
3 years	~14kg
4 years	~16kg
5 years	~18kg
6 years	~20kg
7 years	~22kg
8 years	~24kg
9 years	~26kg
10 years	~28kg
11 years	~30kg
12 years	~32kg

Obtaining Accurate Weights in the ED

Why?

- Inaccurate weight measurements can lead to medication errors.
- Accurate weights are essential for safe medication administration.

How?

- Use a calibrated scale.
- Double-check the weight.
- Document the weight accurately.
- Report any discrepancies.

Since work began on this quality improvement project, there have been **ZERO** weight-related event reports!

10

Study

Weight-Related Medication Safety Events

Phase	Percentage of Events
Pre	~65%
Mid	~5%
Post	~5%

11

Act

- Continued monitoring of weight-related medication safety events
- Anticipated rollout of scale integration with the electronic health record
- Encourage real-time documentation with mobile devices

12

Barriers	Lessons Learned
<ul style="list-style-type: none"> • Resistance to change • Technical challenges • Logistics 	<ul style="list-style-type: none"> • Staff preferences • Have a back-up plan • Small doses, big impact

13

Conclusion

An incorrect weight means an incorrect dose – and if not caught, this can cause preventable harm.

Simple changes combined with education and information sharing has the power to improve patient safety!

14

References

Berg, B., Arnone, C., Cannon-Davis, J., & Foley, A. (2013). Pediatric emergencies: preparing at triage using height and weight. *Journal of Emergency Nursing*, 39(4), 409-411. <https://doi.org/10.1016/j.jen.2013.03.017>

Geocault, M., Giffes, D., & Wilkerson, J. (2017). Elimination of emergency department medication errors due to estimated weights. *BMJ Quality Improvement Reports*, 6(1). <https://doi.org/10.1136/bmjquality.2014016.w5476>

Horta, K. M., Kang, A. H., Ramirez, G. V., Kinosh, C., & Yamamoto, I. G. (2019). Pediatric weight errors and resultant medication dosing errors in the emergency department. *Pediatric Emergency Care*, 35(9), 637-642. <https://doi.org/10.1097/PEC.0000000000000122>

Institute for Safe Medication Practices Canada. (2016, December 7). *Right-sized medication dose errors* (Safety Bulletin, Vol. 16, Issue 9). ISMP Canada. <https://ismpcanada.ca/wp-content/uploads/ISMPCSB2016-09-WeightBasedDoseErrors.pdf>

Pennsylvania Patient Safety Authority. (2009, March). *Medication errors: significance of accurate patient weights*. PA Patient Safety Authority. https://patientsafety.pa.gov/ADVISORIES/Pages/200903_16.aspx

Pennsylvania Patient Safety Authority. (2016, June). *Update on medication errors associated with incorrect patient weights*. PA Patient Safety Authority. https://patientsafety.pa.gov/ADVISORIES/Pages/201606_50.aspx

Stone, E. (2016). *Righting all patients in kilograms: EMTA position statement*. Emergency Nurses Association. https://media.emsreimbursement.com/documents/Weighting_All_Patients_in_Kilograms_ENA_Position_Statement_Pa/Pa%201601.pdf

Thomas, D. O. (2005). Lessons learned: Best evidence-based advice for preventing medication errors in children. *Journal of Emergency Nursing*, 31(5), 499-505. <https://doi.org/10.1016/j.jen.2005.08.007>

Ward, C. E., Taylor, M., Krosney, C., Derosa, E., Wright-Johnson, C., Anders, J., & Brown, K. (2023). The effect of documenting patient weight in kilograms on pediatric medication dosing errors in emergency medical services. *Pediatric Emergency Care*, 27(2), 263-264. <https://doi.org/10.1089/10901127.2022.2028045>

Wells, M., Goldstein, L.N., & Bentley, A. (2017). The accuracy of emergency weight estimation systems in children – a systematic review and meta-analysis. *Int J Emerg Med*, 16(29). <https://doi.org/10.1186/s12245-017-0136-z>

15



16
