

# WEIGHING PEDIATRIC PATIENTS IN KILOGRAMS

Endorsed in 2012 by: American College of Emergency Physicians American Academy of Pediatrics Institute of Safe Medicine Practices American Academy of Emergency Medicine Society of Pediatric Nurses

#### Description

"Of all the ways that pediatric patients can be harmed during treatment, medication errors are the most common and most preventable".<sup>1</sup> Developmental differences and dosing complexities unique to pediatrics put children at high risk for both medication errors and for serious consequences as a result of these errors.<sup>1,2</sup> In contrast to adult medication doses (which are often standard, unit-doses), pediatric medication doses are weight-based; based specifically upon the patient's weight in kilograms. Determining the correct dose of a pediatric medication typically requires multiple calculations, and adult concentrations of drugs must often be diluted for pediatric administration. A 2009 analysis of 479 medication errors involving wrong weights discovered that over 25% were due to "confusion between pounds and kilograms".<sup>3</sup> Weighing and documenting pediatric weights only in kilograms has been repeatedly recommended in the literature as a strategy to decrease medication errors not only in the emergency department, but throughout the inpatient encounter.<sup>1,4,5,6,8,9</sup>

# **ENA Position**

It is the position of the Emergency Nurses Association that:

- 1. Pediatric weights only be measured and documented in kilograms.<sup>1,4,5,6,8,9</sup>
- 2. Scales used to weigh pediatric patients only be configured to record weights in kilograms.<sup>5</sup>
- 3. Pediatric weights are recorded in a prominent place on the medical record.<sup>8</sup>
- 4. Electronic medical records are standardized to allow only kilograms for pediatric weight entries.
- 5. The pediatric patient's actual weight is considered part of the mandatory nursing assessment unless they require resuscitation or emergent stabilization.
- 6. For the pediatric patient who require resuscitation or emergent stabilization, a standard method of estimating weight in kilograms is used (e.g., length-based system).<sup>6,7</sup>
- 7. The pediatric patient's weight in kilograms is included in any inter or intra disciplinary patient handoff report.

#### Background

Emergency departments are one of the top three areas where high medical error rates with serious consequences are known to occur. <sup>10,11</sup> Medication errors due to an incorrect weight recorded in the emergency department may easily be passed on to inpatient units and can



perpetuate throughout the patient's inpatient encounter.<sup>3,5</sup> Research has demonstrated that up to 18% of serious preventable medication errors are the result of not having essential information at the time of prescribing, dispensing, and administering medications.<sup>5</sup> Medication errors are often system failures; as potential sources of errors are detected, the systems should be updated.<sup>12</sup> A weight in kilograms is a critical data point for calculating an accurate drug dosage for a pediatric patient.

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