

When it comes to a child's weight in the ER, mama knows best

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Accurate weight estimation of children is essential in the ER. Parents generally outperform even sophisticated tools for estimating a child's weight. Credit: The American College of Emergency Physicians

Parents outperform even sophisticated measurement systems in emergency departments when it comes to estimating their children's body weight, according to the results of a systematic review of the literature on pediatric weight estimation published online today in *Annals of Emergency Medicine* ("Weight Estimation Methods in Children: A Systematic Review").

"When [emergency](#) department staff needs to know the weight of children for purposes of emergency resuscitation, parents generally offer the most accurate estimates," said lead study author Kelly D. Young, MD, MS, of the Department of Emergency Medicine at Harbor-UCLA Medical Center in Los Angeles, Calif. "Length-based methods of measurement came in second. We still have trouble getting accurate estimates for children from populations with high obesity rates and high malnourishment rates, regardless of which method is used."

Around three-quarters (70 to 80 percent) of parents and legal guardians estimated children's weight within a 10 percent margin, up or down, of the child's actual weight. Length-based estimations (e.g. the Broselow Tape) with body-type adjustments were the next most accurate, and the popular Broselow Tape, which does not adjust for body-type, was accurate for 54 percent of children. Neither age-based formulas nor health care worker estimations were as accurate.

Dr. Young and her co-author, Noah C. Korotzer, a student at Palos

Verdes Peninsula High School in Palos Verdes, Calif., reviewed 80 studies on pediatric weight estimation, including parent estimation, health care worker estimation, calculation based on the child's age, calculation based on the child's length, the Paediatric Advanced Weight-Prediction in the Emergency Room (PAWPER) tape and the Mercy method.

"No reported method is truly ideal," said Dr. Young. "Parental estimation, while pretty accurate, may not be available at the time of resuscitation or parents may be distraught. Parent estimation with length-based methods with adjustment for a child's body type are the most accurate methods for predicting children's total actual body [weight](#). But then it gets complicated because some resuscitation drugs are best dosed based on ideal [body weight](#)."

More information: Weight Estimation Methods in Children: A Systematic Review, [dx.doi.org/10.1016/j.annemergmed.2016.02.043](https://doi.org/10.1016/j.annemergmed.2016.02.043)

Provided by American College of Emergency Physicians

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