

What's New in the Patient Safety World

March 2021

PPSA Reminder: Weigh Your Patients and Do It in Kilograms

Regina Hoffman, in a Pennsylvania Patient Safety Authority blog ([Hoffman 2021](#)), issues a simple reminder for all healthcare organizations "**weigh your patients and do it in kilograms.**"

She points out that the United States is one of only three countries in the world that does not use the metric system. But all our medications are based on the metric system. The big problem arises when we use patient weights in pounds rather than kilograms. In addition to most pediatric medications being weight-based, there are multiple adult medications that are also weight-based. These include some anticoagulants, thrombolytic agents, some antibiotics, and many chemotherapy agents. Calculation of drug doses can lead to overdosing or underdosing when pounds and kilograms get mixed up. Our multiple prior columns, listed below, give many examples of such errors.

In addition to dosages based on the metric system, some doses are also very dependent on patient weight. These include anticoagulants, certain antibiotics, chemotherapy agents, and many pediatric doses. The very young, very old, and people with certain medical conditions are at the highest risk of experiencing harm because their bodies are more sensitive to the effects of an error.

Pennsylvania Patient Safety Authority had published in 2016 data on medication errors associated with incorrect patient weights ([Bailey 2016](#)) and in 2018 published in conjunction with the Pennsylvania Department of Health "Final Recommendation to Ensure Accurate Patient Weights" ([Pennsylvania Bulletin 2018](#)).

Several of our own columns (listed below) have highlighted errors created by inaccurate patient weights, particularly with regard to medication errors.

Some of our other columns on errors related to patient weights:

March 23, 2010 "[ISMP Guidelines for Standard Order Sets](#)"

September 2010	“NPSA Alert on LMWH Dosing”
August 2, 2011	“Hazards of ePrescribing”
January 2013	“More IT Unintended Consequences”
December 8, 2015	“Danger of Inaccurate Weights in Stroke Care”
May 2016	“ECRI Institute’s Top 10 Patient Safety Concerns for 2016”
September 2017	“Weight-Based Dosing in Children”
January 2018	“Can We Improve Barcoding?”
June 2018	“Incorrect Weights in the EMR”

References:

Hoffman R. Weight-Based Medication Errors: How to Tip the Scale in the Right Direction. Pennsylvania Patient Safety Authority Blog 2021; Published February 4, 2021 <http://patientsafety.pa.gov/blog/Pages/02042021.aspx>

Bailey, BR, Gaunt, MJ, Grissinger, M. Update on Medication Errors Associated With Incorrect Patient Weights. Pennsylvania Patient Safety Advisory 2016; 13(2): 50-57 http://patientsafety.pa.gov/ADVISORIES/Pages/201606_50.aspx

Pennsylvania Bulletin. Final Recommendation to Ensure Accurate Patient Weights. Pennsylvania Bulletin 2018; 48(36): 5679 <http://www.pacodeandbulletin.gov/Display/pabull?file=/secure/pabulletin/data/vol48/48-36/1430.html>



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