



Western Health

Parental estimation of children's weight

Estimating children's weights in emergency departments

Mieke Foster, Andrew Tagg, Sharon Klim and Anne-Maree Kelly



$$\text{weight} = 2 \times (\text{age} + 4)$$

Paediatric

Version 6 03/06/15 Page 3 of 9
CPG P0101

Normal Values

Paediatric weight calculation

For children various treatments are based on body weight, such as drug doses, defibrillation joules and fluid volume. It is acceptable to ask a parent the patient's weight. If weight is unknown, it can be estimated using the following guide:

Age Weight

Paediatric Emergency Medication Book

2nd edition

Monash Children's Hospital Resuscitation Committee

Edited by
Simon Craig
Emergency Department
Monash Children's Hospital

Nicole Dirnbauer
Pharmacy
Monash Children's Hospital

Quick reference
Age against weight

Age	Weight (kg)
Birth (term)	3.5
1 month	4.5
3 months	6
6 months	7-8
12 months	9-10
18 months	11
2 years	12
3 years	14
4 years	16
5 years	18-20
8 years	25
10 years	30-32
11 years	35



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Emergency drug doses - CPG

AGE	Wt (Kg)
<u>Term</u>	<u>3.5</u>

Read the text below before using
this calculator.

Use the weight closest to the

Paediatric Reference
Version 5.1

Reference ranges and milestones are guidelines, always follow local protocol. Each patient's individual clinical situation should always be taken into account.

	Weight in lbs	Weight in kg	Resp Rate	Heart Rate	Systolic BP
Preterm (<37 wks)	1.5 - 5.5	0.7 - 2.5	50-70	120-180	40-60
Newborn (37-42 wks)	5.5 - 9.5	2.5 - 4.3	40-60	100-170	50-70
Neonate (1-28 days)	7.5 - 11	3.4 - 5	30-50	90-160	60-80
Infant (1-12 months)	10 - 22	4.5 - 10	25-40	80-160	70-100
Toddler (1-3 yrs)	22 - 32	10 - 14.5	20-30	80-130	70-110

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A photograph of a child's legs and feet on a scale. The child is wearing a grey t-shirt and white sneakers with red and blue stripes. The scale is a white platform scale. The background is a light-colored wall.

ORIGINAL ARTICLE

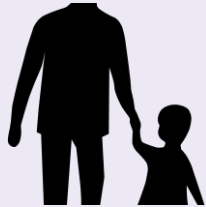
Parental weight estimation of their child's weight is more accurate than other weight estimation methods for determining children's weight in an emergency department?

David Krieser, Kevin Nguyen, Debra Kerr, Damien Jolley, Megan Clooney, Anne-Maree Kelly

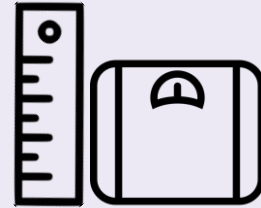
Emerg Med J 2007;**24**:756–759. doi: 10.1136/emj.2007.047993

Children aged 1 month to 11 years

Australian Triage Score 3 – 5



Age, gender, ethnicity
Parental estimate



Height
Measured weight



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450 children



4 years 4 months



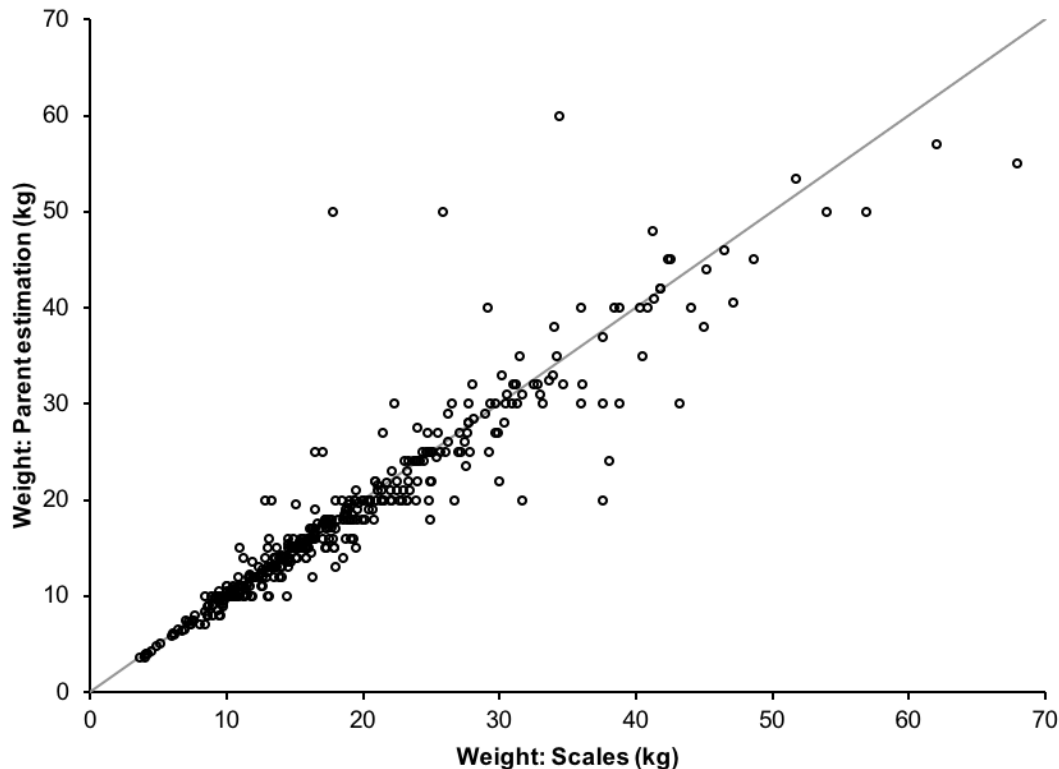
55% male



53% non-Caucasian



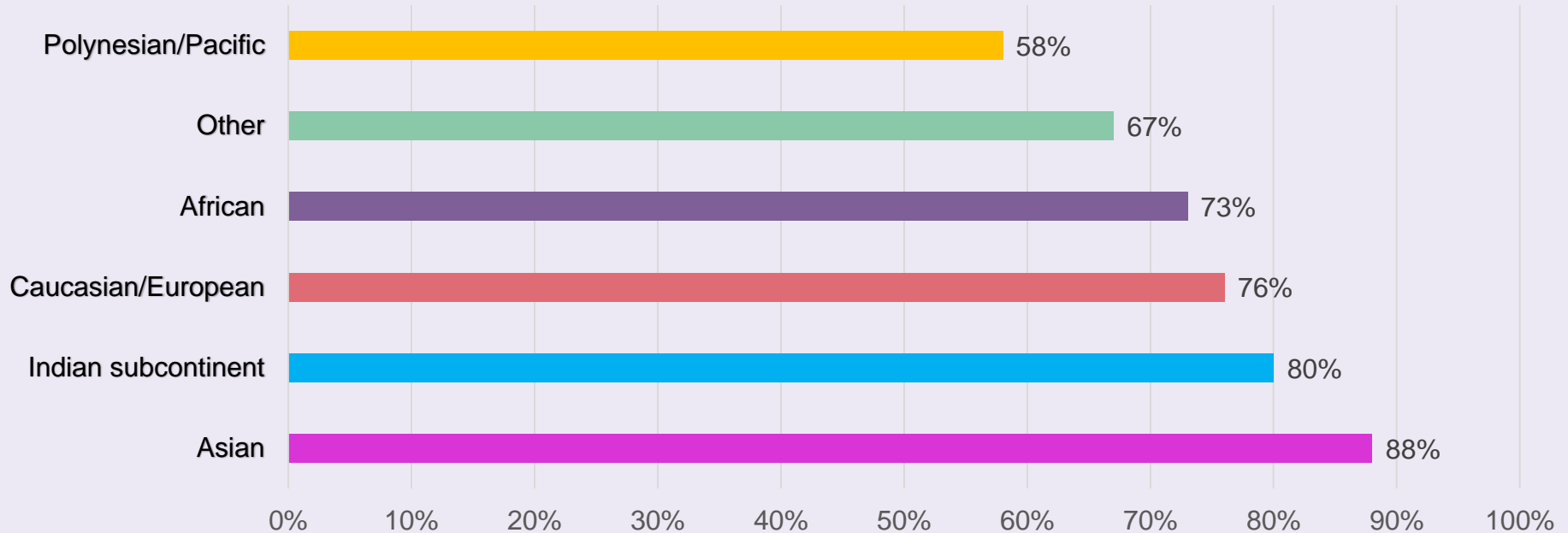
BMI 14 to 17



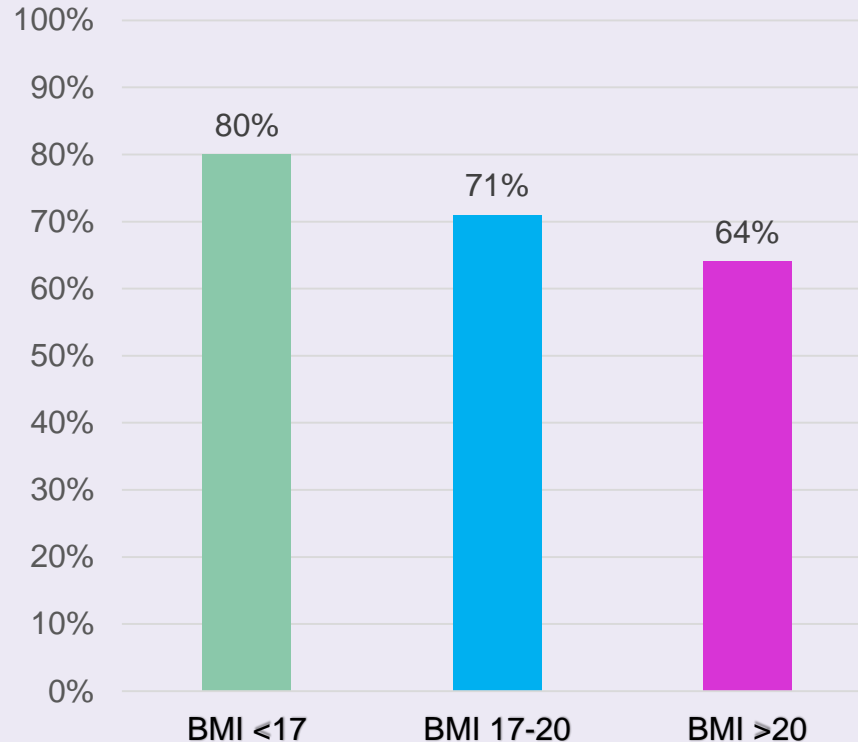
85.6%
of parents
were willing
to provide a
weight
estimate.

Scatter plot showing accuracy of parent weight estimate (kg) compared to measured weight (kg) (n=385).

% of parent estimates within 10% of actual weight by ethnicity (n=385)



% of parent estimates within 10% of actual weight by BMI (n=258)





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Clinical Engineering
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0.00

- 
- Accurate ✓



- **Accurate ✓**
- **Quick**
- **Allow advance preparation**
- **Reduce cognitive load**



mlfoster@deakin.edu.au



@miekefoster



tiny.cc/weightestimation



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References

- Wells M, Goldstein LN, Bentley A. **The accuracy of emergency weight estimation systems in children - a systematic review and meta-analysis.** Int J Emerg Med. 2017;10(1):29.
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- Wake M, Kerr JA, Jansen PW. **Child BMI over time and parent-perceived overweight.** Paediatrics. 2018;142(6):e20173985.
- Huang JS, Becerra K, Oda T, Walker E, Xu R, Donohue M, Chen I, Curbelo V, Breslow A. **Parental ability to discriminate the weight status of children: results of a survey.** Paediatrics. 2007;120(1):e112-9.