

The Parental Analgesia Slide

Parental calculation of paediatric paracetamol dose: a randomised trial comparing the Parental Analgesia Slide with product information leaflets

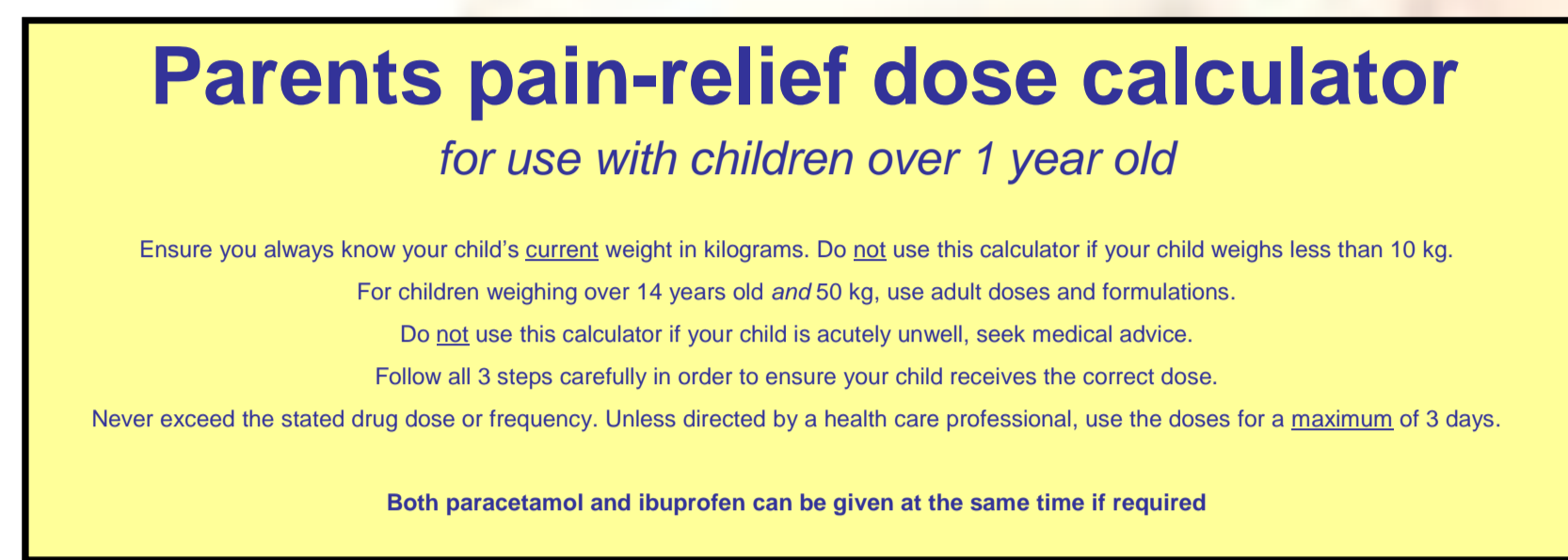
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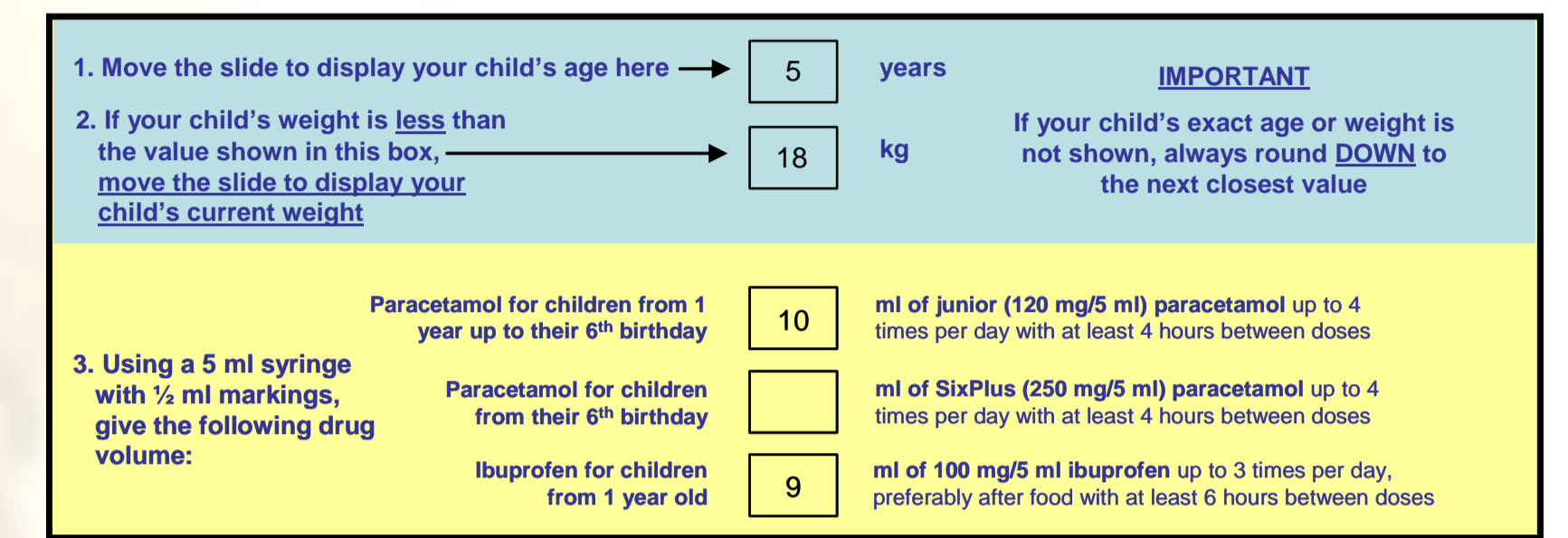
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Conclusion



Use of the Parental Analgesia Slide resulted in a significant decrease in absolute percentage dose error and an increase in the number of correct dosage intervals and frequencies when compared to use of product information leaflets.

An increased number of parents opted to choose an oral syringe after using the Slide. This did not impair their ability to demonstrate an accurate drug volume.



Background

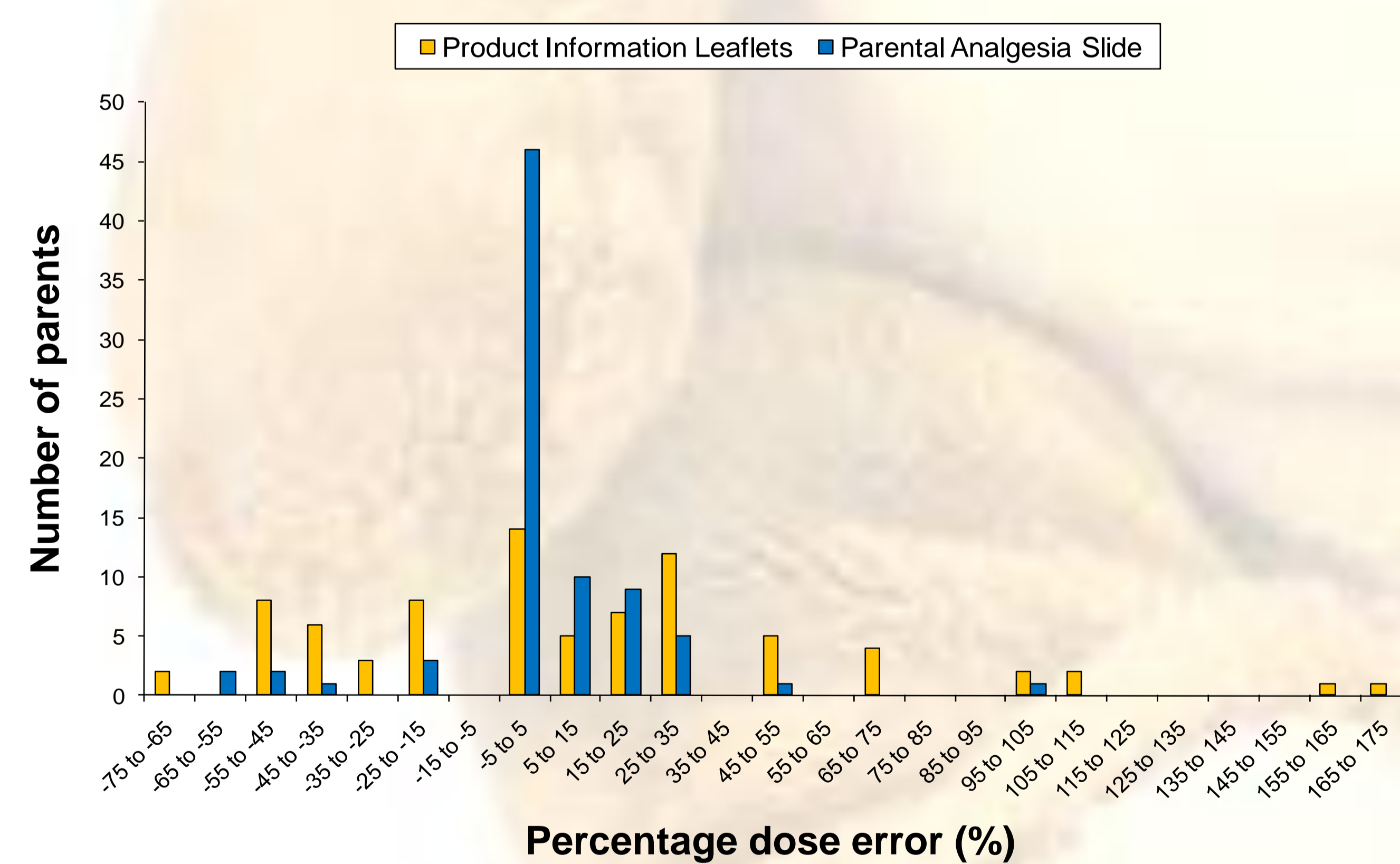
Study design

- Evidence shows that children do not always receive adequate pain relief following discharge from hospital ¹.
- Delivering the correct dose of paracetamol using product information leaflets can be challenging for parents. *Precise* age/weight prescribing information is not provided with over-the-counter analgesic medication.
- Under treatment of pain exposes children to the risk of an adverse drug reaction without the benefit of adequate treatment and may lead to increased use of health care resources ².
- Overdoses most commonly occur in the domestic setting ³ and may lead to harm or even death.
- Paediatric prescribing aides have been shown to improve hospital doctors prescribing accuracy ⁴.
- The Parental Analgesia Slide was developed to assist parents in delivering safe and effective analgesia to children at home.

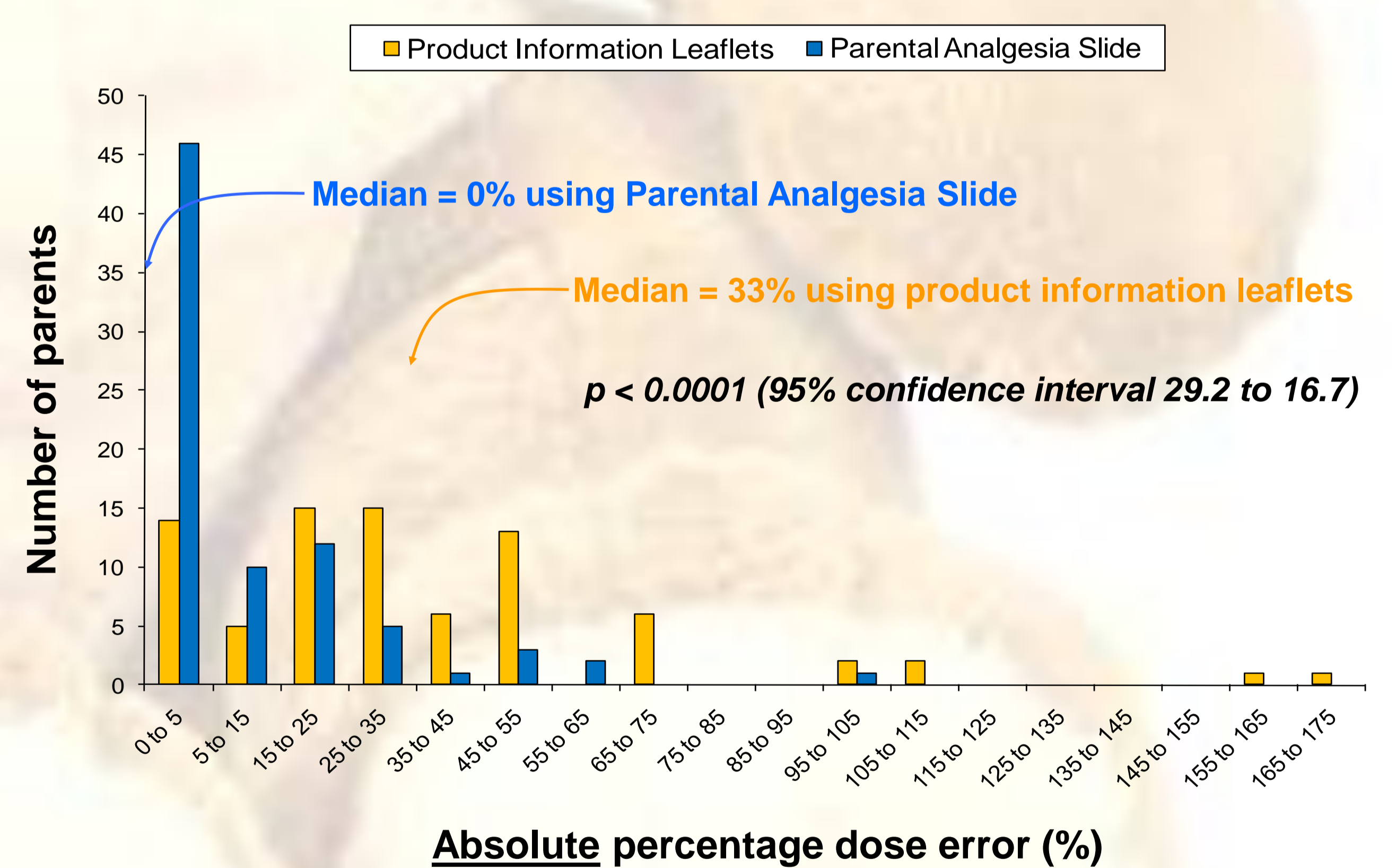
- Following ethics committee approval we conducted a prospective, randomised questionnaire based study.
- 160 parents accompanying children aged between one and 13 years old were randomly allocated to complete a paracetamol dose calculation and administration questionnaire using either product information leaflets (Calpol[®]) or the Parental Analgesia Slide.
- The Parental Analgesia Slide displays pre-calculated paracetamol administration information for children aged between one and 13 years old (10 to 44 kg).
- The *ideal* dose is displayed as drug volume when the slide is aligned to the child's weight with clear instructions on correction for overweight children.
- The two groups were compared with respect to absolute percentage dose errors using the Mann-Whitney U test. The number of correct answers for dose interval, frequency, demonstrated drug volume and the number of parents choosing to use an oral syringe (rather than a 2½ / 5 ml measuring spoon) to demonstrate drug volume were compared using the X² test.

Results

Graph showing the distribution of percentage dose errors about the ideal dose for the two groups before conversion to absolute values for analysis. Negative dose errors represent an underdose and positive dose errors an overdose compared with ideal \pm 5%.



Graph showing the distribution of absolute percentage dose errors for the two groups.



Summary of comparison between groups 1 and 2	Group 1: product information leaflets (n=80)	Group 2: Parental Analgesia Slide (n=80)	p value
Median absolute percentage dose error	33.3	0	< 0.0001 *
Number of correct dosage intervals and frequencies	59	70	0.046
Number of correctly demonstrated drug volumes	77	70	0.082
Number of parents who chose an oral syringe to demonstrate drug volume	24	44	0.002

* 95% confidence interval = 29.2 to 16.7

References

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