required, before dose recommendations can be generated for use in clinical practice.

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14 A COMPARISON OF AGE-BANDED AND WEIGHT-BASED ORAL PARACETAMOL DOSING IN HOSPITALISED CHILDREN

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The British National Formulary for Children contains two dosing strategies for oral paracetamol: age-banded and weight-based. Weight-based is used in our hospital. This study compares dosing strategies in inpatients.

Retrospective analysis over 4 years was undertaken in a single tertiary paediatric hospital. Data was collected from electronic patient records. Patients 3 months to 18 years were included. One measurement per admission was allowed. This was the Health Survey England (HSE) and National Child Measurement Programme (NCMP).

Of 161150 admissions it was possible to match weight to 115466 (58287 patients) and height to 18806 (4892 patients). Of 95598 paracetamol prescriptions, doses <10mg/kg occurred in 5427 (5.7%) prescriptions and doses >20mg/kg in 691 (0.72%) prescriptions. Of the doses <10mg/kg, 1003 were in patients >66.7kg. Applying age-banded doses to all admissions would result in doses <10mg/kg in 20748 (18%) of admissions (13111 patients) and doses >20 mg/kg would occur in 4420 (3.8%) of admissions (2054 patients), most commonly in teenagers. Weight-based dosing (maximum 1g/dose) would lead to doses <10mg/kg in 931 admissions (395 patients).

The potential for inadequate or excessive paracetamol dosing is greater with age-banded doses compared with weight-based doses in hospitalised children. Compared to NCMP and HSE data, obesity is more common in hospitalised children across all ages. Compared to NCMP data, underweight is more common in reception aged hospitalised children but not in year 6. Therefore, atypical body weights are more common in hospitalised children than the general population. A higher proportion of low body weight is seen in young children and teenagers. As a result, age-banded dosing should not be used in hospitalised children.

15 THE RELATION BETWEEN THE SERUM TROUGH CONCENTRATION OF PARACETAMOL AND PAIN REDUCTION IN PRETERM AND TERM NEONATES: A RETROSPECTIVE OBSERVATIONAL STUDY

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Measuring concentrations of paracetamol could be a strategy to optimize the treatment of pain. It is not known if the serum trough concentration of paracetamol at steady state conditions could predict a decrease in pain scores in preterm and term neonates. Low trough concentration can result in inadequate pain relief. The aim of this study was to determine the association between the serum trough concentration of paracetamol and pain reduction in preterm and term neonates.

In this retrospective observational study a hospital database was used to select neonates who were treated with at least 48 hours of paracetamol intravenously or rectally. Linear regression was performed to determine if serum trough concentration of paracetamol at steady state conditions was a predictor for pain reduction. Pain reduction was defined as the difference between CONFORTNeo scores before administration and after the fifth administration of paracetamol.

21 neonates were included for determining the association between serum trough concentration paracetamol and pain reduction. The median (IQR) of serum trough concentration of paracetamol after the fifth dose was 4.5 mg/L (2.7–8.5 mg/L). At steady state conditions the serum trough concentration of paracetamol was not a significant predictor of pain reduction in preterm and term neonates (p = 0.79 for preterm neonates and p = 0.49 for term neonates).

No association was found between the serum trough concentration of paracetamol at steady state conditions and pain reduction in preterm and term neonates. The absence of a significant association could be due to inadequate trough concentrations paracetamol. Further research is needed to investigate the association between serum trough concentrations paracetamol ≥ 10 mg/L and pain reduction.

16 POOR AVAILABILITY OF AGE-APPROPRIATE DRUG FORMULATIONS IN DR CONGO: A BARRIER TO SWITCH FROM INTRAVENOUS TO ORAL ANTIBIOTICS IN CHILDREN ADMITTED TO KISANTU HOSPITAL

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In children with severe bacterial infection in low-resource settings, switch from intravenous to oral antibiotics is important to reduce nosocomial infections and costs. We report barriers to reliable oral antibiotic administration in children under five admitted to Kisantu hospital (DR Congo) with bloodstream infection. Qualitative observations were compiled during field studies (DeNTS/TreNTS study: NCT04473768/08450677). Antibiotics were procured by the hospital pharmacy and part of routine care. Oral switch mostly relied on Watch antibiotics (ciprofloxacin/azithromycin) due to predominance of multi-resistant Salmonella bloodstream infections. Available oral formulations were conventional tablets and powders/granules for reconstitution. Water for reconstitution was rarely sterile and volumes were not exactly measured. Instructions on reconstitution and/or a volume mark on the bottle were missing for some in-country produced antibiotics. Accurate oral dosing was impeded by complex dose calculations and absence of...