Background and importance ODSYSEY is an ongoing international randomised trial evaluating dolutegravir (DTG)-based antiretroviral therapy (ART) versus standard-of-care in HIV-infected children starting first- or second-line ART. Pediatric DTG film-coated tablets (FCTs) of 10 mg and 25 mg are unavailable in low- and middle income countries (LMICs) were most HIV-infected children live. Adult DTG 50mg FCTs are produced by generic manufacturers at low-cost, are well-tolerated, and already available in many high- and LMICs.

Aim and objectives Within ODSYSEY pharmacokinetic (PK) substudies were undertaken to assess PK and safety data for a simplified paediatric DTG dosing approach using WHO weight bands (WBs) 25 to <30 kg and 30 to <40 kg and once daily 50 mg adult DTG doses.

Materials and methods Steady-state 24-hour PK curves were constructed from data in children (≥3 h fasted) observing current EMA-approved DTG doses of 25 mg and 35 mg (10 mg+25 mg FCTs) in 25-<30 kg and 30-<40 kg WBs, respectively. For all children switched to single daily 50 mg DTG tablet, a second 24 h PK curve was constructed. We aimed to achieve DTG exposures comparable to historical adult data for DTG 50 mg FCTs QD taken under fasted conditions (geometric mean (GM): C_{trough}0.83 mg/L, AUC_{0-24h}43.4 h·mg/L, C_{max}3.34 mg/L). Additionally, results were compared to PK data for DTG 50 mg BID in adults (GM ranges: C_{trough}2.41 to 2.72 mg/L, AUC_{0-24h}93.4 to 92.7 h·mg/L, C_{max}5.41 to 5.55 mg/L). Safety was evaluated after switch to the 50 mg dose at 2, 4 and 12 weeks and then every 12 weeks.

Results 28 black-African children (52 PK profiles) from Uganda and Zimbabwe (61% male) with a median (range) age of 11.0(7.5–17.9) years old were included. For children weighing 25-<30 kg on DTG 25 mg (17 profiles) GM with coefficient of variation (CV%) for C_{trough} and AUC_{0-24h} was 0.39(48) mg/L and 33.1(23) h·mg/L, respectively, and after switch to DTG 50 mg (16 profiles) values were 0.77(43) mg/L and 58.6(28) h·mg/L, respectively. For children weighing 30-<40 kg on DTG 35 mg (9 profiles), C_{trough} and AUC_{0-24h} were 0.46(63) mg/L and 40.3(35) h·mg/L, and after switch to DTG 50 mg (10 profiles) values 0.63(49) mg/L and 53.5(32) h·mg/L, respectively. The 50 mg dose resulted in C_{max} values of 5.41(25) mg/L and 5.22(25) mg/L in WB 25-<30 kg and 30-<40 kg, respectively, which did not exceed historical C_{max} values for adults on 50 mg BID. After a median (IQR) follow-up of 30(12–30) weeks on 50 mg DTG 3/28(11%) children had grade 3 or 4 adverse events (one SAE; cryptococcal meningitis) and all were considered unrelated to DTG.

Conclusions and relevance Adult 50 mg FCT once-daily dolutegravir provides appropriate PK profiles in children ≥25 kg, with no safety signal, allowing practical dosing and rapid access to dolutegravir. WHO has released new pediatric dosing guidelines in response to these results.

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IMPLEMENTING MEDICATION RECONCILIATION ON A PAIR OF PHARMACY TECHNICIAN/NURSE TO TRAIN

Background and importance Transitions of care have been determined to be one potential source of errors, especially in relation to medications. WHO has pointed out the need to improve patient safety at transitions for many years as the probability of communication errors increases with a patient moving between facilities, sectors and staff. Almost two thirds of medication errors happen at transitions of care and these mistakes expose patients to medication-related problems and adverse drug events.

Aim and objectives To assess the effect of pharmacist-led medication reconciliation and to evaluate if a hospitalised patient’s medication history is accurately recorded.

Materials and methods Medication reconciliation was performed by the pharmacist within 24 hours after the patient’s admission to the nursing, internal medicine or surgical ward using the validated data collection form in 5 hospitals.

Results A total of 101 patients were included in the pilot study with a mean age 73 years. A total of 218 medication discrepancies (MD) were revealed and 80% patients had at least one MD, a mean of 3.74 MDs per patient among those having MDs. 65% MDs were identified as unintentional MDs and they affected 54% patients with a maximum number of 10 discrepancies per patient case. 41% of MDs were considered clinically relevant by the joint decision of the pharmacist and the prescriber and the patient’s medication list was modified. The most common discrepancies were drug omission (50%), relating food supplements (14%), incorrect dose (10%) and frequency (5%). Older female patient taking at least 5 medications had the highest probability of discrepancies to arise.

Conclusion and relevance The results indicate that the process of collecting medication history needs improvement by implementing medication reconciliation as in 80% of cases patients’ medication list obtained by the pharmacist and nurse were not a complete match and half of the patients had at least one unintentional medication discrepancy. This finding is similar to other studies regarding medication reconciliation.