Acceptability of raltegravir granule use for neonates diagnosed with HIV at birth by healthcare workers and caregivers in Zimbabwe: A qualitative analysis

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BACKGROUND

• The World Health Organization (WHO) has recommended raltegravir (RAL)-based regimens for neonatal HIV treatment [1].
• The government of Zimbabwe adopted the WHO recommendations on birth HIV testing and the use of RAL granules for treating neonates born with HIV in an addendum to their 2016 guidelines
• A qualitative study was conducted to explore the acceptability of using RAL granules and to identify any challenges and lessons learned to support its further successful implementation.

METHODS

• In-depth interviews (IDIs) were conducted with caregivers of neonates receiving RAL-based ART and HCWs providing care and support to the neonates on RAL and their caregivers, IDIs were conducted with a total of 15 caregivers and 12 HCWs.
• Eligible caregivers were at least 18 years of age (or emancipated minors), had a newborn that tested HIV-positive and was initiated on RAL granule-based ART, attended either the 8th or 28th day of life appointment, and had administered the RAL granules to their neonate themselves.
• Eligible HCWs were at least 18 years old, worked in the maternal, newborn, and child health or similar department, and counseled caregivers on the use of RAL granules for at least three months.
• Data were collected from eight out of the 14 sites that had initiated neonate on RAL and data were collected from eight out of the 14 sites that had initiated newborn, and child health or similar department, and counseled caregivers on the use of RAL granules for at least three months.
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• Trained research assistants (RAs) collected data between June and July 2021, written informed consent was obtained before each interview.
• RAs transcribed all audio-recordings, transcripts were imported into the qualitative analysis software program MAXQDA v.12. coders trained in qualitative analysis coded the transcripts.
• Thematic analysis was used to identify recurrent patterns and themes in the data. Data matrices were created for the two study population groups of caregivers and HCWs.

RESULTS-Demographics

• Of the fifteen caregivers, only one was male. Most caregivers (n=9, 60%) were married and living with their partners at time of interview and the group had a mean age of 28.6 years.
• All caregivers had at least primary education (primary n=5, 33.3%; secondary n=8, 53.3%; and tertiary n=2, 13.3%).
• The majority of study neonates (n=11) had been on RAL for four weeks, three neonates had been on RAL for three weeks, and one neonate had been on RAL for two weeks.
• The twelve HCWs comprised of: six nurses (50%), three midwives (25%), two pharmacists (16.7%), and one doctor (8.3%).
• The majority of the HCWs had been in their current position for 3-6 months (7 HCWs), three HCWs were in their position for 7-12 months and two HCWs had been in their position for more than a year.
• Seven HCWs had been prescribing RAL for 1-6 months and five HCWs had been prescribing RAL for 7-12 months.

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REFERENCES


Barriers to RAL initiation and adherence

• HCWs reported challenges with caregivers understanding dosing instructions, measuring with a syringe, swirling and not shaking the medicine, discarding unused medication, and following the changes in the dosing schedule and amount when RAL was initiated a few days after birth.
• Delays in birth testing causes delays in RAL initiation. HCWs reported testing delays were due to deliveries on weekends or evenings, staff trained on birth testing not being present, and stockouts of the cartridges used for the PoC birth testing machines.
• Stigmatization due to social and cultural norms presents challenges to RAL initiation and adherence. Many HCWs reported caregivers were hesitant in getting the consent of their partners and disclosing their baby’s HIV status within their social support networks.
• HCWs also reported inadequate materials for practicing demonstrations. Capacity building efforts were eroded by high staff attrition and staff rotations.
• COVID-19 significantly impacted the rollout of RAL granules in Zimbabwe, stockouts led to some HCWs resorting to using remaining pediatric formulations of nevirapine.

Recommendations to improve RAL delivery

• HCWs stated that adequate counseling and repeat demonstrations were crucial to ensure that caregivers clearly understood RAL dosing and administration instructions.
• HCWs requested more standardized training targeting nurses with guidance on handling missed doses and clarification on mixing RAL granules with water and not breastmilk.
• HCWs understood the value of RAL and recommended that RAL be implemented at the national level. To prevent delays in the birth testing process, HCWs recommended ensuring adequate supplies of the cartridges for the POC machines and training more staff on how to use the machines.
• Many HCWs recommended providing caregivers with educational communication materials featuring large visuals and diagrams to take home and refer to if there were issues with RAL preparation or administration.

CONCLUSIONS

• While RAL granules were well accepted by both caregivers and HCWs, additional steps are needed to ensure adequate training of HCWs, sufficient caregiver instruction and support to ensure proper RAL preparation and administration, and timely diagnosis of HIV-positive neonates.