Rifapentine in High Doses in Pregnancy with TB (Radiant-Moms) Formative Research

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ANNUAL MEETING
2023

RATIONALE

- Drug-sensitive pulmonary TB (DS TB) has been treated with a **6-month regimen** for the past 40+ years.
- Regimen is used in pregnant/breastfeeding women **despite no trial data**.
- A new **shorter 17-week regimen** is now approved for use in adults and adolescents and will soon be studied in children <12 years.
- **No plans to test this regimen in pregnant/breastfeeding women** because of perceived potential safety and acceptability concerns.
- Important to understand how **feasible, acceptable, and preferred** this new shorter regimen may potentially be among pregnant/breastfeeding women and their healthcare providers (HCP).
- Critical need to **understand facilitators and barriers** to the inclusion of pregnant/breastfeeding women in TB clinical trials.

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PRIMARY OBJECTIVES

1. Explore the **feasibility, acceptability, and perceived demand** for the new 17-week RPT-MOX regimen for pregnant/breastfeeding women with and without HIV among key stakeholders.
2. Assess relative **priorities and trade-offs** between attributes of novel DS TB treatment regimens among pregnant/breastfeeding women with and without HIV and HCP.
3. Identify facilitators of and barriers to the inclusion of pregnant/ breastfeeding women in TB clinical trials.

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STUDY DESIGN

- Cross-sectional, mixed-methods study.
- Component 1: Online or in-person survey distributed through IMPAACT, ACTG and TBTC sites.
- Component 2: At selected sites in 2-3 regions, conduct:
  - In-person discrete choice experiment (DCE) and survey (n=180/region).
  - Semi structured in-depth qualitative interviews (n=25/region).
- Focus on women who are living with or are at-risk for HIV.
- Components are complementary allowing for triangulation of data.

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STUDY METHODS: COMPONENT 1

- Objective: Explore the feasibility, acceptability, and perceived demand for the new 17-week RPT-MOX regimen for pregnant/ breastfeeding women among key stakeholders.
- Brief **online quantitative survey** with HCP and community stakeholders.
- Surveys will be distributed to:
  - HCP linked to IMPAACT, ACTG and TBTC sites.
  - Community stakeholders associated with these sites.
- Protocol submitted to Stellenbosch University for ethics approval on 10/26/2023.

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COMPONENT 1: TIMELINE

	Anticipated Timeline
Preparation	**Oct-Dec 2023**
Distribution of survey	**Jan 2024**
Data analysis	**Feb-Mar 2024**
Dissemination	**Mar-Apr 2024**

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STUDY METHODS: COMPONENT 2

- Objective: To quantitatively and qualitatively:
  - Assess relative priorities and trade-offs between attributes of novel DS TB treatment regimens.
  - Identify facilitators of and barriers to acceptability of DS TB treatment regimens and participation in TB clinical trials.

- Component 2.1: Virtual or in-person semi structured **in-depth qualitative interviews** and short **quantitative surveys** (n=25/region).
- Component 2.2: In-person **quantitative survey**, including DCE (n=180/region).
- Component 2.3: In-person **in-depth qualitative cohort interviews** (n=15/region).
  - Subset of Component 2.2.

HCP

Pregnant/ breastfeeding women, especially those living with or at-risk for HIV

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COMPONENT 2.1

- Objective: Provide context to results from the quantitative survey conducted in Component 1 and facilitate design of the DCE.
- Zoom or in-person interviews:
  - In-depth interviews and short quantitative survey with HCP.
  - Facilitates rapid collection of HCP's perspectives.
  - Participants will be sampled purposively for 'rich cases' and diversity in region and role.

COMPONENT 2.2

- Objective: Assess relative priorities and trade-offs between attributes of novel DS TB treatment regimens among pregnant/breastfeeding women with and without HIV.
- Quantitative Survey, including discrete choice experiment (DCE).
- Survey: socio-demographic characteristics, TB/HIV history, TB knowledge and attitudes, barriers and facilitators to inclusion in TB trials, stigma, health system utilization, satisfaction with services.
- DCE:
  - Assess pregnant/breastfeeding women's preferences for attributes of TB treatment regimens and service delivery models.
  - Hypothetical scenarios where participants select preferred scenario.

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COMPONENT 2.3

- Objective: Gain an in-depth understanding of pregnant/breastfeeding women's experiences over the course of the pregnancy/postpartum period.
- Qualitative cohort approach with a series of 3 data collection interactions, including in-depth qualitative interviews, participatory activities, and ethnographic field notes.
- Conducted at sites with qualitative research experience and high burden of TB.
- Subset of Component 2.2.
- Pregnant and breastfeeding participants will be purposively sampled for diversity in region, HIV status, and pregnancy/postpartum stage.

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COMPONENT 2: INCLUSION CRITERIA

- Women: Age ≥15 years, pregnant or breastfeeding within the past year, capacity for consent.
  - Include a subset of women with TB (current or history).
- HCP: Age ≥18 years, providing TB care for minimum of 2 years at a health facility in a region included in the study.

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COMPONENT 2: SAMPLE SIZE

- Component 2.1 (qualitative & quantitative interviews):
  - Total of 25 HCP per region.
- Component 2.2 (in-person quantitaive survey & DCE):
  - 180 participants per region to improve confidence and generalizability of findings.
  - Targets based on pregnancy status (<27 weeks, 27-40 weeks, postpartum) and HIV status (with HIV, at-risk for HIV).
  - Target 80% in each region to be women living with HIV.
- Component 2.3 (in-depth cohort interviews):
  - Total of 15 pregnant/breastfeeding women per region.
  - Sub-sample of women participating in Component 2.2.
- Potential study sites: Minimum of 2-3 regions.
  - Strong interest from sites in South Africa and India.

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COMPONENT 2: TIMELINE

	Anticipated Timeline
Preparation	**3 months**
Enrollment in 2.1	**3 months**
Enrollment in 2.2	**4-6 months**
Enrollment in 2.3	**6-8 months**
Total implementation time	**18-24 months**

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COMPONENT 2: FUNDING

- Estimated costs will be ~$100,000 per site.
- Need a minimum of 2-3 sites.

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LIMITATIONS

- Focus on new treatments for DS TB, especially RPT-MOX.
- Assessing acceptability, appropriateness and feasibility of drug-resistant TB (DR TB) regimens in pregnancy is beyond the scope of this proposal but methodology could be replicated for DR TB.

IMPLICATIONS

- An improved understanding of the **nuances of what influences decision-making** in pregnant/breastfeeding women and their HCPs regarding RPT-MOX use.
- Identification of **potential differences in prioritization and trade-offs** of DS TB treatment regimen attributes between pregnant/breastfeeding **women with HIV versus without HIV**.
- If acceptable and preferable, this study would provide **strong rationale for proceeding with a safety and pharmacokinetics study of RPT-MOX** in pregnant/breastfeeding women with DS TB.
- This mixed-method study would also provide a **standard framework for engaging with pregnant and breastfeeding women and their HCP** to ascertain their preferences and the potential acceptability of other novel TB treatment regimens (and beyond) in the future.

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THANKS!

Any questions?

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