An epidemiological integrated approach to clinical research center selection for the MTBVAC phase 2b prevention of TB, clinical trial in African adolescents and adults

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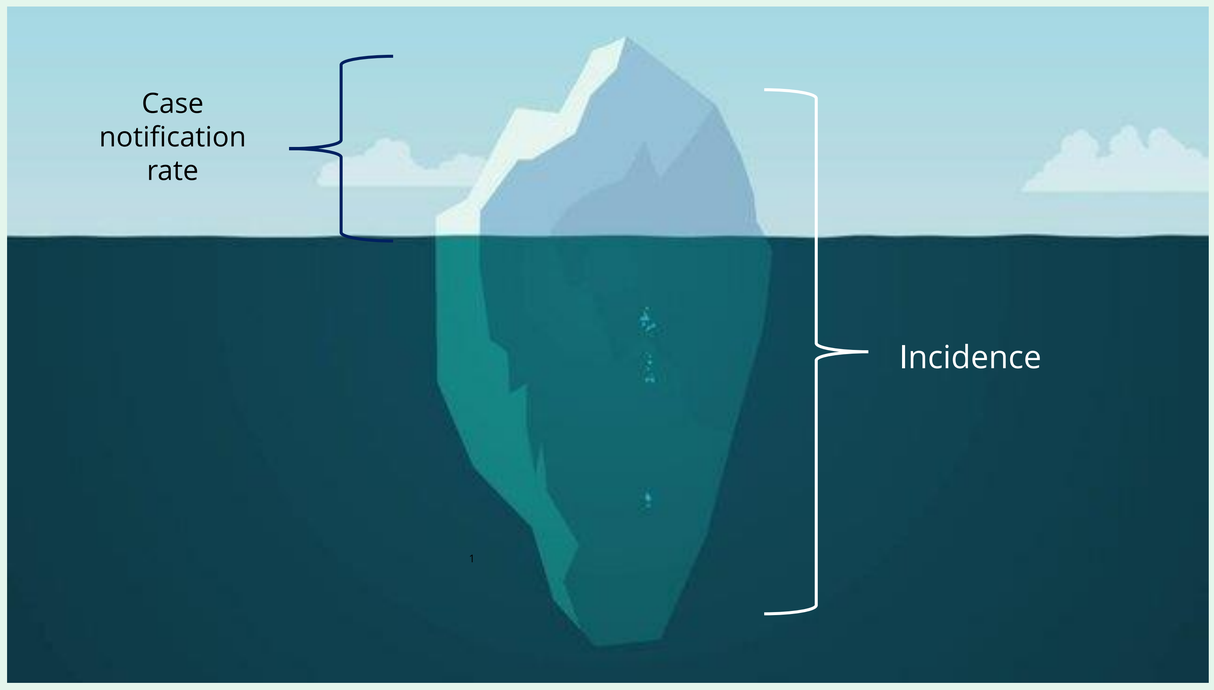
Background

- IAVI is conducting a Phase 2b TB vaccine trial (IAVI C113, IMAGINE) investigating the primary endpoint of pulmonary TB in IGRA+ and HIV– participants
- Late-stage TB vaccine trials need to target high TB transmission areas to ensure adequate case accrual
- Estimates of TB incidence and prevalence have limiting assumptions and subnational heterogeneity
- TB incidence may be highest in those areas that lack resources for surveillance, clinical trials capacity and health care



- Both epidemiological assessments and operational feasibility approaches are crucial for selecting clinical research centers (CRCs)
- This assessment aimed to integrate epidemiological data to identify high-burden areas for CRC selection

Conclusion

- The aim was to select CRCs for adequate trial recruitment, considering data validity and completeness, and CRC experience.
- This allowed focusing on endemic regions with high TB incidence, high IGRA prevalence, and low HIV prevalence while also assessing CRC readiness.

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Methods

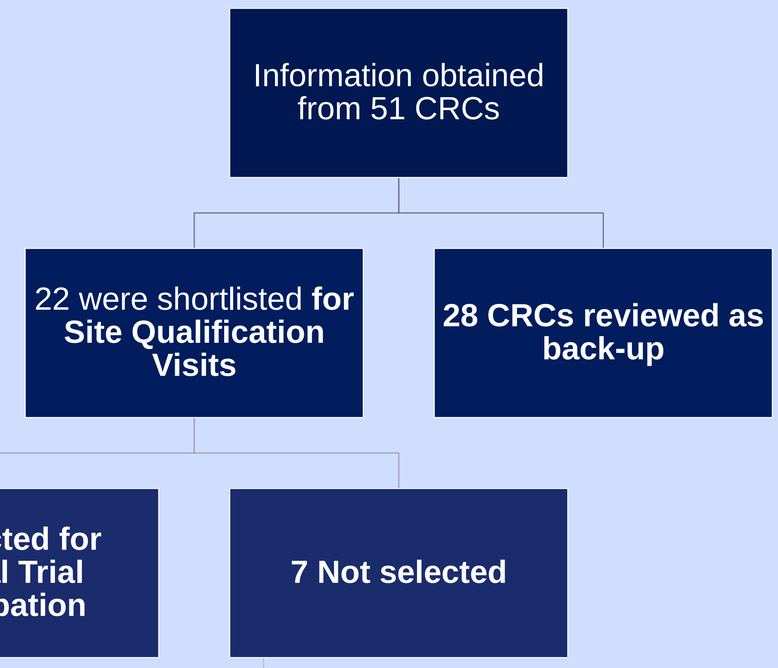
- We engaged with CRCs to obtain and validate available data.
- Key indicators were developed, providing a structured framework while considering the context of additional endpoints

Feasibility	Epidemiology
Clinical Trial Experience (vaccines, TB, adult participants, adolescent participants)	Case notification rate: CNR in tiers (minimum 250 per 100 000) - compared to estimates used for sample size calculations
CRC and laboratory infrastructure	HIV prevalence (maximum 50%)
Good Participatory Practice management	HIV/TB co-infections
Genetically Modified Organisms and community engagement	IGRA positivity (overruled CNR if IGRA over 50% and valid)
Recruitment projections and competing studies	Validity of data provided (ie year, geography, verified), completeness, confidence

- We assigned scores based on assessed components.
- A scoring system was applied to both initially selected and backup CRCs

Results

- 51 CRCs in Kenya, Uganda, Tanzania, and South Africa
- 15 CRCs selected: 12 in South Africa due to high TB burden; 1 in Tanzania; 2 in Kenya.



- While limitations existed due to lack of available epidemiological data, many case notification rates exceeded the lower bounds for sample size calculations.

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