

# *Trials of tuberculosis prevention interventions in Africa: a descriptive cross-sectional study*

**Student: Nondwe Patience Titi**

**Supervisor: Dr Kredo**

---

**Background:** Prevention of new infections of *Mycobacterium tuberculosis* (TB) and their progression to disease is important for reducing TB disease burden and related mortality. Randomised controlled trials (RCTs) are considered the gold standard for evaluating the effectiveness of healthcare interventions. Our study identified and described published RCTs conducted in Africa for TB prevention and assessed their methodological quality. This work maps available published TB prevention trials and identifies gaps to inform relevant key stakeholders in the TB field.

**Methods:** We searched three electronic databases: PubMed, EMBASE, and Cochrane Library in April 2015. All published RCTs investigating TB prevention in Africa were included. Two investigators independently screened records for inclusion and extracted data using a pre-defined data extraction form. Data extracted included country, setting, interventions, funders, principal investigator, ethics, and methodological quality that was assessed using Cochrane's Risk of Bias tool. Descriptive analysis was conducted in MS Excel.

**Results:** A total of 7,077 records were identified and 46 trials met the eligibility criteria. Trials were published between 1952 - 2015, and included a median sample size of 210 participants (range 18 to 121 020). Twenty-eight trials investigated vaccines, 15 investigated TB preventive chemotherapy, two evaluated active case-finding, and one was a combination of BCG and TB preventive chemotherapy interventions. Most trials were conducted in South Africa (n = 28). International agencies and governments were the predominant funders. Methodological quality of trials was poorly reported.

**Conclusion:** In addition to the focus on vaccines and TB preventive chemotherapy in African TB prevention trials, researchers, governments and funders should consider increasing research on multi-faceted strategies to address transmission and active linkage to prevention services. Poor quality reporting of published trials needs to be addressed to improve the credibility of results to inform policy. Studies mapping research in particular sectors can guide research and funding gaps and highlight methodological strengths and limitations of the research conducted.