Methods A healthy population was generated in PK-Sim [3,4] and modified to include the following disease components: 1) increased (20%) intestinal permeability as a consequence of "leaky" intestine, 2) decreased (20%) intestinal permeability as a consequence of damaged microvilli intestine, 3) diarrhoea due to faster transit time in small intestine (20%) and large intestine (50%), 4) diarrhoea due to higher water volume in large intestine (50%) and 5) severe malnutrition.
Results The main risk in exposure with the SR formulation compared to IR formulation is for diarrhoea caused by fast transit time, resulting in a 10% lower ratio (SR/IR) exposure compared to a healthy population. This can be explained by the shorter time available for absorption in diarrhoea, affecting the SR formulation to a greater extent than the IR formulation.
Conclusion Switching from an IR to SR formulation for the treatment of CM is not predicted to impact exposure in a patient population, except for patients with fast transit diarrhoea.

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PA-300 BARRIERS AND FACILITATORS FOR IMPLEMENTATION OF GOOD CLINICAL PRACTICE IN A RANDOMIZED CONTROL TRIAL IN LIMITED RESOURCES SETTINGS: THE EXAMPLE OF FREEBILY IN MADAGASCAR

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Background To fight neglected tropical diseases (NTD), clinical trials implemented in endemic settings are crucial. This requires high standards of Good Clinical Practice (GCP) to ensure participant safety and reliable data. Yet, the local implementation can be challenging due to limited resources, remote study sites, or inexperienced staff. This study aims at assessing barriers and facilitators to implement GCP in limited resources contexts through the example of the clinical trial freeBILy.
Methods A mixed-methods design was used: quantitative data to measure frequencies and extent of GCP nonconformities were extracted from the trial database, while qualitative data were collected among trial staff (n=30) through in-depth interviews and focus group discussions. A closed questionnaire captured background information of the staff. Statistical analysis with R® includes classification of nonconformities by error type and severity, as well as regression analysis of sociocultural factors associated with nonconformities. Qualitative data are being analyzed following a thematic approach. Triangulation of the data will be performed.
Results From a random sample of 500 study IDs of enrolled women, a total of 331,349 data entries have been retrieved from the database and organized to proceed with the regression analysis. The informed consents of the same 500 women were manually reviewed. A total of 30 nurses and midwives with a median age of 30 years (IQR: 29, 34) were qualitatively interviewed. The majority were female (77%) with a university degree (100%), fluent in French (86%), and had received GCP training in the last 2 years (97%).
Conclusion Our preliminary data show that the involved staff were well educated and regularly attended GCP trainings, challenging the stereotype of inexperienced staff in SSA. Further analysis will assess association of specific factors with frequencies and type of nonconformities in order to inform implementation strategies of future trials.

PA-302 LYOPHILIZATION AND FIELD BASED STABILITY OF ID93 + GLA-LSQ, A SINGLE-VIAL ADJUVANTED SUBUNIT TUBERCULOSIS VACCINE CANDIDATE

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Background ID93_GLA_LSQ is one of the adjuvanted-recombinant protein vaccines that are in clinical development for the prevention of pulmonary TB. The current composition comprised of two vials, one containing the antigen and one containing an adjuvant, which is' bedside mixed' immediately prior to immunization. Hence, this study developed a strategy for the presentation of the vaccine as a single vial through conjugation and lyophilization. The study also evaluated the field-stability of these samples stored at room temperature in five health facilities in Nigeria.
Methods Lyophilization process was developed to have a single vial of co-mixed(coVL) and conjugate(ConjVL). The physicochemical stability and biological activity stability were evaluated for three months at 4°C and 37°C. The parameters evaluated include cake quality and melting point for the powder, while the reconstituted liposomes were assessed for liposome reformation, particle size, GLA and QS21 concentration and the integrity of ID93. The samples were stored in five health centres to assess the stability of the formulation outside cold chain for nine months.
Results The assessment of the stability parameters for coVL and ConjVL, showed that they were stable at 4°C and 37°C. Moreover, the two formulations maintained their biological activity at the two storage conditions for three months, however, the conjugated formulation still maintained higher memory T cell cytokine recall response in the in vitro whole blood assay as observed with the liquid formulation. The two formulations stored at average daily room temperature of 29.3–30.7°C in five health centres across South -Western geopolitical zone of Nigeria maintained the cake quality and melting points for the nine months with less than 20% reduction in GLA and QS21 across the sites and the particle size growth was also less than 50%.
Conclusion This work presents development of thermostable adjuvant-containing subunit tuberculosis vaccine in developing country.

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