

STUDY SUMMARY

EPIDEMIOLOGICAL MODELLING AT THE LONDON SCHOOL OF HYGIENE & TROPICAL MEDICINE (LSHTM)

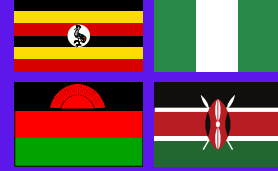
BACKGROUND TO THE STUDY

The LIGHT Consortium Team at LSHTM is leading work to evaluate the potential population-wide impact of strategies to reduce gender inequities in TB care in Kenya, Malawi, Nigeria and Uganda.

Our work complements implementation research studies within LIGHT. We are focusing our analyses to assess outcomes, such as incidence and mortality, that would not be feasible to measure within the scope of LIGHT's implementation research studies.

STUDY SITES

OPERATIONAL IN 4 COUNTRIES



UGANDA, NIGERIA, MALAWI, KENYA

AIM

TO EVALUATE THE POTENTIAL IMPACT OF STRATEGIES TO IMPROVE MEN'S ACCESS TO TB CARE ON INCIDENCE AND MORTALITY IN MEN, WOMEN, AND CHILDREN IN LIGHT COUNTRIES: UGANDA, NIGERIA, MALAWI AND KENYA

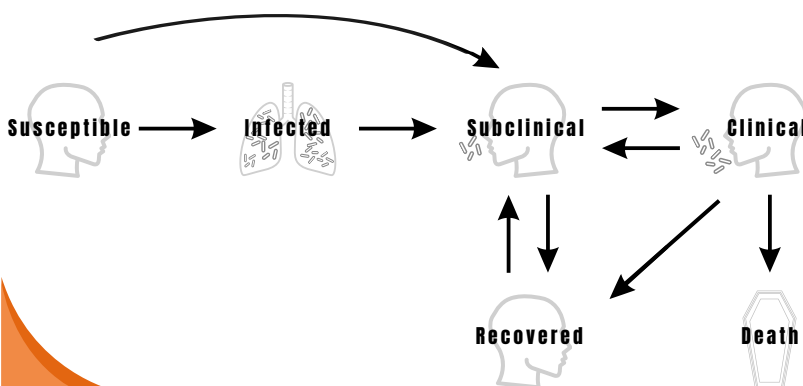
STUDY OBJECTIVES AND METHODS

DEVELOPING MATHEMATICAL MODELS

We are developing mathematical models that reflect TB epidemiology in each LIGHT country and can be used to project the potential impact of future interventions.

Our models reflect current understanding of TB natural history, recognising states of infection, subclinical disease, and clinical disease (see Figure 1), as well as differences in risks and behaviours across age, sex, and HIV/ART status in each setting.

Figure 1



Models are informed by data on TB natural history, as well as setting-specific data on key TB determinants and programmatic data on TB care pathways, and will be calibrated to indicators of TB burden and trends over time in order to represent each setting as accurately as possible. The model calibration process is an iterative one and will be conducted in close collaboration with partners from National TB Programmes to ensure consensus around model projections.

POTENTIAL IMPACT

Calibrated models can then be used to examine the potential impact of strategies to improve men's access to TB care on the TB epidemic in each setting, either at a population level or specifically among population subgroups such as men, women, and children. Model results can be combined with cost data to also evaluate the cost-effectiveness of strategies.

In addition to the work described above, the LIGHT team at LSHTM makes use of existing, often publicly available, data to answer remaining knowledge gaps related to gender disparities in TB. To date, we have quantified gaps in case detection for men and women in LIGHT countries, and we have analysed inequalities in the impact of COVID-19-associated disruptions on TB diagnoses by age and sex. See links:

[GENDER GAPS IN DISEASE DURATION](#)

[INEQUALITIES IN THE IMPACT OF COVID-19-ASSOCIATED DISRUPTIONS ON TUBERCULOSIS DIAGNOSIS](#)

For further information, please contact:

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