Melissa Penny (Prof)

Swiss Tropical and Public Health Institute

Melissa Penny is an Assistant Professor at Swiss Tropical and Public Health Institute, University of Basel. Currently head of the Disease Modelling unit at Swiss TPH she has more than 14 years' experience in developing mathematical and computational models to provide quantitative evidence to support infectious disease control and elimination decisions.

Her most recent research focuses on analysing data and developing mathematical models and algorithms to understand pathogen, host and intervention dynamics, with the goal to inform decisions during product development through to implementation and policy recommendations. This work includes new approaches with mechanistic models to inform quantitative target product profiles for novel malaria interventions. She is a member of WHO technical working groups and Guideline Development Groups, and along with other modelling groups supports modelling and economic-based evidence during malaria vaccine Pilot studies.

Mathematical modelling to address contemporary issues in infectious diseases and global health

With reflections on the current COVID-19 pandemic, in this presentation, we will discuss the role of mathematical modelling to address questions in global health. In particular, we will discuss the benefits and limitations of models to support decision making to combat infectious diseases.