

Despite considerable efforts to control malaria transmission across the world, it continues to be a serious burden in many communities. Mosquito survival beyond the parasite's incubation period is crucial to sustain transmission. However, there is a substantial overlap between the extrinsic incubation period of *Plasmodium falciparum* and the lifespan of its vector, both of which are known to be affected by external cues like temperature. This suggests that many mosquitoes die before becoming infectious.

Many studies have investigated the effect of malaria parasites on mosquito lifespan. However, while some report parasite-induced mortality, some others do not. Many of these studies ran for limited time periods, or explored unnatural parasite-vector combinations. Moreover, most studies investigating the effect of temperature on mosquito survival use different constant temperatures. Some authors have proposed that these parts of the experimental design may produce biased results that are not representative of the dynamics in wild mosquito populations.

Here, we use parametric survival models to describe the effect of an infected blood meal, mosquito species, and temperature oscillations on mosquito survival. Describing how these factors interact to affect mosquito lifespan could improve the ability of transmission models to make estimations of disease incidence under different climate change scenarios.