Malaria is the most prevalent tropical parasitic disease in the world. An estimated 214 million cases of malaria occurred and 438,000 people died in 2015. Together with medical treatment, the most commonly used control strategies include insecticide-treated bed-nets (ITNs) and indoor/outdoor residual chemical sprays (IRS).

In this talk, we will discuss a few mathematical models that we recently developed, which investigate the effectiveness of ITNs. (Received September 15, 2016)