

Study shows more malaria infections in a community leads to more cases of severe symptoms

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A team of researchers from the U.K., Kenya, Uganda and Tanzania has found that a higher prevalence of malarial infections in a given

community leads to higher numbers of people with severe malarial symptoms. In their paper published in the journal *Science*, the group describes their study of malaria infection patterns at multiple sites in East Africa over the course of 14 years. Terrie Taylor and Laurence Slutsker with Michigan State University have published a Perspective piece in the same journal issue outlining the challenges involved with tracking malaria infections in Africa and the work done by the team in this new effort.

As Taylor and Slutsker note, tracking [malaria](#) infections is difficult work due to a variety of issues—one of the most predominant is that most infections are asymptomatic. For people who are infected, there is a range of symptoms, some of which are annoying (such as fever and body aches) while others are much more serious. Adding to the problem of tracking is the fact that the degree of [infection](#) and types of symptoms can differ by age—[younger people](#), for example, are at higher risk of developing more serious problems such as respiratory distress, anemia or cerebral malaria. Because of such issues, until now, no one really knew whether a decrease in transmission of the disease in a given area would decrease mortality rates. To find the answer to that question, the researchers took a new, community prevalence-based approach to the problem.

The work by the team involved traveling to 26 communities in Kenya, Uganda and Tanzania and conducting surveys of households and schools, while reading published literature regarding malaria in the areas they were studying. They also went to the hospitals in the same communities and counted the different types of infections they encountered.

In looking at their data, the researchers found that for every 25% increase (over a baseline of 17.6%) in the prevalence of infections, annual rates of those people with severe infections doubled. They also found that as the prevalence of infections rose, the average age of

patients admitted to hospitals in the area dropped.

More information: Robert S. Paton et al, Malaria infection and severe disease risks in Africa, *Science* (2021). [DOI: 10.1126/science.abj0089](https://doi.org/10.1126/science.abj0089)

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