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# MALARIA RISK FACTORS FACING UGANDA'S BATWA POPULATION

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## SUMMARY

- Malaria remains a major public health risk in Uganda, and is especially concerning with increased transmission rates linked to climate change;
- Indigenous communities like the Batwa in Kanungu district in southwestern Uganda are highly vulnerable to malaria because of their high risk factors for transmission;
- Community-based approaches, combined with diagnostic testing, treatment, effective surveillance and focus on vulnerable indigenous people provide an opportunity for moving policy and progress forward.5

## INTRODUCTION

Malaria remains a public health threat to more than 600 million Africans, and its control is critical to achieving targets set forth by the Millennium Development Goals (MDGs). The greatest disease burden occurs in the endemic regions where the disease pathogen is continuously present in the community. Worldwide it has been estimated that 81 percent of reported cases and 91 percent of deaths have occured in Sub-Saharan Africa, with children and pregnant women being most severely affected (WHO, 2011a:1).

Malaria remains a major causes of morbidity and mortality, for example, in the central African country of Uganda (GOU, 2010: 72). Clinically diagnosed malaria cases account for up to 50 percent of outpatient visits at health facilities, 20 percent of all hospital admissions, and over 20 percent of all hospital deaths. A significant percentage of malaria-related deaths occur in the home, however, they are not reported in official statistics (UBOS, 2010; GOU 2011a; GOU, 2011b).

# ABOUT THE AUTHOR

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The Batwa pygmies, a marginalized ethnic group whose homelands were annexed during the formation of Bwindi Impenetrable Forest National Park in 1992, are particularly vulnerable as they were displaced into settlements without adequate shelter, food or access to education and health services (Birungi, 2010). The few statistics available indicate that Batwa health is well below the national average, with child mortality rates 1.8 to 2.4 times higher than neighbouring non-Batwa villages (Ohenjo et al., 2006). A study in the Batwa sub-counties of Kayonza and Mpungu shows that malaria accounted for 37 percent of all deaths and households identified malaria as a top health concern (Bwindi Community Hospital, 2009).

## BATWA SHIFT FROM INDIGENOUS TO WESTERN HEALTH CARE

It is notable that the Batwa transitioned from their indigenous health practices to a western-oriented system just 20 years ago. Before their removal from Bwindi, they depended on the forest for everything, including their cultural and spiritual identity. The Batwa considered themselves to be in an intimate, nurturing relationship with the forest, always providing for their basic needs (UNFPA, 2008: 57-58). Some scholars suggest that pygmy groups who still lead a forest-based life have better health than the nearby farming groups, as this is where they feel at ease and a sense of mental and spiritual health (Ohenjo et al., 2006).

In one study, Agrippinah Namara (2007:17) established that Batwa felt healthier in the forest, which they associate with little risk of contracting complicated diseases. In the case where individuals contracted common diseases such as intestinal parasites, they were viewed as being easily treatable with herbs found in the forest. However, the Batwa are now subject to a new variety of infections, including malaria and sexually transmitted diseases that cannot be treated through the natural remedies they previously relied on.

Currently, the Batwa in Kanungu district have access to western health services with Bwindi Community Hospital as the main point of access. Also a community health insurance scheme named ‘eQuality’ was established in 2010 with a focus on the special needs of the Batwa people. The Batwa Development Programme, in collaboration with Bwindi Community Hospital, operates weekly health outreach programs to Batwa settlements.

## MALARIA AND CLIMATE CHANGE

Malaria in Africa is one of the continent's most persistent health challenges, and is now being exacerbated by the effects of global warming (Mayah, 2012). Studies in East African highlands, in particular, have found that increases in malaria are related to increases in temperature that affect these formerly temperate areas (Pascuala et al., 2006). Models produced by Ermert et al. (2010) also suggest that higher temperatures and even slightly higher rainfall can cause a substantial increase in season length and parasite prevalence in formerly epidemic-free areas. Territories formerly unsuitable for malaria, therefore, could become suitable as the climate changes and warms. Berrang-Ford et al. (2012) further illustrate the increasing prevalence of malaria to be associated with warming temperatures and higher frequency of the disease in the local mosquito population. Similarly Cox et al. (1999), observe the prevalence of malaria in cooler highlands of African highlands may be a result of mosquitoes shifting habitats to cope with increased air temperature at lower altitudes.

## MALARIA RISK FACTORS AMONG BATWA

According to Berrang-Ford et al. (2012), community members of Uganda's Kanungu district consistently identify poor health as one of the greatest challenges facing Batwa residents. Health care professionals concur that Batwa face a significantly higher malaria burden despite the application of prevention measures ranging from promotion of long lasting insecticidal nets (LLINS) to indoor residual spraying (IRS) and integrated vector management (IVM).

Across the rest of Uganda, there is stable transmission of malaria in 95 percent of the population, but in the southwest highlands where Batwa live, transmission is not stable and outbreaks are common. While all Ugandans are at risk of being infected with malaria parasites, however, those who have little to no immunity are more vulnerable (GOU, 2011a). This applies to the Batwa who originally lived in forests and reportedly did not experience malaria. It has also been suggested that malaria risk is greater for residents of poorly built homes — such as those where many Batwa live — which harbor higher numbers of indoor-resting mosquitoes (Gamage-Mendis et al., 1991). According to the Government of Uganda (2011a), low income

households are also more exposed because poor quality housing is prone to mosquito entry and consequently, there are less means for preventive action.

## OPTIONS FOR MALARIA PREVENTION AND CONTROL

Efforts to control malaria in endemic areas of Africa have often focused on scaling up existing interventions including LLINs, IRS, intermittent presumptive treatment during pregnancy (IPTP), diagnostic testing and treatment of uncomplicated cases using artemisinin-based combination therapy (ACTs) (WHO, 2012a). In Uganda, significant progress has been made in scaling up treatment using ACTs and LLINs distribution. The country has also worked to expand parasite-based diagnoses and more resources have moved towards funding key interventions nationwide (GOU, 2011a).

The WHO (2007), under the Global Malaria Program, recommends three primary interventions for effective malaria control, which must be scaled up if countries are to move towards achieving MDGs by 2015:

- Diagnosis of malaria cases and treatment with effective medicines;
- Distribution of insecticide-treated nets, especially long-lasting-insecticidal nets, to achieve full coverage of populations at risk of malaria; and
- Indoor residual spraying to reduce and eliminate malaria transmission.

In order to achieve sustained, full-scale malaria control, there is need to combine a set of interventions and strategies depending on local conditions. In the past few years, the WHO has developed important strategies including a community-based approach (CBA) and the T3 (Test, Treat, Track).

The CBA proposes more responsibility in controlling malaria at the community and peripheral administrative levels, where affected communities take a more aggressive and tailored approach to eliminating transmission (WHO, 2012a). On the other hand, T3 seeks to focus the attention of policy makers and donors on the importance of adopting evidence-based recommendations on diagnostics testing, treatment and surveillance, and on updating existing control and elimination strategies (WHO, 2012b).

## CONCLUSION

One of the difficulties associated with reducing the incidence of malaria is the combination of diverse factors contributing to its transmission (Gunawardena et al., 1998), which is now further complicated by the onset of climate change. The CBA and T3, combined with Uganda's supportive policy framework, comprise current national malaria control plans, health sector strategic investments and renewed commitment from the Ugandan government aligned with global efforts to achieve the MDGs.

At the same time, it is critical to give special attention to vulnerable minorities like the Batwa and other indigenous communities in this process. The fact that minorities in Uganda have been marginalized creates a need to improve awareness amongst policy makers and implementers that can improve the status of groups such as the Batwa (UNFPA, 2008).

As the WHO (2012b) stresses, all malaria endemic countries, including Uganda, should ensure that every suspected malaria case is tested, every confirmed case is treated with anti-malarial medicine, and the disease is tracked through accurate surveillance to guide policy and operational decisions.

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