Hetzel et al. Malaria Journal 2012, **11**(Suppl 1):O46 http://www.malariajournal.com/content/11/S1/O46

ORAL PRESENTATION





Dramatic changes in malaria after the free distribution of mosquito nets in Papua New Guinea

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From Challenges in malaria research Basel, Switzerland. 10-12 October 2012

Background

Papua New Guinea (PNG) is a South Pacific island nation with a complex malaria epidemiology. Four malaria species are transmitted by a variety of anopheline vectors filling the diverse ecological niches. Attempts to eliminate malaria in PNG in the 1950s -70s failed largely due to operational difficulties related to the unique implementation environment. Since 2004, the national malaria control program has been supported by two consecutive grants from the Global Fund resulting in the first country-wide free distribution of insecticide treated mosquito nets.

Methods

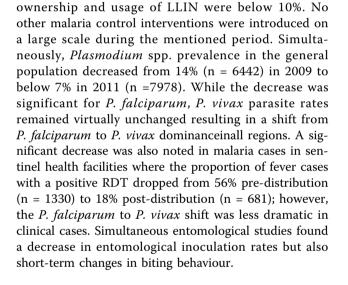
Two cross-sectional household surveys carried out in 2008/09 and 2010/11 in randomly selected villages across PNG investigated changes in malaria control intervention coverage and population prevalence of malaria infection. Malaria surveillance in sentinel sites documented trends in the incidence of clinical cases and the prevalence of malaria infection among fever cases in health facilities. Prevalence of *Plasmodium* spp. was assessed by rapid diagnostic test (RDT) and light microscopy.

Results

Country-wide household ownership of long-lasting insecticide treated nets (LLIN) reached 65% (n = 1958) in 2009 and over 80% (n = 1986) in 2011; usage in the target group of children under five years amounted to 40% (n = 1599) and over 55% (n=1768) in the respective years. Data from sentinel surveillance sites suggest that prior to the first LLIN distribution (2005 - 2009) both

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Conclusions

The dramatic effect of the Global Fund supported LLIN distribution on malaria in PNG poses new challenges to the national malaria control program. Implications for surveillance, prevention and treatment choices are discussed in consideration of experiences from comparable settings.

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doi:10.1186/1475-2875-11-S1-O46

Cite this article as: Hetzel *et al.*: **Dramatic changes in malaria after the free distribution of mosquito nets in Papua New Guinea.** *Malaria Journal* 2012 **11**(Suppl 1):O46.

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