Abstract

Malaria is a mosquito-borne disease caused by *Plasmodium* parasites. Epidemics occur in areas where most of the conditions for malaria transmission are present, contributing to over 90% of the estimated 650 million clinical malaria cases reported annually in the world, and approximately 41% of the world's population which is at risk of contracting malaria. Detection by health care workers of a malaria epidemic depends on knowledge on malaria monitoring indicators that include vulnerability, transmission and early detection. In Kenya, malaria epidemics have been reported in the greater Nyando sub-counties but the knowledge on malaria monitoring indicators amongst the health workers in the sub-counties is unknown. The significance of this study was to provide information on what the health care workers believe is a common health problem in the community, how malaria is transmitted within that community, and if there are early detection tools or techniques used in detection of malaria outbreaks in the community. Information gathered was to shed light on interventions required by the health care worker to reduce malaria infections in that community. The aim of the study was to assess the knowledge on malaria epidemic monitoring indicators among health care providers in Greater Nyando sub-counties. This was a descriptive cross-sectional study which included 141 health care workers (HCWs) working in health facilities in Greater Nyando Sub-counties. The specific objectives were to determine the health care providers knowledge on malaria vulnerability indicators, malaria transmission indicators and to examine health care providers knowledge on malaria early detection indicators. Purposive random sampling for HCWs was used to select staff to be interviewed to assess their knowledge on malaria epidemic monitoring indicators using a questionnaire in a personal digital assistant (PDA) having the Epi Surveyor software. The results indicated that majority of the HCWs were nurses (n=111; 79%), worked in dispensaries (n=56; 40%) and were from Upper Nyakach (n=54; 38%). In the community, the HCWs believed that malaria was a very common infection (n=140; 99%) in adults (n=128; 91%) and children (n=123; 87%). Not using an Incecticide Treated Net (ITN) (n=140; 99%) and bushes (n=136; 96.5%) were mentioned as major causes of malaria spread. The HCWs believed that malnutrition (n=135; 96%), HIV/AIDS (n=127; 90%), movement from endemic areas (n=94; 67%), poor drainage (n=132; 93.6%) floods (n=139; 99%), and rain (n=131; 93%) were contributors to malaria infection in the area. The HCWs were aware of malaria surveillance (n=141; 100%) activities that could be used for prediction (n=122; 87%) and planning (n=119; 84%) for malaria epidemics. These results show that awareness of malaria epidemic indicators in known among the HCWs though knowledge on specific interventions is lacking. Health promotion and design of specific malaria messages locally is recommended. Determining malaria thresholds and continuous monitoring of the epidemic curves would significantly visualise the risks due to malaria epidemics and adequate interventions implemented. There is need to strengthen malaria surveillance by closely monitoring malaria transmission and actions taken by the communities affected with specific interventions. Further research on knowledge and practice of the communities should be done to enable well designed health interventions that are practical to reduce malaria epidemics.