Determinants of Ownership and Use of Insecticide Treated Nets in Juba, Southern Sudan

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ABSTRACT

Malaria, caused by a protozoan parasite of the genus Plasmodium, causes one million deaths annually, mostly children under five years globally. In 2002, Sudan reported a malaria incidence of 282 per 1000 population while in 2006, the Infant and the under five Mortality Rates in Southern Sudan were reported to be 102/1000 and 135/1000 live births respectively. Global initiatives to control malaria (Roll Back Malaria and the Abuja declaration) offer opportunities for resources to control malaria through different measures including provision of Insecticides Treated Nets (ITNs), Artemisinin Combination Therapy (ACT), Indoor Residual Spray (IRS) and Intermittent Preventive Therapy (IPT). According to the Sudan Household Health Survey (SHHS) of 2006, only 11.6% of the households in Southern Sudan own at least one ITN. There is no reported data on the factors that determine ITNs ownership and use in households with children under five years in Juba, Southern Sudan. This was a cross-sectional community based study conducted in Juba County, Southern Sudan between August to October 2009 to determine factors associated with ITN ownership and use in households with children under five years and specifically to determine the percentage of ownership and factors that promote or hinder ITN ownership and use in Juba. Study participants were heads of households with children under five years of age in which 309 were interviewed. Structured questionnaire was used to collect the data which was entered, stored and analyzed using Epi-info version 3.5.

Odds ratio was used to measure level of association and Chi-square test to determine level of significance at 95% Confidence Interval and alpha level of 0.05.

The study revealed that although ownership of ITNs was high (86%), the use remained low (22%). ITN ownership was positively associated with awareness of mosquito repellent

(OR=3.90, 95% CI= 1.90-7.98, P-value=0.0002) and unemployment (OR=8.23, 95% CI=1.093-62.00, P-value=0.0407), while negatively associated with age 18 to 24 years (OR=0.31, 95% CI 0.13-0.71, P-value=0.0057). Use of ITNs was higher among those who obtained their nets from health facilities (OR=11.64, 95% CI=4.63-29.27, P-value=0.001) and NGOs (OR=10.68, 95% CI=4.23-26.98, P-value=0.001) while those who obtained theirs from markets were less likely to use them (OR=0.23, 95% CI=0.08-0.68, P-value=0.0074).

In conclusion, ownership of ITNs was highest among household heads with better education and income. Majority of households own ITNs, but only a few use and this falls below the Abuja target of 60% children sleeping under ITNs by 2005. Knowledge about mosquito repellant encourages ownership while ITNs obtained from NGOs and health facilities encourage use. Younger household heads hinders ownership while nets obtained from market hinder use.

The government should incorporate health education and ITN programmes in all health facilities and start mass distribution of free/subsidized ITNs.