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Sleeping arrangements under long lasting impregnated mosquito nets: differences during malaria transmission seasons

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The Anti Malaria Campaign has distributed approximately 300,000 long lasting impregnated mosquito nets to residents in malaria endemic areas of Sri Lanka. The sleeping arrangements under LLINs was recorded in 2467 households during the low malaria transmission season (May/June 2007) and the same families were followed up during the high malaria transmission season (December/January 2008) in Anuradhapura and Vanuniya districts. Approximately 800 households from each main ethnic group were studied. The number of families lost to follow up was 68. The percentage of individuals who slept under a net increased significantly ($p<0.001$) in all three ethnic groups during the high transmission season. During the low transmission season it was children under five years of age in the Sinhalese and Moor households that were given the priority to sleep under the LLIN. In the Tamil households, children between ages 5-12 were given preference. During the high transmission all three ethnic groups gave preference to children under the age of five years. When the entire population of children under the age of five years was considered the percentage who slept under the LLIN was high (75% and 90% during the low and high transmission seasons respectively). The percentage of children who did not sleep under a LLIN due to the fact that their households did not have an LLIN was 28% during low transmission season and 18% during high transmission season. As only approximately 45% of pregnant women slept under a LLIN during both seasons, utilization of LLINs by pregnant women was less compared to children under 5 years. Further the percentage of women (16% and 40% during low and high transmission season respectively) who did not sleep under the LLIN during the high transmission season due to an absence of LLIN in their household was high. Usage of LLINs by children under the age of five years, who are classified as a vulnerable population was high and comparable to the standards set by the Roll Back Malaria Initiative which indicates utilization of LLIN should be 80% by young children and pregnant women. However, usage of LLINs by pregnant women was less satisfactory. At the time of LLIN distribution, the households should be educated on key messages regarding the importance of the nets.

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