STRONG CHILDREN'S RESEARCH CENTER

Summer 2013 Research Scholar

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ABSTRACT

Title: *A Best Practice for Mosquito Net Usage: Lessons learned from community based participatory research in Senegal*

Background:
Malaria continues to be a devastating disease in Sub-Saharan Africa. Advances have been made to fight malaria, primarily with the mass distribution of insecticide treated mosquito nets. Despite these efforts, in 2010 alone malaria killed an estimated 600,000 people in Africa – 85% of whom were children under the age of five. As net distributions approach universal coverage of at-risk populations, Public health research attention has shifted toward the rates and determinants of the usage of available nets. The World Malaria Report 2011 found that Senegal has the lowest usage rates of available nets. Increasing the knowledge base about the social interactions between an at-risk person and their net can help us create interventions to increase net usage and the overall efficacy of an insecticide treated mosquito net.

Objective:
A household survey conducted in 2012 will be qualitatively analyzed to elucidate the barriers and facilitators in achieving universal insecticide treated net coverage in Senegal. The resulting data will be used to assess the need and direction of projects designed to increase the usage of available nets.

Results:
The qualitative household survey revealed several key themes. Foremost was the confirmation that one of the biggest barriers to using an insecticide treated net (ITN) remains access. 12% of respondents who lived in areas included in net distribution campaigns reported wanting more nets. This data, coupled with surveyor observations of damaged nets, supports our hypothesis that the ITNs are not lasting for their predicted 4 years in the community. This is most likely due to damage from excessive ITN washing.
Additionally, our analysis illuminated several factors to facilitate future and continual net usage in the community. For example, 20% of respondents reported customizability of nets as a key component in the improvement of current nets. This included changes such as: 1) More durable net material to prevent physical damage; 2) A door to the net to make entry and exit possible without collapsing the entire net; 3) A choice of nets based on size and design to allow proper coverage of irregularly shaped huts and to make nets aesthetically pleasing in the community.

Conclusion:
Mosquito nets remain the cheapest and most effective way to reduce malaria in a community. Our goal is to not only ensure the entire community has access to a net but also to make mosquito net usage a part of the Senegalese way of life. Fortunately, the goal of universal coverage is closer to being attained. The results of this analysis will be utilized in future interventions be it through redesigning the current nets or creating additional education modules on how to ensure the longevity of nets already in the community. Such interventions will ensure that universal net distribution correlates with universal net usage, ultimately reducing malaria contraction rates.