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Lamu Sensitive Aid: Barriers to Distribution, Acceptance, and Use of Malaria Prevention in Lamu District

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Lamu Sensitive Aid:

Barriers to Distribution, Acceptance, and Use of Malaria Prevention in Lamu
District

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SIT Kenya: Swahili Studies and Coastal Cultures

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Abstract

This study examines how organizations work locally to distribute malaria aid and education for malaria prevention. Additionally, it analyzes the effectiveness this aid has in improving malaria preventative techniques used by the people of Lamu District. This effectiveness was compared in the contexts of several regions of the district to further understand differences in rural and urban settings. Information was gathered using a variety of interviews with organizations and prominent community leaders to gauge their ideas on malaria in Lamu and strategies used to prevent it, and informal field interviews to observe different communities' perspectives on malaria and also their perception of the aid efforts by organizations. The results of the study suggest that while malaria preventative measures are gaining popularity in Lamu District and malaria prevalence has decreased, effective prevention measures are still not used by many in the district. It also shows a troubling reality that barriers to malaria prevention in Lamu District extend to greater levels than just community acceptance. The funding structure for local organizations also limits the community's ability to combat urgent issues such as malaria.

Assumptions and Biases

At the onset of my study, it must be recognized that I had heard of cases of cultural factors hampering insecticide-treated bed net (ITN) acceptance and use, and I was interested to see if this could be the case in Lamu as well. I also had a belief that Western malaria prevention advancements such as medicine or ITNs would not be accepted, and traditional methods of malaria prevention such as use of traditional herbalists and medicine for malaria would

be widespread. The idea of my study came after hearing of issues such as corruption within the distribution frameworks of ITNs, so it must be noted that I believed I might find issues such as this in Lamu. I asked open questions to allow for any response removing my personal bias, but it is also possible that assumptions I previously had affected the questions I asked and thus affected results.

Background

The disease malaria is caused by the parasite *Plasmodium*. There are four species of *Plasmodium* with *Plasmodium falciparum* being the most dangerous to humans and unfortunately accountable for 98 percent of all malaria infections in Kenya.¹ *Plasmodium* is transmitted to humans by female Anopheles mosquitoes that rely on human blood as their food source.² Despite the devastating effect *Plasmodium* can have on humans, the Anopheles mosquitoes themselves are unharmed by the parasite and thus act as an efficient vector for the disease.

Upon entry to the human body as the mosquito bites to receive blood, the parasite makes its way to the liver where it develops and multiplies for typically 9-14 days. From the liver the parasite then attacks the red blood cells, which are when malaria symptoms typically start to develop. Symptoms of malaria are wide ranging and can appear as a fever, chills, headaches, and even flu-like symptoms. If the malaria is not handled properly with medical assistance, the parasite can develop to more life-threatening conditions such as anemia or cerebral malaria. Though there have been significant advances in

¹ Division of Malaria Control. *Kenya Malaria Fact Sheet*. Republic of Kenya. 2009.

² WHO. "What is Malaria?" Roll Back Malaria Infosheet. 2006. Accessed 2 December, 2009. <http://malaria.who.int/cmc_upload/0/000/015/372/RBMInfosheet_1.htm>

the field of medicine to combat malaria, strains of *Plasmodium* have recently been known to develop resistance to certain anti-malarial prophylaxes which adds to the difficulty in effectively handling the disease.³

To combat the spread of malaria, many countries and organizations have placed a strong emphasis on preventative measures to disrupt the mosquito's life cycle and also prevent contact between humans and the vector. A popular and effective way to reduce contact has been the use of insecticide-treated bed nets (ITNs) while sleeping. As the genus *Anopheles* is nocturnal and usually bites at night, transmission is greatly reduced by the proper use of ITNs.⁴ The insecticide coating the bed net acts as a deterrent to mosquitoes, which prevents human-vector contact even if the human accidentally touches the netting. The ITN kills the mosquitoes that come in contact with the net, further reducing the vector presence in homesteads. This defense also effectively shortens the mosquito life span, as their access to nutrition is reduced. It has been found that when properly used, ITNs can provide a 30-60 percent reduction in malaria morbidity.⁵

Recognizing the importance of proper ITN use as a measure to reduce malaria prevalence, the World Health Organization's (WHO) Roll Back Malaria initiative adapted distribution and access to ITNs as a main pillar in their project. The 2000 Abuja Declaration made a goal of distributing ITNs to ensure coverage of at least 60 percent of the region's pregnant women and children under the age of five—the sectors of the population with the highest risk regarding malaria. With this goal in mind, the Kenyan government, in association with several aid organizations, effectively raised the percentage of children under

³ Ibid.

⁴ Sumitomo Chemical. *Olyset Net Technical Information*. London, UK. 2009.

⁵ Division of Malaria Control. *Vector Control*. Republic of Kenya. 2009.

five sleeping with an ITN from 4.6 percent in 2003 to 50.2 percent in 2006, just slightly short of the Abuja Declaration of 60 percent coverage by 2005.⁶ Fifteen million ITNs have been distributed in Kenya from 2001 to 2009. However this still only results in an average of .8 ITNs per household, not enough to ensure proper coverage showing that still more needs to be done to fully utilize this preventative technique.⁷

In addition to the use of ITNs as a prevention measure, the WHO advocates for other measures to be taken as well to further reduce the prevalence of the vector. Some of the methods advised are Indoor Residual Spraying (IRS) to remove mosquito populations inside the homesteads, clean-up of stagnant water, and clearing of bush to remove breeding locations of *Anopheles* mosquitoes. Applying these strategies on a greater community level can have a large impact in reducing the vector around humans, and thus can reduce the risk of malaria transmission.⁸

Despite the great advancements in malaria prevention, more is still needed to be done to ensure that all of the Kenyan population, regardless of income, is properly equipped with ITNs and educated on their proper use to effectively prevent malaria transmission. Malaria is still the leading cause of morbidity and mortality in Kenya. It is estimated that malaria causes 20 percent of all deaths in children under the age of five.⁹ This is equivalent to roughly 90 Kenyan children dying daily as a result of malaria.¹⁰ This disease has been

⁶ Division of Malaria Control. *Kenya Malaria Fact Sheet*. Republic of Kenya. 2009.

⁷ Division of Malaria Control. *Kenya Malaria Fact Sheet*. Republic of Kenya. 2009.

⁸ Division of Malaria Control. *National Malaria Strategy 2001-2010*. Republic of Kenya. April 2001.

⁹ Division of Malaria Control. *Kenya Malaria Fact Sheet*. Republic of Kenya. 2009.

¹⁰ PSI Kenya. "Where We Work." 4 July, 2009.
http://www.psiwash.org/where_we_work/kenya.html

eradicated in many developed countries, but continues to devastate many developing countries like Kenya killing 1-2 million people yearly, with 90 percent of the deaths occurring in Sub-Saharan Africa.¹¹ Malaria is not only a significant health issue to the people of Kenya, but also a large contributing factor hampering economic development. It is estimated that 170 million working days are lost to malaria each year.¹² To add to this, malaria accounts for 40 percent of Africa's public health expenditures and costs the region as much as 12 billion USD annually.¹³ This is money that could otherwise be used to encourage development. An unhealthy workforce also dissuades potential foreign investment which could help provide employment essential to the development of the nation's economy.

With these pressing issues in mind, this study analyzes the efforts put forth by local non-governmental organizations (NGOs) to encourage malaria prevention, and how these efforts are received by the people of Lamu District to ultimately affect behavior change amongst residents to better combat the threat of malaria in their lives. As is the case with most diseases, prevention of malaria transmission is a far more effective strategy than relying on medication to cure. As ITNs have been a major focus in the fight against malaria in Africa by the WHO, this study also analyzes the ITN usage trends of different communities to better understand barriers to their usage as a measure of malaria prevention. While the *ability* to prevent malaria is available in the form of ITNs, spraying homesteads, and removing breeding areas; the issue currently is properly administering this technology and information to the people that need it. NGOs of Lamu have undertaken this challenge alongside the Ministry of Health to enable the communities to prevent malaria transmission, and this study analyzes

¹¹ Sumitomo Chemical. *Olyset Net Technical Information*. London, UK. 2009.

¹² Division of Malaria Control. *Kenya Malaria Fact Sheet*. Republic of Kenya. 2009.

¹³ PATH Malaria Vaccine Initiative. *Fact Sheet*. 2009.

the strategies they have used and their actual effects on behavior change. More is needed than simply distributing this aid to communities as the organizations well know, efforts need to be undertaken to educate and convince the population to adapt the prevention strategies to effectively fight malaria on the community level.

Literature Review

On the topic of ITN distribution, research has shown that in certain situations merely providing ITNs is not enough to ensure they are used properly. A study done by Jane A. Alaii showed that even after distributing ITNs free to those in malaria endemic regions, the usage of the ITN did not mesh with the local culture and they were not used. Though the populations were given free ITNs and all the necessary tools for mounting, only half of the ITNs were in use a month later. Many cited heat as the reason they did not use the ITN, others pointed to the fact that sleeping arrangements in their culture were not conducive to ITN use. While the ITNs were intended for the children, the ITNs were used by parents, as children maintained their traditional habit of sleeping on the ground together leaving them still vulnerable. Still others believed the smell of the insecticide caused sickness. Particularly interesting to this study is that many did not use the ITN, fearing the insecticide would cause infertility in children, and that cultural practices such as funerals— which involve a congregation of relatives in one house— were not conducive to the use of the bed nets. This study helped show that more is required than simply distributing ITNs to effectively combat malaria. In this case understanding the cultural practices is essential before being able to successfully change behavior.¹⁴

¹⁴ Alaii, J.A., et.al. "Community Reactions to the Introduction of Permethrin-Treated Bed Nets for Malaria Control During a Randomized Controlled Trial in Western Kenya" *American Journal of Tropical Medicine and Hygiene*. 2003.

Organizations must take cultural practices and situations into account in order to ensure the prevention measures issued can reach their full potential.

Another study by Agha Sohail looked at how the implementation of an ITN intervention can affect the knowledge, access, and use of ITNs in rural Zambia. The findings suggest the knowledge benefited most residents in the region, but still those of the lowest socio-economic situation (SES) were not able to purchase even highly subsidized nets due to costs. The results align with previous research findings that social marketing attempts to persuade ITN use in rural communities will be difficult unless prices are kept very low to open access to those of the lowest SES groups.¹⁵ While demand may be there in communities to practice malaria preventative measures such as ITN use, factors such as socio-economic barriers must be taken into account to ensure all sectors of the community are able to participate. While ITNs in Lamu District are distributed at a highly subsidized price, there is still a possibility that it is not enough to permit the purchase by those of low SES in the district. Organizations must take this into account when formulating distribution plans.

Another study by Cathrine Panter-Brick went beyond the issue of accounting for culture in distribution and behavior change to look at culturally *compelling* ways to create this behavior change. The study took place in rural Gambia, and specifically focused on community-directed intervention to encourage community members to repair holes in their ITNs. In the study, they created songs and displayed posters by community members to create a sense of ownership in the malaria prevention technique. Evaluation of the study showed that the strategies applied—particularly creating songs—were highly effective in instigating behavior change in the community to increase repairs of mosquito nets. The study used this successful intervention to create a framework

¹⁵ Sohail, Agha, Et. Al. "The impact of a hybrid social marketing intervention on inequities in access, ownership and use of insecticide-treated nets." *Malaria Journal*. 2007.

for future health related interventions within the social ecology of behavior practices.¹⁶ In the context of my study, it shows that successful interventions regarding behavior change are possible and more effective when accounting for culture, and should be taken further to ensure intervention methods are culturally *compelling* as well.

While my study places an emphasis on the strategies organizations use to pass information and the greater structures in place to allow this local freedom to organizations, minimal scholarly work can be found on the topic. Perhaps the lack of study on issues with greater aid distribution structures is because it is a new topic. However, it is also possible that the topic of analyzing aid structures is not politically correct in certain contexts pertaining to the ideology that ‘of course aid is helping.’ This possibility illuminates a great need for analysis of the topic, as billions of dollars of donor funding are poured out each year and it needs to be assured that the aid is properly allocated to best serve the recipients. Regardless of the reason as to why there is this discrepancy, it is important to note that previous work on the topic is lacking in the world of academia and this paper aims to provide new insight into issues present within greater foreign aid structures active in Kenya.

Significance of Research

This study differs from previous scholarly work in that it looks at how organizations work to distribute culturally sensitive aid in addition to gauging the acceptance of malaria preventative methods and barriers to their usage. It has been discovered by previous scholars that more is needed beyond basic distribution to instigate behavior change, and this study takes this information

¹⁶ Panter-Brick, Catherine; Sian E. Clarke, Heather Lomas, Margaret Pinder, Steve W. Lindsay. *Culturally compelling strategies for behaviour change: A social ecology model and case study in malaria prevention*. *Social Science & Medicine Journal*. 62 (2006) 2810–2825.

and applies it to a new setting of Lamu District, where organizations are currently working on the issue, educating to change these behaviors. Malaria prevention is an essential tool to combat the disease district-wide, as transportation throughout the district to seek treatment is expensive and unpredictable. It is also important because current health facilities available often lack resources for proper treatment. Furthermore, Lamu District is a part of the coast region that has been labeled a malaria endemic region, which suggests a regional need for aid and access to proper malaria preventative measures such as ITNs. As this study is following a recent large push district-wide to fight malaria, it is important to gauge the successes of these efforts and investigate if still more needs to be done.

Location

This study took place in various locations of Lamu District, which is one of seven districts that make up Coast Province of Kenya. The predominant religion of Lamu District is Islam, which accounts for approximately 80-90 percent of the population. The main economic activity for this region is fishing and agriculture, with a growing tourism industry supplying incomes to many in Amu Division.¹⁷

Lamu is a low-lying region with an altitude from 0-50 m above sea level. The district experiences a range of 540-1100 mm of rain per year, most of which comes during the wet seasons. The temperature ranges from 23.6° C – 31.2° C which creates ideal conditions for the breeding of *Anopheles* mosquitoes.¹⁸ Along the Kenyan coast is one of Kenya's two malaria endemic regions, areas of stable malaria transmission (the other being the Lake Victoria lakeshore). Regions along the coast have been known to have malaria prevalence often

¹⁷ Lamu District Development Plan 2002-2008. Republic of Kenya. Ministry of Finance and Planning. 2002.

¹⁸ Ibid.

exceeding 50 percent, though prevalence decreases moving closer to the Somali border, due to the more arid climate. The transmission and maximum disease risk exhibit seasonal fluctuations due to changes in rainfall, temperature, and humidity. High transmission seasons occur in the short rains of November to December and in the long rains from April to June.¹⁹

The last major peak in malaria prevalence occurred in 1998-1999, when Lamu District reached a prevalence of around 60 percent. This period of high transmission was correlated to the El Nino Southern Oscillation (ENSO) occurring that year, leading to regional flooding, and therefore ample breeding sites for *Anopheles* mosquitoes.²⁰ This carries relevance to the study as 2009-2010 also marks the return of ENSO, giving increased importance of proper malaria control and preventative measures in the district. The current malaria prevalence rate is estimated to be about 10 percent, though this figure is not exact. A doctor at the public King Fahd hospital said actual malaria figures are unavailable. The figures available are distorted, as any fever-like symptoms are treated as malaria in dispensaries and clinics, where rapid malaria tests are not available. It is also distorted in that many in Lamu District self-treat for malaria and obtain medicines from pharmacies or traditional healers rather than going to the hospitals for treatment.²¹

Many factors contribute to the need of strong malaria preventative behavior in Lamu District. The doctor to patient ratio is 1:36,343, illustrating the obvious difficulty of relying on rapid treatment once contracting malaria. In addition, 11 percent of the population has no access to health centers whatsoever, which is clearly a hindrance to relying on treatment as a way of

¹⁹ Division of Malaria Control. Malaria Background Info. Republic of Kenya. 2009.

²⁰ Interview. David Gitau. Lab Technologist of King Fahd District Hospital. 13 November, 2009.

²¹ Interview. David Gitau. Lab Technologist of King Fahd District Hospital. 13 November, 2009.

dealing with malaria.²² This lack of access to proper medical care is exacerbated by the poor state of infrastructure in Lamu District.

The poor state of roads in the district was noted as a major development challenge in the Lamu District Development Plan 2002-2008. Additionally, as Lamu District is an archipelago, difficulties in reaching proper healthcare is a significant issue, as those living in rural areas must rely on inconsistent, expensive marine transportation to hospitals or health centers. The plan states that "In the district, lack of access to health services may be due to high cost of medication or mobility to reach the health facilities due to the poor condition of the roads, and the unreliability of sea transportation on which a majority of the residents depend."²³ Poor infrastructure is clearly an issue for the people of Lamu District, and their frequent isolation does nothing to help the economic development of the region.

Lamu District was projected to have a population of 90,774 in 2008. Of this population as of 2002, it was estimated that 60 percent live in absolute poverty, contributing to an average household income of 787 Ksh (10.49 USD).²⁴ To combat malaria in the midst of such poverty, the government run hospitals administer free *Artemesinin Lumefantrine* (AL) anti-malarial medications to the entire population. The government also began a program two years ago with the help of outside donors to provide free ITNs to all children under the age of five and pregnant mothers. ITNs were also made available for the rest of the

²² Lamu District Development Plan 2002-2008. Republic of Kenya. Ministry of Finance and Planning. 2002.

²³ Lamu District Development Plan 2002-2008. Republic of Kenya. Ministry of Finance and Planning. 2002.

²⁴ Lamu District Development Plan 2002-2008. Republic of Kenya. Ministry of Finance and Planning. 2002.

population at the highly subsidized price of 50 Ksh (.67 USD) at government hospitals and dispensaries.²⁵

To assist the Ministry of Health in their fight against malaria, many organizations are present in Lamu also administering aid. For this study, the main organizations observed working on malaria were Kenya Red Cross Lamu Branch, Council of Imams and Preachers of Kenya (CIPK) Lamu, Tawasal, and Kikozi.

The Red Cross Lamu Branch is a member of the Kenyan Red Cross, but also receives funding from international Red Cross donor countries. Currently they are running a program called Home-Based Malaria Management (HMM) funded by the Canadian Red Cross. The purpose of the program is to reach out to underserved areas of the district with high rates of malaria prevalence. They sensitize the communities about malaria and its causes by working with a community health worker (CHW) from the community. The main focus of the project is to administer AL medication to children under the age of 5, as these regions lack easy access to timely health treatment. The program is a pilot-project with another program in Malindi to gauge success for the possible implementation nationwide by the Ministry of Health in the future.

The other organizations mentioned are run locally with funding currently coming from the United States Agency for International Development (USAID) through the regional organization AIDS, Population and Health Integrated Assistance Project (APHIA II). The focus of APHIA II is to reach out and deal with health related issues such as HIV/AIDS transmission and stigma, malaria, and tuberculosis through community-based organizations (CBOs) or NGOs to empower the local community. The organizations funded in Lamu by APHIA II

²⁵ Interview. Athman Dumila Mohammad. District Commissioner of Health. 18 November, 2009.

each deal with a specific sector of the Lamu population to ensure each demographic is reached.²⁶

The first group, CIPK Lamu, is a Faith-Based Organization (FBO) that works mainly, but not exclusively, with the Muslim population. The branch works on reaching out to men in the community by training imams on community issues such as malaria and HIV/AIDS. It was started in 1997 and has its national headquarters in Mombasa. Currently the Lamu branch is the only sector of CIPK receiving funding from USAID.²⁷

The second organization, Tawasal, works primarily with youth on the subject of HIV/AIDS stigma reduction in the community. They recently finished a project under the Global Fund however to distribute ITNs to youth under the age of five and pregnant mothers throughout the district.²⁸

Finally, Kikozi, the last organization observed, works with the women of the community through peer education and the formation of women groups. Their main focus is HIV/AIDS education and stigma reduction. They work alongside CIPK Lamu and Tawasal to occasionally host outreach events to areas like Kashmiri. They are currently not working on the subject of malaria however.

Methodologies

Obtaining the information needed for this study required working on two fronts: First, interviewing and observing the aid organizations of Lamu to see how they distribute assistance and information, and secondly, conducting informal interviews with people in various locations of Lamu District to understand their

²⁶ Interview. Mohammad Mwalim. Field Coordinator of CIPK Lamu. 11 November, 2009.

²⁷ Interview. Mohammad Mwalim. Field Coordinator of CIPK Lamu. 11 November, 2009.

²⁸ Interview. Omari Famau. Director of Tawasal. 25 November, 2009.

perspective on malaria, what they do to protect themselves, and what they feel about the work of the organizations.

In visiting organizations, I conducted several interviews with different workers of the group to see exactly how their organization functions and, in the case of the Red Cross, attended their outreach check-ups to further observe their work. These interviews were conducted primarily in English as almost all in the organizations knew English. Also, to better understand the framework these organizations work within, I interviewed representatives at APHIA II headquarters and other office branches in order to see the structure and flow of foreign funding down to the local organizations to better understand the framework.

The second sector of my research— hearing the communities' perspectives on malaria and the organizations' aid— took place in various rural and urban areas to gain a fuller picture of opinion and practice. The locations for research were Amu town on Lamu Island, the region of Kashmiri (actually further divided to Kashmiri, Kandahari, Bombay, and India) on the outskirts of Amu town, Manda Mashambani on Manda Island, and Mtangawanda on Pate Island (See Appendix A). A total of 47 individuals were interviewed in the field. This can be broken down further to 16 in Amu town, 18 in the Kashmiri region (4 in Kashmiri, 3 in Bombay, and 10 in India, 9 of who took part in an informal group interview), 8 in Manda Mashambani, and 5 in Mtangawanda. Through these individual interviews I was also able to hear perspectives on the greater community's practices.

Most of the research was conducted by myself in Kiswahili, as the questions asked were within my comprehension level of the language (See Appendix B). In the outreach to Manda Mashambani I was fortunate to travel with Muhsin, the outreach coordinator of the Red Cross Lamu Branch, to pursue my research. On this visit to Manda Mashambani, I was able to use Muhsin as a translator. To ensure results were not skewed by the presence of a Red Cross

worker, I also returned with a private translator to again gauge the situation of the community.

The informal interviews with community members were typically brief, lasting 15-20 minutes. In field situations I would find a shaded area upon conclusion of the interview to write notes, rather than noting throughout, which I felt would disturb the flow of the interview and perhaps affect results. I interviewed a wide spectrum of the population including women, men, elderly, young adults, and community leaders to ensure proper representation and also to possibly discover demographic differences in results.

Interviews took place in a variety of locations such as living rooms, shops, offices, the town square, and *shambas* (farmland). Using this approach of interviewing I was able to get many perspectives to ensure more accurate information. As Lamu is a small community where individuals can be recognized easily, certain names from interviews have been omitted from the study to protect their identity. Quotations used from field outreach have been translated from Kiswahili.

Study Findings

CIPK Lamu

A main focus of the CIPK Lamu Branch is reaching out and educating members of the community through the mosques. A special focus is placed on incorporating health information into the *khutba* or sermon given by imams at every mosque on *Ijuma* (Friday). With the *khutba*, the imams address health issues such as malaria and defend practices with examples from the Quran or Hadith on how Muslims should live their lives. In talking with representatives of CIPK Lamu, they showed examples of how they teach malaria prevention.

إِنَّ اللَّهَ لَا يَسْتَحْيِي أَنْ يَضْرِبَ مَثَلًا مَّا بَعُوضَةً فَمَا فَوْقَهَا فَأَمَّا الَّذِينَ آمَنُوا فَيَعْلَمُونَ أَنَّهُ الْحَقُّ مِنْ رَبِّهِمْ وَأَمَّا الَّذِينَ كَفَرُوا فَيَقُولُونَ
مَاذَا أَرَادَ اللَّهُ بِهَذَا مَثَلًا يُضِلُّ بِهِ كَثِيرًا وَيَهْدِي بِهِ كَثِيرًا وَمَا يُضِلُّ بِهِ إِلَّا الْفَاسِقِينَ {26}

Surely Allah does not hesitate to give humans whichever examples He wishes—for example, a mosquito and beyond...²⁹

The Quran does not directly talk about each issue, but rather it covers large topics and offers keywords that can be used to direct Muslims to the truth. In looking at the verse, *mosquito* was put there intentionally to show the importance of mosquitoes in larger issues such as malaria. The keyword offers academics a guide to study mosquitoes and thus find how mosquitoes play a major role in malaria transmission. Also, *beyond* could be anywhere, even inside the mosquito guiding humans to find *Plasmodium*, the parasite responsible for malaria. Showing Muslims the reference of mosquitoes in the Quran, imams can further stress the importance of vector control and malaria prevention.

CIPK Lamu also teaches that knowledge is respected and desired in Islam. Evidenced by the first verse of the Quran saying:

اقْرَأْ بِاسْمِ رَبِّكَ الَّذِي خَلَقَ

خَلَقَ الْإِنْسَانَ مِنْ عَلَقٍ

اقْرَأْ وَرَبُّكَ الْأَكْرَمُ

الَّذِي عَلَّمَ بِالْقَلَمِ

عَلَّمَ الْإِنْسَانَ مَا لَمْ يَعْلَمْ

READ in the name of thy Sustainer, who has

created man out of a germ-cell

Read - for thy Sustainer is the Most Bountiful One

who has taught (man) the use of the pen

taught man what he did not know!³⁰

²⁹ Informal translation provided by Omar Alma Fazi. CIPK Accountant. 12 November, 2009. Text can be found in the Quran. Al-Baqarah (Chapter 2: Verse 26)

From this, Muslims are encouraged to *read* and continue learning, not simply accepting things the way they are. In the *khutba*, the imams teach that Allah created both medicine and disease, and it could be said that disease or 'problems' are a challenge for humans to overcome. As knowledge and science are strong foundations of Islam, any discovery made by scientists, even Western scientists, is to be used in combating these challenges. There is no stigma in the Quran about using modern advancements. The challenge was stated by a representative of CIPK Lamu, Omar Alma Fazi, as follows:

Allah enabled Anopheles mosquitoes to carry *Plasmodium* to humans causing malaria, but he also gave humans the knowledge on how to prevent mosquito contact. Knowing the mosquito lifecycle, humans can rise to the challenge of malaria and use the technology available to prevent mosquito development or malaria transmission. To meet this challenge, people must remove stagnant water from their property, spray their homes to prevent mosquitoes, and also use an ITN while sleeping to prevent transmission.³¹

Thus, CIPK Lamu uses the words of the Koran to break any stigma against any new methods of prevention such as ITN use, and actually put it upon each person in the community to rise to the challenge and do their part in preventing malaria transmission.

By talking to other religious leaders in the communities, the perspective became widespread that working through the *khutba* is a very effective way of reaching the people of Lamu.³² Unlike outreach events and other activities put on by organizations, public attendance at the *khutba* is guaranteed, as it is a

³⁰ The Quran. Al-Alaq (The Clot) (Chapter 96, Verse 1-5) Translated to English using M Asad Translation. <http://www.islamicity.com/QuranSearch/>. Accessed: 2 December, 2009.

³¹ Interview. Omar Alma Fazi. CIPK Accountant. 12 November, 2009.

³² Interview. Mahmud Ahmed Abdulkadir. Amu Town, Lamu District. 27 November, 2009.

religious obligation. Also, it is a quiet setting where people must listen to the message, regardless if they want to or not. The work in the *khutba* is also a very important strategy in Lamu to combat the false interpretation that 'everything is planned by God', rather than making choices that will direct one's future. Many in Lamu can recite the Quran, but are unable to fully comprehend greater meanings as it is in a foreign script. This creates issues for the community, in that a lesser understanding of the religion's true path guides people to take false meanings from the religion's beliefs that go against the development of their community.³³ Teaching the population the true meaning of the verses in this regard is a very effective way of instigating behavior change.

The biggest issues in working through the *khutba* though are that it does not reach the non-Muslim population in the district, and also that there are no women in attendance. As one resident put it, "it has an effect, but those who listen to *khutbas* are men, while those actually doing the cleaning of homesteads and cooking are the women."³⁴ One cannot ensure that the men will pass the message along, yet the ones needed to be reached are those responsible for maintaining the cleanliness of the homesteads, removing the stagnant water, the women.

In addition to incorporating health issues into the *khutba*, CIPK Lamu also distributes flyers on important current issues, educating the community on the issues and giving advice on how to deal with the problems. In this way CIPK Lamu can reach out to families as a whole rather than just the men attending the mosques. They also do outreach to communities like Kashmiri in conjunction with Kikozi to ensure their message gets outside of just the Amu community.

³³ Interview. Private Interview. 29 November, 2009. Amu Town, Lamu District.

³⁴ Interview. Private Interview. 29 November, 2009. Amu Town, Lamu District.

The response of the community to strategies put forth by CIPK Lamu is generally positive. Working through the mosques and *khutba* is clearly a very effective way of disseminating information to the people of Lamu. While the population is appreciative of the work of CIPK Lamu, some did have suggestions and complaints for their work. One woman said, "They try very hard to encourage people, but the message becomes redundant over time. Those who will change have changed and it has no effect on others."³⁵ The community has heard the message put forth by CIPK Lamu, but perhaps more needs to be done to instigate behavior change. Another man said, "What they do in the mosques is good, but more could be done outside of the *khutba*, like organizing group discussions or leading clean-ups."³⁶ Again, the community recognizes their work in the mosques, but perhaps more could be done to engage the community.

Tawasal

The organization Tawasal has been a prominent group in Lamu for many years, working on a variety of topics from civic education to HIV/AIDS. They began work on malaria in 2004 and they were the main organization dealing with the topic at that time. The project was to distribute 6000 ITNs provided by the Global Fund to under-fives and pregnant women throughout Lamu District.³⁷ To do this, they first consulted with the chiefs of each village to check on the situation in each location and then worked through nursery schools and dispensaries to ensure that each child was equipped with an ITN. Before handing out the net, they ensured that each receiving family was educated about malaria and proper ITN usage to ensure the ITNs could have their

³⁵ Field Interview #25. 17 November, 2009. Amu Town, Lamu District.

³⁶ Field Interview #42. 21 November, 2009. Amu Town, Lamu District.

³⁷ Interview, Omari Famau. Director of Tawasal. 25 November, 2009.

maximum effect.³⁸ This was a very effective strategy to ensure the populations were reached and behaviors were changed when compared to other situations where ITNs were distributed. In one private distributor's experience, nets were often used for fishing or sold-off after they were distributed, as they saw short term gains or food for the day as more important than their use in preventing malaria.³⁹ To combat the tendency in Lamu for people to sleep without ITNs due to perceived heat, they convinced recipients that the nets they were distributing were cotton, which reduces heat and allows air flow. They also said that the nets only need to be used from 10 pm to 4 am, as these are the hours *Anopheles* mosquitoes typically feed.⁴⁰ Giving people these reasons and simple guidelines for use, in addition to educating the population on malaria prevention in general, were recognized as important strategies to reduce the chance of any other barriers to malaria prevention in the district.

Tawasal said that of course they would like to distribute nets to everyone in the district, but in reality they only were given 6,000, while Lamu district has a population of around 100,000. The desire to reach out to the populations in need is there, but the funding to carry out such projects is not. Tawasal is currently waiting on the Global Fund to approve a new project to increase malaria awareness and run workshops that would educate the people of Lamu District on malaria and prevention techniques.⁴¹

In general, the community perception of Tawasal is positive. People enjoy the work they currently do with youth and the theatres they currently use to educate the community. Some were more skeptical of Tawasal, calling it a 'political organization'. One claimed that their distribution was broadened to

³⁸ Ibid.

³⁹ Interview. Sarah Hillewaert. Amu Town, Lamu District. 29 November, 2009.

⁴⁰ Interview, Omari Famau. Director of Tawasal. 25 November, 2009.

⁴¹ Interview, Omari Famau. Director of Tawasal. 25 November, 2009.

please more than just the under five population. They claimed that as a result of this some children in need were not reached as nets were given elsewhere.⁴² With this it must be recognized that free ITNs were also distributed to children by the Ministry of Health through hospitals and dispensaries. Tawasal ensured that no nets were given unfairly or outside of the contract, even to their own families.⁴³

Red Cross Lamu Branch

Though the Red Cross' current focus is only on distributing AL medication to children under five in hard to reach areas of Lamu District through their HMM pilot project, they have played several roles in their short history in Lamu to combat malaria. A few years ago, the Red Cross received funding from Public Services International (PSI) to run a large malaria prevention campaign as part of the larger community push by donor funding to fight malaria at that time. To reach the community, the Red Cross used techniques such as youth theatre groups to engage the public and also increase community knowledge about malaria and malaria prevention.⁴⁴ This method of reaching the community through theatre has been very effective and is currently being used for their HIV stigma reduction program.

Currently, in addition to distributing AL medication to CHWs to later distribute to sick under-fives in the villages, the Red Cross teaches the CHWs to then teach malaria prevention to their respective communities. This strategy of working through a CHW has been seen to be a successful way of distributing information to several hard to reach locations of Lamu District. It is also helpful in

⁴² Private Interview. Amu Town, Lamu District.

⁴³ Interview, Omari Famau. Director of Tawasal. 25 November, 2009.

⁴⁴ Interview. Muhsin Mohammad Ahmed. HMM Coach, Red Cross Lamu Branch. 30 November, 2009.

empowering each community to take measures of malaria prevention into their own hands. The CHWs emphasize environmental cleanliness to reduce malaria and mosquito populations near homesteads, and also proper ITN use to further protect from malaria. As mosquito nets are new and did not used to be part of their culture, many times they are used improperly, such as simply hanging it in the home, as they were told it repels mosquitoes, or by using it as a blanket.⁴⁵ This is why continued education by the CHWs, who can easily make check-ups to ensure proper usage, is still important.

As an organization, the Red Cross Lamu Branch is very conscious of delivering aid in a way that is acceptable by the people of Lamu. They take projects that are implemented nationwide and change them so they will be accepted in Lamu. In the case of their HIV project, they have created an entire manual apart from the National HIV manual called Islamic Life Skills Based Education. This version makes the national material appropriate by removing certain pictures and fighting stigma of HIV by using examples from the Quran.⁴⁶ This religiously sensitive approach is a large reason as to the Red Cross' popularity in the community. Sometimes this is as simple as toning down dances from the national model on outreach to keep people comfortable and accepting to the aid information as well. Even with their malaria outreach, they work through mosques such as approaches by CIPK Lamu to stress the importance of cleaning homesteads and using ITNs.⁴⁷

Community perception of the Red Cross in Lamu has been steadily improving as "their name and workers are everywhere and they are able to

⁴⁵ Interview. Muhsin Mohammad Ahmed. HMM Coach, Red Cross Lamu Branch. 30 November, 2009.

⁴⁶ Interview. Nancy Chebii. HIV/AIDS Focal Person, Red Cross Lamu Branch. 16 November 2009.

⁴⁷ Interview. Zahra Aboud. Project Officer of HIV/AIDS and HMM programs, Red Cross Lamu Branch. 11 November, 2009.

reach so many places.”⁴⁸ Initially, the Lamu community had a stigma against their presence, as they perceived the emblem to be religious and imposing on their culture. However, this stigma was eventually reduced after conducting workshops to tell community members how the Red Cross is not religiously affiliated and is only concerned with helping the community. Currently, the community is very accepting of Red Cross work and impressed as they are able to do “so many projects in so many different areas of the district compared to the other NGOs and CBOs of Lamu.”⁴⁹ In the rural communities, people are welcoming of the Red Cross, but also frustrated as they are currently only offering assistance to those under five. However, the Red Cross is actually unable to deliver these services to the whole population through the CHWs, as the AL medicine requires a prescription under the current national laws for all those except those under-five. Some are also frustrated, as the Red Cross said they would bring nets as a part of their program, but they have not received them yet. Unfortunately, these nets have not come from the Red Cross Lamu Branch's donors yet, leaving this section of the project still incomplete.

Effect on the Community: Current Prevention Practices

After analyzing and comparing responses regarding malaria in the different locations, it became clear that there is no overarching rural perspective on malaria but rather each community had its own situation.

Amu Town

The urban area for the research was Amu town on Lamu Island. Amu is the location for the offices of the organizations observed, and also the area

⁴⁸ Field Interview # 42. 21 November, 2009. Amu Town, Lamu District.

⁴⁹ Field Interview # 42. 21 November, 2009. Amu Town, Lamu District.

receiving the majority of the aid and education. Through the many interviews, it is clear that the government and organization attempts to educate and distribute nets for free to children under five and pregnant mothers have succeeded in ensuring the coverage of these at-risk populations. Every person interviewed with a young child told that the child sleeps under an ITN. In many cases, this correlated to the rest of the family also sleeping under nets, but this was not always the case. In several households interviewed, children slept protected under nets, while other members of the family slept uncovered, using other methods of prevention. One woman noted that “children in our household sleep with nets, but the rest of us just use a fan to keep mosquitoes away.”⁵⁰ In another household bed nets are above every bed, but only the youngest uses a net while the rest of the siblings sleep without. The guardian said that “they are old enough to make their own decisions.”⁵¹ This lack of use was usually reasoned by nets being too hot and uncomfortable, paired with the lowered amount of mosquitoes and perceived reduced risk of malaria in town. One woman originally from Tana Delta stated that she uses a bed net in Tana Delta, as there are so many mosquitoes there, but here there are few so she uses coils instead.⁵² In general, the information has been provided to the community but it has not been convincing enough to persuade all to practice malaria prevention.

Kashmiri Region

The first outreach community was the villages of Kashmiri, Kandahari, Bombay, and India-- all on the outskirts of Amu town. These communities have been recently developed and are still under construction, as high prices for plots

⁵⁰ Field Interview # 36, 20 November, 2009. Amu Town, Lamu District.

⁵¹ Field Interview # 43, 22 November, 2009. Amu Town, Lamu District.

⁵² Field Interview # 47, 25 November, 2009. Amu Town, Lamu District.

in town are pushing many day-workers of Amu town out. The population was described by a resident as “Muslims who were born here, and Christians who have moved here for work.”⁵³ The community is mostly without electricity, and the SES tends to worsen as moving further away from Amu, ending with the most impoverished communities like India. The general trend of community is that people use mosquito nets as a necessity due to high mosquito nuisance, with the main deterrent being cost of investment. The region is low-lying and was once swamp land, which are prime breeding grounds for mosquitoes. As one man put it, “If I don’t sleep with a net I will be disturbed by mosquitoes all night and not sleep.”⁵⁴ For those who can afford it, ITNs are essential, even though it is perceived as hot to sleep under them. In talking to a young adult in Kandahari, he said he uses a net, but he went further to say he uses it “only because there are so many mosquitoes, not because of malaria.”⁵⁵ While his reason of ITN coverage is not to protect from malaria, protecting from mosquito nuisance is still effective in preventing malaria transmission.

This situation is not the case for everyone in the area though. In talking to several women residing in India, one explained that they received one ITN free from the hospital for their child, but still could not afford to pay the 50 Ksh reduced price to cover the rest of the family. She said, “ We are left trying to fit a mother, three children, and a relative under one net and it does not work...we have to slap mosquitoes instead.”⁵⁶ Many understand the importance of the ITNs in protecting them and they would gladly trade protection for heat, but their SES is simply not conducive to the investment of an ITN. As one member of CIPK Lamu put it, “There is a difference between living and surviving, and still

⁵³ Field Interview # 18-19, 13 November, 2009. Kashmiri Region- Bombay, Lamu District

⁵⁴ Field Interview # 18-19, 13 November, 2009. Kashmiri Region- Bombay, Lamu District

⁵⁵ Field Interview # 23, 13 November, 2009. Kashmiri Region- Kashmiri, Lamu District.

⁵⁶ Field Interview # 09-17, 13 November, 2009. Kashmiri Region- India, Lamu District.

many in Lamu are stuck on surviving."⁵⁷ The choice comes down to purchasing an ITN or feeding the family for the day, and in these situations, even the highly subsidized ITNs are not a viable option for them.

Manda Mashambani

The second location of fieldwork was Manda Mashambani on the island of Manda just outside of the airport. The community is mostly made up of farmers and the homesteads are scattered amongst the many *shambas*. For the people of Manda Mashambani, the closest medical help is on Lamu Island, which is an expensive ferry toll for many of the impoverished residents. In talking to several people, many shared the idea that malaria was the biggest health issue they face due to their low-lying bushy region and abundance of mosquitoes. Despite this, many outside the free coverage of pregnant women and children under five are unable to afford even the subsidized nets. One elderly man stated that he even saved to purchase a net some years ago, but now it is worn and lets mosquitoes through, making it useless. He cannot afford another net now so his family all sleeps uncovered.⁵⁸ Economics was the main factor affecting lack of ITN coverage for the community. In talking to the chief and headman and their families, malaria was not too big of an issue, as they could afford the subsidized nets and pay for the occasional trips to Lamu in case of malaria. The chief even said that "everybody has nets here...malaria is not an issue."⁵⁹ This showed a clear divide between the understanding of the leader and the actual needs of the whole scattered community. A *shamba* worker responded to the words of the chief by privately saying "all is not fine,

⁵⁷ Interview. Omar Alma Fazi. CIPK Accountant. 12 November, 2009.

⁵⁸ Field Interview # 33, 19 November, 2009. Manda Mashambani, Lamu District.

⁵⁹ Field Interview # 34, 19 November, 2009. Manda Mashambani, Lamu District.

many people have no nets and have no money to buy nets.”⁶⁰ He went so far as to say “(the chief) does not want development” in their community and was frustrated by the leadership.⁶¹ Not all were neglected though, those within the parameters of the free distributed nets were able to benefit from the offer and were very grateful for the program. One man was able to get three nets from the program, and since children typically sleep together on one bed they were enough nets to cover the rest of the family as well. He said, “We all sleep under nets and even have one left over, *Mashallah!*”⁶² This shows the clear benefits free distribution can bring, especially to regions plagued with the cycle of malaria and poverty such as Manda Mashambani.

Mtangawanda

The third location for fieldwork was the village of Mtangawanda on Pate Island. It is a small Muslim fishing and agriculture community, with the nearest medication at a dispensary in Pate, and the nearest medical assistance in Amu, an expensive and unpredictable 150 Ksh boat ride away. Surprisingly however, in contrast to the other rural locations, the 50 Ksh subsidized price did not seem to be an issue and those desiring ITNs had ITNs. Some claimed malaria was a large issue there still, but many others said that “there are many mosquitoes, but few of them carry malaria.”⁶³ These residents did not see malaria as a big threat to their community. Perhaps due to this perceived lack of threat, many people said they did not use ITNs due to heat. This much more resembles the situation of the urban location of Amu town, despite the detached rural setting. In asking

⁶⁰ Field Interview # 32, 19 November, 2009. Manda Mashambani, Lamu District.

⁶¹ Field Interview # 32, 19 November, 2009. Manda Mashambani, Lamu District.

⁶² Field Interview # 28, 18 November, 2009. Manda Mashambani, Lamu District.

⁶³ Field Interview # 38 & 41, 21 November, 2009. Mtangawanda, Lamu District.

one man why, he said, “nets are just too hot... and people don’t like them.”⁶⁴ A common alternative in the community was burning mosquito coils to keep mosquitoes away while they sleep. In some homesteads, young children receive nets free from the hospital, but as the family prefers coils, the nets are put aside, even at the risk of the child. This is not to say that no one in Mtangawanda uses ITNs, as in fact much of the community does. One young man said, “I use a net, sometimes I sleep with a coil but a net is better.”⁶⁵ Regardless of preference, the economic shortcoming of the other villages was not nearly as present in Mtangawanda, despite its remote location and lack of electricity. What the community really wanted was a dispensary so they could easily deal with any malaria cases rather than make the expensive trip for care elsewhere. It is for this reason that some choose to rely on traditional medicine for basic conditions, and only go to the hospital if conditions become serious.⁶⁶ This can become dangerous as transportation is unreliable from the community. Waiting until conditions become serious can often be too late to treat the conditions, especially with the unreliability of health services, even on Lamu Island.

One man interviewed shared very interesting information regarding people’s understanding of malaria there. He and his family uses mosquito coils instead of ITNs, but claimed he could distinguish between malaria-carrying mosquitoes and normal mosquitoes, saying those with malaria are “more white.” He also said malaria only comes with the wet seasons so there is really no need to worry the rest of the year. Adding to this, while his family uses coils, his wife recently fell sick with malaria and had to go to the hospital for care. Despite his

⁶⁴ Field Interview # 38, 21 November, 2009. Mtangawanda, Lamu District.

⁶⁵ Field Interview # 41, 21 November, 2009. Mtangawanda, Lamu District.

⁶⁶ Field Interview # 38, 21 November, 2009. Mtangawanda, Lamu District.

wife's illness, he still did not see malaria as a large issue.⁶⁷ The information shared regarding the community's perception of malaria occurrence is troubling, as proper prevention measures are not observed. The ability to discern malaria-carrying mosquitoes from others is interesting, but useless in regard to malaria prevention, as one is not able to observe mosquitoes during transmission hours—while sleeping. Rather, observing general prevention measures would be much safer in preventing malaria. Perhaps reduced malaria prevalence in the community has permitted the use of alternative prevention methods such as coils, but the lack of uniform ITN use still is dangerous, especially with regard to distance to proper care. Heat was an issue affecting ITN use, and since the community does not have power, there are no fans to offset the perceived heat under the net. This does create a stumbling block to convincing ITN use, especially as the malaria prevalence rate is perceived to be low relative to other regions.

Discussion

ITN Use and Factors Preventing Use

All of the interviews conducted in the field suggest that the strategy of supplying ITNs for free to at-risk populations has been a success. Nearly every family interviewed said their child sleeps under a net, as they are more susceptible to serious malaria. However, this focus on at-risk populations has led to a gap in coverage deriving from a perceived lack of threat for the remaining population. This should be seen as a big issue inhibiting a unified fight to eradicate malaria in Lamu District.

While it is true that young children and pregnant women are at a higher risk for being affected by malaria, it does not mean that the rest of the population has any lesser odds of contracting the *Plasmodium* parasite, even if

⁶⁷ Field Interview # 38, 21 November, 2009. Mtangawanda, Lamu District.

this only results in mild symptoms that are easily treatable, even over the counter. This perception that 'malaria is not a risk to adults' is dangerous, as this sector of the population can simply become a carrier from which malaria can flourish rather than assisting in eradicating it from the area. Also, as there is no separation between at-risk populations and the rest of the community, a mild-case of malaria for one person can increase the odds of malaria-carrying mosquitoes in the region, as they could have fed from the infected person, thus contracting the parasite and becoming part of the vector. This all leads to more chances and opportunities for at-risk populations to contract malaria, even if observing proper prevention strategies such as ITN use, as this is not able to prevent the occasional transmission that can still happen in the hours outside of sleep.

The reasons for this phenomenon of sectionalized ITN use and lack of wide-spread coverage are two-fold: many are not convinced that ITN use is worth the perceived added heat, and still others cannot afford to add the purchase of an ITN into their daily budget. The issue of heat discouraging ITN use in Lamu is a conundrum with no easy solutions. It is still a belief shared by many in Lamu that ITNs discourage air flow, which is reason enough for many here to sleep without the net. The stance of most organizations is waging the severity of sleeping with the perceived heat or contracting malaria. As many know the dangers of malaria, they understand the importance of the preventative measure and suffer through the heat. But a representative of CIPK Lamu defended the thought process of those still choosing against ITN use. Contracting malaria can sometimes be overshadowed by issues related to lack of sleep due to the heat. "Poor sleep night after night can lead to poor health perhaps resulting in frequent headaches. This consistent health issue can hamper with one's ability to work, and thus lead to the conscious decision

against ITN use.”⁶⁸ A fan would be an easy solution to encourage air flow, but many in the district are without electricity, as it is simply not viable due to their economic situation.

These issues with heat in Lamu cause many to use non-proven, less effective prevention strategies such as the use of mosquito coils, which once exhausted, allow mosquitoes to return. Fans are only effective in disturbing mosquito flight, but still allow many opportunities for possible transmission once they land. Screening windows is also a popular technique, which does significantly reduce mosquito numbers in the home, but cannot ensure 100 percent prevention.

Efforts are being undertaken by manufacturers to create more “heat-friendly” ITNs, which could help alleviate this issue in the future. Companies such as Sumitomo Chemical are creating LLINs with wider mesh to improve airflow, recognizing that “some people avoid sleeping under ordinary bednets because they perceive them to be too hot and uncomfortable.”⁶⁹ Though they have wider mesh, the insecticide permethrin they contain repels mosquitoes and kills any mosquitoes still daring to penetrate the mesh. While proper education must be used to instruct on the new net’s benefits to overcome the stigma amongst some that nets are hot in general, improved technology such as this could assist in ‘culturizing’ ITNs to be adaptable for all in hot regions such as Lamu.

While sleeping without ITNs is a choice for some, many in Lamu District expressed desire for an ITN but could not afford the investment due to their economic situation of poverty. While 50 Ksh is a much reduced price for the service given, many are not able to logically make this investment as the opportunity cost is providing the daily food for their family. In these situations,

⁶⁸ Interview. Omar Alma Fazi. CIPK Accountant. 12 November, 2009.

⁶⁹ Sumitomo Chemical. *Olyset Net Technical Information*. London, UK. 2009.

perhaps more education is required to show the economic benefit of the small investment comparing it to costs of treating malaria each time.

Organization Work through Cultural Framework

Gauging by the response of the community to aid efforts put forth by organizations, it suggests that the local NGOs and CBOs are successfully working through Lamu's cultural framework to administer education and aid. All the organizations observed are run by local people and incorporate several factors in their work to make sure the aid reaches the population. Working through the religious framework is clearly an important adaptation organizations of Lamu use to reach the populations in not only a culturally acceptable manner, but also one that is culturally *convincing*. CIPK Lamu's work through the mosques is clearly an effective way to distribute information on a large scale in the region. As religious leaders are highly respected in the district, using them to work toward behavior change is a very important tool to affect a large population of the district. As mosques provide a setting where people are congregated and quiet, it is a perfect way to disperse important information to the community. As one religious leader put it, "during the *khutba*, they must listen."⁷⁰ Issues in working through the mosques are still that the female population is not reached, and thus strategies such as working through women *darasas*, such as with Kikozi, or organizing indoor meetings and focus groups like the Red Cross, are important additions to ensure that the whole population receives the aid. The entire aid distribution framework for Lamu is completed when you add organizations such as Tawasal that work with the youth. Their approaches such as theatre when used properly, by analyzing skits afterward to ensure the message is passed, is a very effective way to draw the attention and provoke thought of the youth population of Lamu.

⁷⁰ Interview. Mahmud Ahmed Abdulkadir. Amu Town, Lamu District. 27 November, 2009.

However, still a significant issue with this aid is that it is focused mainly on Amu town, leaving the rest of the district unreached. The organizations do conduct occasional outreach to Kashmiri region, but it seems the outreaches are too few and far between to have a lasting effect on these communities. This lack of outreach was recognized by CIPK Lamu and was made a goal for their future to outreach more to needy communities outside of Amu town. As is the situation of many NGOs, funding is always the issue, as even the most simple outreach activities cost money. Red Cross has been reaching out to several underserved communities in the district, but still their ability to provide for the need of the community is limited, as the funding is simply not there to provide things such as ITNs to everyone in need.

In the aid that organizations have distributed to other areas of the district such as ITN distribution by Tawasal, successful strategies have been used to ensure populations are educated before the ITN is given. Educating the people before distribution has seemed to help create a demand for the ITNs throughout the district, even though many are still unable to afford them. Reasoning with recipients to overcome barriers to usage such as heat was well used to limit the possibility that the nets will go unused. However, the method used by Tawasal to say that ITN use was only needed from 10 pm to 4 am could have negative effects, as a recent study by scientists suggests that Anopheles mosquitoes are adjusting to the implementation of ITNs and are beginning to feed earlier in the night to adapt to the net use.⁷¹ This therefore needs to be revised for the future malaria prevention campaign under the Global Fund.

Larger Organizational Framework

Looking at each organization's effort to combat malaria ended up opening insight into issues on the subject of the greater NGO structure in Lamu.

⁷¹ Gathura, Gatonye. "Alert over New Malaria Trend." Daily Nation. 28 October, 2009.

An interesting observation after looking at the roles the organizations have fulfilled throughout their history is the flexibility required regarding subject focus to sustain the organization. Each organization has worked on a variety of topics to adapt to grants being awarded by the larger donor foundations. For example, Tawasal's original focus was on civic education under funds by USAID, the Ford Foundation, and the UN. Eventually as hot button issues on the international agenda changed these funds dried up. With changing trends, Tawasal applied for a grant under the Global Fund to distribute ITNs throughout Lamu District. Currently, while seeking more funds to continue the malaria work with Global Fund, they adapted once more and now work with APHIA II funding under USAID to teach HIV/AIDS education to youth.⁷² It is clear to see that adaptability is essential for these NGOs' survival. Organizations must be willing to work on a variety of issues, despite their desires, to continue their aid work.

Another example of this adaptability is the organization Kikozi. The organization focuses on women in Lamu and has been active in the community since 1998. In their beginning, their main focus was microfinance for women to train and assist them in starting their own businesses. In 2005, they secured a grant by USAID to teach civic education to women to inform them on their rights. Currently, they are also working on the issue of HIV/AIDS stigma under APHIA II. They said they do not work on malaria, as there currently no available funding, despite recognizing it as large community issue. They even tried to get funding from the Global Fund for malaria prevention but did not receive the grant.⁷³ This is another clear indication of how much control donors still have over the direction of aid locally.

⁷² Interview, Omari Famau. Director of Tawasal. 25 November, 2009.

⁷³ Interview. Amina Kale Loo. Project Manager of Kikozi. 25 November, 2009.

Each organization has a subject they would prefer to focus on as well, urgent issues they see themselves as fit to deal with in the community. For instance, when asked, Kikozi said it would be better if they could continue to work with microfinance integrating it into HIV/AIDS stigma reduction, but their current grant is not sponsoring the additional topic.⁷⁴ CIPK Lamu sees their organization as fit to address the urgent issues of drug abuse and human rights issues such as domestic abuse, but under their current contract they are strictly guided to work on HIV behavior change. While they recognize the issue of HIV stigma reduction and behavior change as urgent, they “would like to work on both if grants were available.”⁷⁵ Similarly, Tawasal’s educational efforts originally placed an emphasis on sanitation as it contributes to so many other community issues in Lamu. Tawasal still sees sanitation as Lamu’s biggest issue, but currently can not find donors to fund projects.⁷⁶

This all suggests that there is a significant gap between the aid desired by the community and the grants and projects provided by international donors. Aid focus changes with international trends, but these trends do not always reflect the urgent issues on a community level. The organizations are able to successfully work in their community to educate and change behaviors, but this work is restricted to certain subjects rather than reaching their full potential. It is beneficial that large donor organizations empower local NGOs to work through the cultural framework, but still more could be done to allow these grassroots NGOs and CBOs to adjust to provide exactly what the community needs.

Currently a hot button issue in Kenyan donor aid is HIV/AIDS. Lamu has been affected by this new aid trend with now over five NGOs and over ten

⁷⁴ Ibid.

⁷⁵ Interview. Mohammad Mwalim. Field Coordinator of CIPK.. 23 November, 2009.

⁷⁶ Interview, Omari Famau. Director of Tawasal. 25 November, 2009. Amu Town, Lamu District.

CBOs working under grants related to HIV/AIDS issues. While recognizing that HIV stigma reduction is an important issue for the community of Lamu, not one informant listed it as the biggest health issue in their community. This *could* mean that there is still stigma against HIV, making it taboo to mention (which would confirm that it still is a large issue), but also it could suggest that aid elsewhere, for example to promote sanitation reducing cholera and malaria, would be more relevant to Lamu's current condition. As one informant put it, "People are still dying of general diseases like malaria, yet the focus is on HIV."⁷⁷ This all reflects back to donor desires overshadowing community needs. As the informant also said, "Everything depends on what funding is available."⁷⁸

The issue is not the empowerment of local organizations to better distribute aid in a culturally sensitive manner. Discussions with both actors suggested that APHIA II merely provides assistance when desired and requires monthly reports to track progress. The organizations are empowered to deal with their community, as they see fit on the issue. Neither is the issue whether the aid is reaching the population, as different organizations were funded for specific purposes to reach each community differently. In Malindi, APHIA II funds the organization Solwodi, which works with sex workers on HIV/AIDS education, while in Lamu there is no such organization, as it would not be applicable in the much more conservative culture.⁷⁹ The issue seems to be larger than even APHIA II management to reach the levels of grants provided by large funding organizations. Issues selected at this level may reflect larger trends in Africa, but they are not always able to focus these large grants to community specific issues.

⁷⁷ Private Interview. Amu Town. Lamu District.

⁷⁸ Private Interview. Amu Town. Lamu District.

⁷⁹ Interview. Elizabeth Nafula. Director of Solwodi-Malindi. 9 November, 2009.

Conclusion

“dawama, dawama, ukambau kata jiwe”

Repeating, repeating, the thin rope cuts the stone⁸⁰

Information from the fieldwork suggests that ITN use is slowly becoming part of the Lamu culture. Work by organizations has successfully created a demand for the ITNs district-wide for youth, and a growing demand for adults as well, as they recognize the advantages of using an ITN in malaria prevention. It appears, however, that organizational focus on youth has thrived at the expense of the importance of prevention by the entire community. While it was important that the organizations focused on those at-risk first to ensure their protection, now it is necessary to adapt a more community-focused campaign to further educate members of the community on what they can do to help eradicate malaria, and also what can result if they choose not to practice malaria prevention.

In order to allow many of those in rural communities of Lamu District to practice effective malaria prevention techniques, I believe the next step is to provide free ITNs to all people in regions of the district where it is still not economically viable to invest in a net. Eventually, the economic advantage of preventing malaria with ITNs will be a better investment than the money currently spent on providing free treatment to all who contract malaria—the investment will be offset. As ITN coverage by itself is not 100 percent effective in

⁸⁰ Swahili Proverb by Mahmud Ahmed Abdulkadir. 27 November, 2009.

malaria prevention, still other efforts such as sanitation in the community need to continue to be emphasized to fully tackle the issue of malaria in Lamu. To achieve these goals, the population needs to continue to be educated about diseases like malaria and the importance of practicing effective malaria prevention techniques.

Also shown by the research, the organizations of Lamu play a major role in educating the community, leading to behavior change. To achieve this task, local organizations have successfully adapted their information and present it in a way that is both accepted by the community and also persuasive to encourage and instigate the larger behavior change. While more could be done in many cases to further the efforts to more communities in Lamu District, or even reach out locally in Amu to lead more community initiatives, money is always a factor dissuading aid efforts, as always more could be done.

This constant importance of money in order to continue aid work has been a troubling realization in studying the organizations of Lamu. The organizations have the experience in the community and know how to adapt a message so it is convincing locally, but too often these message topics are decided by donors and not by the organizations which have a much clearer idea as to the situation in the community. Urgent issues such as sanitation are left unaddressed, as there is no international funding for the cause. Similarly other issues such as malaria are abandoned mid-fight as funds dry up and aid is directed elsewhere. The fact that even the main district hospital currently has no nets to distribute or even to sell indicates the severity of the drop-out of funding toward malaria in Lamu District recently.

This suggests that there needs to be a change in the categorization of grants to be more *community* based as opposed to issue based. While the donor organizations do a great job of empowering the local NGOs to pass culturally appropriate information and assistance, it should also be emphasized

that donors care to provide culturally and community *relevant* aid as well. Issues can change rapidly in places like Lamu, and the organizations in place are willing and able to adapt to meet these pressing issues, but grants they are contracted under limit them to only certain issues. Organizations are left waiting for funds to be allocated to their desired issues, and if what they see as important is not recognized internationally, they simply have to adjust and apply for other grants to ensure the sustainability of their organization. This again leaves pressing community issues unresolved, while other issues take up the community spotlight as directed by donor funds. While it is popular and moving for donor foundations to claim they will 'eradicate a disease in Africa' with their funding, perhaps it would be more beneficial to local communities if grassroots organizations not only decided how to deal with issues in their community, but also which issues in the community currently need dealing with.

Malaria prevention has been experiencing great success in Lamu District to the enormous benefit of the local population. It would be troubling to see this advancement fall stagnant due to lack of international support. Donor funding has the power to make great changes and improvement in developing communities; it just needs to be ensured that the funding goes towards the actual needs of the community and is not based on popular international trends. In empowering local community organizations of Lamu to fight the issues they see urgent, I believe preventable issues such as malaria can be handled in an effective, culturally convincing manner.

Recommendations

As the topic of health and NGOs in Lamu is expansive and could yield many studies, with more time much more could be done to expand on this research. More rural perspectives would help paint a better picture as to the overall situation of malaria in the greater Lamu District, not just Amu town. The

gaps in rural and urban resource allocation would also have been an interesting study to pursue, as there is still such a divide within the district.

With regard to the organizations working locally to distribute aid, shifting focus from malaria to HIV/AIDS would provide very interesting results, as the stigma in the community on the issue is still so great. It is also interesting to see how this aid is passed using the religious framework of Lamu, as the conservative culture appears to be much less accepting of modern methods of HIV/AIDS prevention. Another interesting topic to focus on in Lamu would be sanitation and addressing issues such as cholera or diarrheal diseases, as they are so prevalent in Lamu.

As for doing research in Lamu, people are more than willing to share perspective with students; it is just a matter of posing the question. For men, *barazas* or the seafront in the evening can be great locations to stimulate discussion and quickly gather public opinion. Organizations such as the Red Cross can be great locations to start research, as they are well connected to the rest of the community and can direct you to more information and contacts.

Setting up interviews with Western organizations here is much more difficult than their African counterparts and this must be taken into account if desiring to do a research with them. For these organizations, it would be much easier to obtain information with a contact in the system.

Appendix B: Sample Field Interview

- 1) What do you believe is the biggest health issue in your community?
 - a. Unaamini katika jamii yako ni lipi tatizo kubwa zaidi la kiafia?
- 2) Do you think malaria is a big issue in your community?
 - a. Unafikiri malaria ni tatizo kubwa katika jamii yako?
- 3) What are the issues you face in protecting your family against malaria?
 - a. Ni matatizo gani unayakumba katika kuilinda jamii yako dhidi ya malaria?
- 4) How do you protect your family against malaria?
 - a. Unailinda vipi jamii yako dhidi ya malaria?
- 5) Do you use nets when you sleep? Why or why not?
 - a. Je, unatumia chandarua cha mbu unapolala? Kwa nini au kwa nini hutumii?
- 6) How did you obtain your net?
 - a. Ulipata vipi chandarua chako?
- 7) Are there organizations helping the people here?
 - a. Je, kuna vyama ambavyo vinawasaidia watu hapa?
- 8) How do you feel about their work, would you prefer something else?
 - a. Unahisi vipi juu ya kazi za vyama hivyo; je, ungapendalea jambo tofauti?

*This is merely a framework from which the interviews were based. Often the questions differed depending on responses of the interviewees.

Appendix C: Acronyms Used

AL- Artemesinin Lumefantrine

APHIA II- AIDS, Population and Health Integrated Assistance Project

CBO- Community-Based Organization

CIPK- Council of Imams and Preachers of Kenya

FBO- Faith-Based Organization

HMM- Home-Based Malaria Management

IRS- Indoor Residual Spraying

ITN- Insecticide Treated Bed Net

Ksh- Kenyan Shillings

LLIN- Long Lasting Insecticidal Net

NGO- Non-Governmental Organization

SES- Socio-Economic Situation

UN- United Nations

USAID- United States Agency for International Development

WHO- World Health Organization

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