



Barriers in Rural Healthcare Centers: Identifying Hygiene Practices and Understanding of the Treatment and Prevention of Malaria in the Ivory Coast

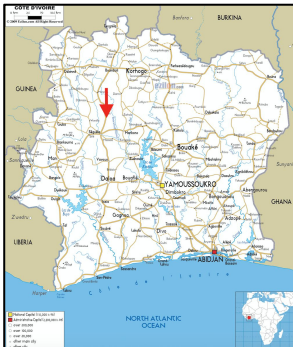
Ismael Ben Fofana PhD, Mansé Bamba PhD, Victoria Pouille, Jude Aboukhater, Laura Stehler



Background

As of 2017, only 68% of Ivoirians live within five kilometers of a health center. While expansion has increased, many are not completely familiar with and do not fully utilize their resources. Most people do not visit a clinic until they are already sick, especially in rural communities. Frequent access to primary and prenatal care has been shown to reduce maternal mortality in other developing countries, yet most women do not seek prenatal checkups. The presence of malaria in particular, despite having access to preventative options, remains a widespread problem. A National Malaria Control Program 2006 survey showed that only 27% of households owned a mosquito net, and just 6% of those were insecticide-treated nets. Other prevalent diseases include yellow fever, hepatitis A and B, typhoid, and tetanus, all of which are vaccine-preventable.

Location



Surveys were conducted in three northern villages: Gbémazo, Kondogo, and Karaba. Gbémazo, the largest of the three, is the location of the new Centre de Santé, the new health center built to serve these three communities. The local language is Dyula, with a majority muslim population and nearly 20% of the individuals in the village being under the age of five.

Objectives

- To identify reasoning for the underutilization of the Centre de Santé de Gbémazo amongst the population of the three villages
- To sponsor a public health event that will promote the use of the center
- To hear from women about their concerns regarding health care access and their experiences with the new center
- To determine current beliefs and practices surrounding the cause, treatment, and prevention of malaria

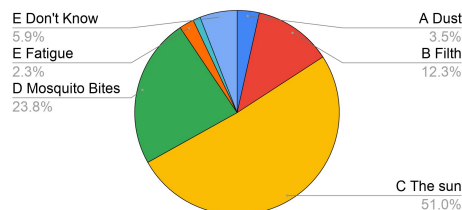
Methods

We conducted a survey that included questions regarding the new Gbémazo Health Center, attitudes toward vaccines, women's health, hygiene, and malaria. While the bulk of the questions pertained to malaria, we saw value in asking a range of questions in order to form a comprehensive perspective of health in the village. Surveys were written in French but conducted via translators in Dioula (Malinké), the local language of the region. We surveyed 251 individuals over the age of 18.

Results

Malaria:

- Out of 45.8% of participants who claim to know the cause of malaria, these are what they believe the cause to be:



- 29.9% of participants claim that they know how to prevent malaria.
- 84.5% of participants have had malaria and 61.8% of those fall ill with malaria more than twice a year.
- 58.6% of participants stated they use traditional methods, such as herbal drinks, to treat malaria.

Sanitation:

- 98.8% of people said they wash their hands before eating, but out of those only 29.3 % of people use soap, with the rest not using any product.

Women's Health:

- 95.2% of participants believe that prenatal health check-ups are important.
- 81.7% of participants believe that it is not appropriate to discuss menstruation in public.

Vaccinations:

- 91.6% of participants have been vaccinated before and 98.8% of participants would accept a vaccination if offered to them.

Education Level:

- 87.3% of participants did not receive any formal education.

Discussion and Future Direction

Based on our results, we found that most of the population surveyed has a very good foundational understanding of the importance of sanitation, health, and treatment, but there is a gap present in the scientific understanding. The vast majority of people surveyed have an erroneous knowledge of the causes and origin of malaria. They also perform the act of washing their hands before eating, but it is unclear whether they understand the benefit of using soap and hand washing in prevention of the transmission of certain diseases. Once again, the understanding is there, but there is a disconnect between the scientific knowledge behind the understanding. This is most likely the result of the fact that this is primarily an uneducated and unlettered population and very few have the level of a primary/elementary education. Women's health is also recognized to be important, yet it is still a stigmatized topic of discussion. With increased understanding of reproductive and newborn health, these deeply rooted attitudes toward women's health as a taboo topic can diminish significantly. We believe that the new health center will serve as a platform to provide necessary health-related information, distribute valuable educational materials as well as conducting workshops and activities for the benefit of the entire population.

Acknowledgments

We would especially like to thank Dr. Ismael Ben Fofana, Dr. Mansé Bamba, the Côte d'Ivoire Ministry of Health, the Prime Minister of Côte d'Ivoire and the Centre d'Information et de Communication Gouvernementale (CICG) for collaborating with us. We would also like to thank the BC Cadigan Alumni Center Legacy Grant and the Biology Department for their financial support, as well as Dr. Philip Landrigan for his guidance and support.

References

- National Institute of Statistics and ICF International. "Enquête Démographique et de Santé et à Indicateurs Multiples de Côte d'Ivoire 2011-2012." Calverton, Maryland, USA. 2012.
- UNAIDS. Country factsheet: Côte d'Ivoire. 2017; Available at: <http://www.unaids.org/en/regionscountries/countries/coteivoire>. Accessed Apr 12, 2018.
- National Malaria Control Program - <https://www.cmi.gov/docs/default-source/default-document-library/malaria-operational-plans/fv17/fv-2017-cote-d-ivoire-malaria-operational-plan.pdf?sfvrsn=4>