



Kilifi Kids

Rotary International



mHealth Prospectus



Bringing Healthcare to Kids

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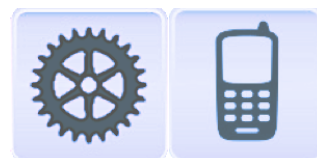
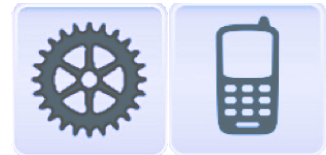


Table of Contents

mHealth Project Executive Summary

mHealth Project Details

About Kilifi Kids: Our History	3
About Mobile Health: Cell Phones + Health	3
The Looming Health Problem in Kilifi: Malnutrition	4
Road Block to Treatment: Distance and Isolation	4
Our Solution: Bring the Mountain to Mohammed	5
Redefining how health workers work against malnutrition	
The Future: Scaling Worldwide	6
Join the Team, Save Lives! We Need Your Help to Succeed	6



mHealth Project Executive Summary

Kilifi, Kenya, a region of 740,000 people, is beset by poverty and malnutrition. Chronic hunger means that the children of Kilifi are highly susceptible to diseases like Malaria or TB or diarrhea—**thousands of kids per year are dying due to malnutrition**. Health care is difficult in Kilifi especially because of the lack of transportation and **the isolation that poverty entails**.

But technology can help change that: already, **cell phones are widespread in the developing world**, including in Kilifi. They're going to transform how these countries operate, and this shift is being leveraged to improve health. Kilifi Kids is joining this opportunity.

How? A major problem in **Kilifi is that the 700,000 people in the district are served by only 11 doctors**. Kilifi does have a great asset—over 2,000 Community Health Workers, trained personnel in the towns and villages of the district. However, being miles away from the nearest medical facility, the network is uneven in quality and skills. By **providing these health workers with cell phones, training and an automated text-message based system**,

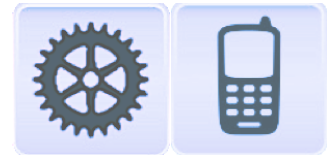


we can improve their management through improved communications; by improving management, we can make sure the **kids with the greatest health problems get the care they need**. The cell phone and the emerging field of mobile health that allow us to do this.

Short term, Kilifi Kids and Kilifi Rotary Club is working with **leaders from the UN Foundation, Stanford University and the Millennium Villages Project**. Long term, Kilifi Kids also will foster the expertise we develop to expand:

1. **Financial Self-sustainability:** We will, by controlling costs for healthcare provision, make this project financially self-sustaining for the communities we work in and ensure long-term viability.
2. **Expansion:** This project is the first step; we expect to expand to other regions of Kenya and East Africa.

We rely on Rotary support to succeed. **Financial donations are key to the project's success: Equally important is expertise:** we're also looking for people to roll up their sleeves to help out—whether you have business expertise or know a thing or two about fundraising or technology or health, we can put those skills to good use.



mHealth Project Details

I. About Kilifi Kids: Our History



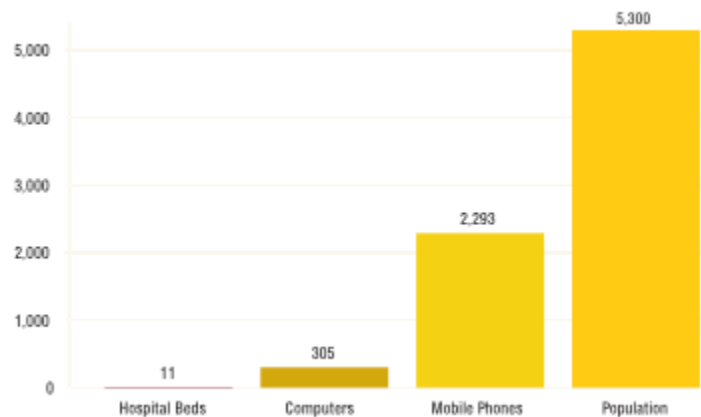
Kilifi Kids is a partnership between 15 clubs in 4 states—Georgia, North Carolina, Virginia and Wisconsin—in the US and the Rotary Club of Kilifi in Kenya. Kilifi Kids was started in 2006 by Marc and Michael Olsen, brothers and Rotarians. While it has undertaken several projects surrounding health and education, the largest to date was in 2007-2008 when it worked to establish a project that is providing anti-parasite treatment to 33,000 kids in Kilifi and provide full scholarships for 45 of the brightest/top-performing secondary school students in Kenya. To date, thanks to its partners and Rotary International, Kilifi Kids has raised over US \$200,000 and added greatly to the education levels in Kilifi, Kenya.

II. About Mobile Health: Cell Phones + Health

Mobile phones are part of our lives, but they're nothing less than a revolution for the world's poor. By 2012, over half the world's population will have access to a mobile phone. All of a sudden, it is possible to communicate with wide ranges of people.

An amazing statistic: according to the UN, there are 4 billion cell phones in the world. Of that, 2.2 billion are in developing world. And cell phones have become a tool to save millions of lives.

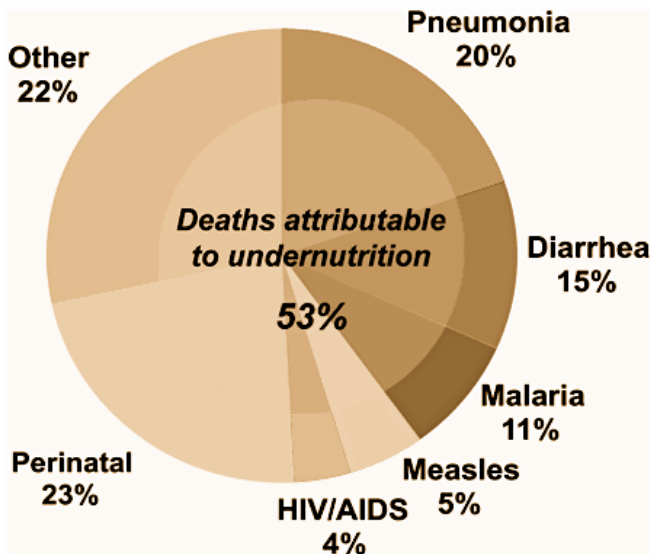
Mobile phones already are being used across the developing world for services like personal banking and job placement. Bringing phones into health is the next big leap



Health and Technology in the Developing World (Figures in Millions)

III. The Looming Health Problem in Kilifi: Malnutrition

In Kilifi this year, 3,400 children under 5 will die due to an underlying cause of malnutrition.



Leading of Deaths for Children Under 5 Years Old: Worldwide Including Contribution of Malnutrition

Kids Going Hungry = Deadly Diseases: Kilifi is the second poorest region in Kenya, and food security is a big issue. Kids without proper nutrition are easy targets for disease—Malaria, TB or diarrhea. In fact, according to the World Bank, half of deaths of kids under 5 are attributed to malnutrition. It's mind-numbing to consider, but in little Kilifi, according to statistics, 3,400 children under five will pass away from lack of nutrition this year.

Well over 1 child in 10 born this year won't make it to age 5. Fifty-one percent of children are considered medically "underweight": they just don't get the nutrition to thrive. It becomes impossible for these kids to fight off infection. Malaria, TB, diarrhea, or pneumonia may be the biggest killers among these kids but malnourishment allows these diseases to take hold.

Lack of Food isn't the Whole Story—Much of the Problem is Education: Surprisingly enough, many mothers could nourish their kids with the amount they spend on food, but they aren't nutrition-efficient. In other words, they aren't serving the food that provides the most nutrition; or, they might not cook their food in a way that maintains the nutrients. Basic food education can solve many malnutrition-associated problems.

IV. Road Block to Treatment: Distance and Isolation

Kilifi Rotary Club and Kilifi Kids already are attacking the malnutrition problem with vigor—Kilifi Rotary has distributed food in recent droughts, and together, we've invested in intestinal parasite treatments and in 10 new malnutrition clinics and innovative programs—in a model called "PD Hearth"—to help mothers develop parenting skills in challenging environments like Kilifi.

But we still face problems. It's been said that "Poverty is Isolation." That is true in Kilifi: while Kilifi has 73 health clinics, a full 57% of the population lives over 3 miles away from their closest clinic. This creates a problem for health care: it's harder to treat kids weakened by malnourishment, and it's harder to teach healthy practices to Kilifi mothers and other citizens. Cell phones can break that isolation.

"POVERTY IS ISOLATION"

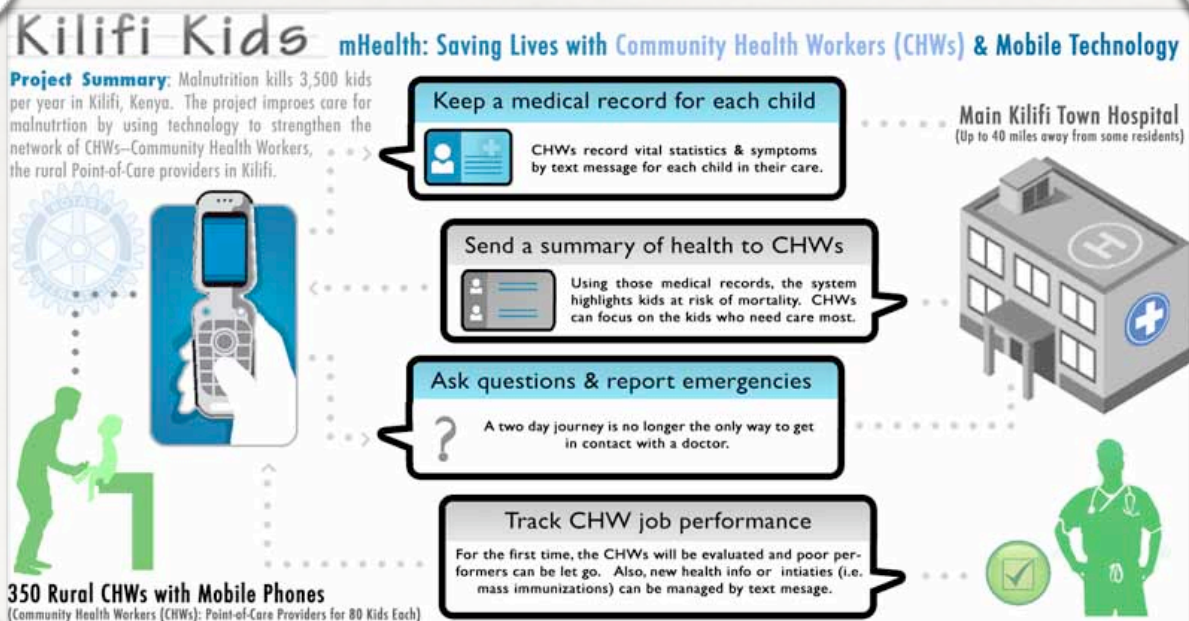
Poverty, especially rural poverty, means being miles away from a health clinic. Walking often is the only answer. But if you're a mother with a sick child, plus 5 other kids to take care of, walking is out of the question.

V. Our Solution: Bring the Mountain to Mohammed

Instead of bringing the kids to the clinic, we're bringing the clinic to the kids. We're going to be taking the medical care to the kids who need it most. Our efforts will be through the cell phone. Cell phone coverage is good in Kilifi: about half the population has access to a phone. Our project will leverage this asset for health, with cell phone systems developed in Africa in conjunction with nonprofit leaders from Stanford University, UNICEF, Columbia University and the Millennium Villages Project.

Redefining how health workers work against malnutrition

We will be creating a system of cell phone-enabled Community Health Workers, or volunteers who live in a community and are trained by the government and nonprofit organizations. While there are about 2,000 workers currently in Kilifi, we're going to be redefining how they work and deliver services.



We will be connecting these workers, even when they're many miles away, to their home base, especially for consultations regarding malnutrition issues. For example:

- They're going to be sharing information about their patients—mainly kids who are malnourished—through a text message to the home base and then doctors can tell them what action to take.
- The computers behind the system will be programmed to tell them which of the children in their area are in the highest risk categories, so the workers can focus on them.
- It also serves as Kilifi's *first census*—for the first time, the government will have a list of all children Kilifi District. This will make future health interventions (vaccinations, for example) much easier.

- They can ask their home base for delivery of needed medications to treat sick kids.
- The health leaders in Kilifi can find out, by looking at their communications, which health workers are doing their jobs well and which need retraining.

Listed are just some of the many facets of the program. A similar system has been put into place already in Malawi and several other countries with success, and the Rotary Club in Kilifi is eager to get started.



Our central role is not to bring cell phones to Kilifi, but to set up systems that will allow the health workers and their managers to use the technology that's already there. We will provide training, the computer systems needed and operations expertise to the leaders of Kilifi. Those leaders will, in conjunction with Kilifi Rotary Club, drive the process and determine where the technology can be applied.

VI. The Future: Scaling Worldwide

Once we establish a pattern of success in Kilifi, our plan is to package these tools and our experience into an easy-to-use form that other organizations—especially other Rotary Clubs—can bring to other communities.

Our goal is to establish a business model—based on “Social Entrepreneurship”—to ensure sustainable funding of the program once established. We realize the difficulty in a business environment such as Kilifi, with a target population of very limited resources. However, our project’s services will provide cost savings to government and nonprofits while increasing coverage. Building in customizations for individual clients can provide valuable funds to keep the project viable for the long haul.



VII. Join the Team, Save Lives! We Need Your Help to Succeed

Kilifi Kids is looking to build our team. We need financial donations, to bring the needed technology and expertise to Kilifi and to measure the outcomes of the program and prove its a good investment for other areas. We also need networking and publicity support. Please contact us for specific roles we’re on the lookout for! marc.olsen@kilifikids.org (404.453.3765) or michael.olsen@kilifikids.org (262.227.9898)

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