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JeffHEALTH: Helping East Africa Link to Health

Elizabeth Kuhn
Thomas Jefferson University, elizabeth.kuhn@jefferson.edu

Emily Zhang
Thomas Jefferson University, emily.zhang@jefferson.edu

Naveed A. Rahman
Thomas Jefferson University, naveed.rahman@jefferson.edu

Rebecca Margolis
Thomas Jefferson University, rebecca.margolis@jefferson.edu

Savannah Coe
Thomas Jefferson University, savannah.coe@jefferson.edu

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JeffHEALTH, Thomas Jefferson University, The Rwandan Village Concept Project

Introduction

JeffHEALTH-Helping East Africa Link to Health is a student-run organization at Thomas Jefferson University dedicated to improving basic medical education and quality of life in Rwanda, which was devastated in 1994 by civil war and genocide. Working in partnership with the Rwanda Village Concept Project, a student organization at the National University of Rwanda, JeffHEALTH seeks to implement sustainable health initiatives in our partner villages. Graduate students from Thomas Jefferson University travel to Rwanda where we taught Community Health Workers from the Villages of Akarambi and Ruli the following topics: Nutrition and Vitamin Deficiencies, Family Planning, Prenatal care, HIV, Sexually Transmitted Illnesses and Hepatitis, Breast and Cervical Cancer, Diabetes, and Fistulas. We also taught two programs to children of the villages (Oral Hygiene and Soil Transmitted Helminths) and talked with young adults about Circumcision and HIV Prevention and Sex Education.

JeffHEALTH members after the lesson on Circumcision and HIV Prevention

Overview of Healthcare System in Rwanda

Rwanda's decentralized, multi-tiered system provides care via 18 dispensaries, 16 prison dispensaries, 34 health posts, over 442 health centers, 48 district hospitals, and 4 national referral hospitals.[1] Healthcare funds are drawn from state resources, individual contributions to health insurance, and direct fees for service. The largest form of health insurance, the Community-Based Health Insurance Scheme, functions through a $6 fee per family, with an additional 10% service fee in case of a hospital or health center visitation.[1] Private health centers are not covered under this plan. By 2010, 91% of Rwandans were insured by this program.[1] In 2012, health expenditure per capita was $48, about 9% of the total GDP of Rwanda.[1] In February 2011 ,Rwanda had 470 generalist practitioners, 133 specialists, and 58 inpatriate specialists to provide healthcare to over 10 million people.[2] Rwanda has also introduced Community Health Workers in an effort to extend quality healthcare to rural regions.[4]

Major Health and Social Concerns of Rwanda

With cooperation from all of the world's sovereign nations and leading health institutions, the United Nations outlined the fulfillment of eight objectives, entitled Millennium Development Goals (MDG), by the year 2015.[3] These ideas outlined a blueprint to confront crises that disproportionately affect the downtrodden of society, ranging from economic to social to educational to medical issues. Rwanda made encouraging progress in most objectives.

Millennium Development Goal (MDG)	MDG Progress
1C. Halve proportion of people who suffer from hunger[1]	***51.9% reduction (1990 to 2015) Achieved***
2A. Ensure that children will be able to complete a full course of primary schooling[2]	***Net enrollment ratio in primary education (2007-2014): 93% Not Achieved***
3A. Eliminate gender disparity in all levels of education[2]	***Gender parity index in primary education (2007-2014): 1.02 On Track***
4A. Reduce by two thirds the under-five mortality rate[1]	***Deaths per every 1000 live births (1990 to 2015): 72% reduction Achieved***
5A. Reduce by three quarters the maternal mortality ratio[1]	***Maternal mortality ratio (per 100,000 live births) (1990 to 2015): 78% reduction Achieved***
6A. Halt and begin to reverse the spread of HIV/AIDS[1]	***Incidence of HIV(%) (2000 to 2014): 62% reduction Achieved***
6B. Achieve universal access to treatment for HIV/AIDS [1]	*Anti retroviral therapy coverage (%) (2007 to 2014): 71% to 68%* ***Not Achieved***
6C: Halt and begin to reduce incidence of malaria and other major diseases[1]	*Malaria incidence: 80% reduction* ***Achieved***
7C. Halve the proportion of people without sustainable access to safe drinking water and basic sanitation[1]	*Population using improved drinking-water sources and improved sanitation: 42% improvement* ***Achieved***
8A. Develop further an open, rule-based, nondiscriminatory trading and financial system[3]	*Median availability of selected generic medicines (2007-2013): Private ratio: 80% Public ratio: 46.3%*
8D. In cooperation with pharmaceutical companies, provide access to affordable essential drugs[3]	***Median consumer price ratio of selected generic medicines (2007-2013): Private ratio: 3.6% Public ratio: 1.7%***

Source: 1. WHO, 2015 2. UNICEF, 2015 3. World Bank, 2015

Teaching Community Health Workers

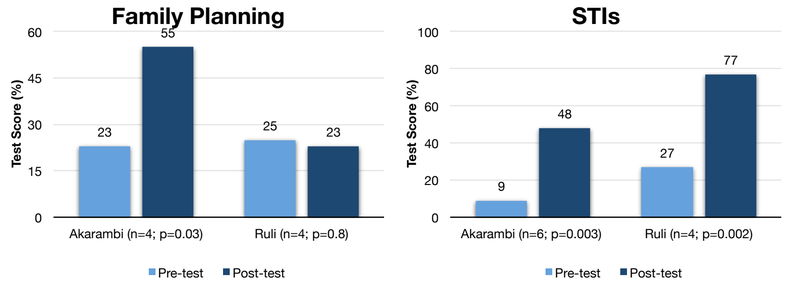
We chose our lesson topics based on both the goals that the Rwandan Ministry of Health has indicated are important for their country and what the project director, Andre Munyantanaage, assessed were important topics for the specific villages we were working in. The lessons were then approved by village leadership and the director of the local health center. Some of topics we taught were nutrition, oral hygiene, soil transmitted worms, hypertension, diabetes, cervical and breast cancer, family planning, HIV, sexually transmitted infections, and hepatitis. We taught these lessons to Community Health Workers, who are rural health advocates chosen by their communities and trained by the Ministry of Health on important health topics. Our programming was supplemental to the training they had previously received.

To make sure our lessons were making an impact we piloted an evaluation program for our lessons of family planning and STIs. This structure of this new program is shown below:

Pre-Test → Lecture → Interactive Activity → Post-Test and Evaluation

A two sample two-tailed paired t-test (α=0.05) was used to test whether the post-test scores were significantly different than pre-test scores.

Lesson Evaluation Results



Based on our evaluations, the community health workers generally gained knowledge from our lessons. In the future, we plan to use this information to improve our lessons by partnering with RVCP to add more activities and make sure our lessons our as culturally relevant as possible. We also plan to expand our evaluation program to include evaluations of all of our lessons next year.

References

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