

TITLE: Current Waterless Hand Sanitation Practices in Zambia

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INTRODUCTION:

Diarrheal illnesses are a serious issue for children under 5 years in developing countries. There are about 3.5 billion cases of diarrhea and 2 million deaths due to diarrhea annually in this population. Lack of access to clean water and poor hand hygiene are the main determinants. Studies have shown that various interventions including educational initiatives, water chlorination, and hand washing can all be effective at reducing diarrhea in this population. Hand washing in particular can reduce mortality from diarrheal diseases in less developed communities by 40% or even more. Unfortunately, in communities with none-networked household water, hand washing competes with other uses of stored water. Thus even when individuals in the community know that it prevents diarrhea, hand washing is not likely to be practiced. To further complicate the problem, stored water for drinking is likely to be contaminated by unsanitized hands. For these reasons there has been interest in waterless hand sanitation as an alternative or complementary method for cleaning hands in such communities.

Alcohol based waterless hand sanitizer was shown to effectively disinfect hands in a Tanzanian community without household net-worked water. In addition, participants rated it as acceptable and more convenient than washing hands with soap and water (Pickering et al). However, the effectiveness of promoting waterless hand sanitation in order to prevent mortality from diarrheal diseases has yet to be demonstrated.

This project is a feasibility study to assess whether such an efficacy study is possible in a community without household level networked water in Lusaka, Zambia. Demonstrating feasibility will pave the way for designing a large community effectiveness study of locally made waterless hand sanitizer. This project will have several components including a survey of caregivers bringing children to the pediatric clinic at University Teaching Hospital in Lusaka, Zambia. The same survey will be part of community health surveys routinely conducted by local medical students. The survey includes questions about demographics, water source, and hand washing practices. Other components of the project will involve meeting with local public health officials, and assessing the availability and price of potential ingredients for a locally made alcohol based hand sanitizer.

QUESTION:

What are the current barriers to adequate sanitation in the areas surrounding Lusaka, Zambia? Would a locally made waterless hand sanitizer be an appropriate, acceptable, and affordable intervention?

OBJECTIVES:

The majority of households in the suburbs (commonly referred to as shanty compounds) surrounding Lusaka do not have household level piped water. The majority

of the cases of early childhood diarrhea and pneumonia come from these communities. This project seeks to describe current sanitation practices with emphasis on use of waterless hand sanitizer within these communities through a survey. In addition, prices and availability of ingredients necessary for locally made alcohol based waterless hand sanitizer will be assessed.

METHODS:

Surveys will be conducted at two independent sites and will include the pediatric clinic at University Teaching Hospital in Lusaka, Zambia and through community health surveys conducted by the Department of Public Health several times each year. Data collected will include demographic data, sanitation practices, water source, ages of children living in the house, and frequency of diarrheal illnesses in these children. No sensitive or identifying information will be collected. Given the large number of local languages, surveys will be conducted orally with interpreters available for assistance. All participants must be 18 year or older and must live in a home with at least 1 child under 5 years old. We anticipate about 100 participants. Surveys will be conducted in the fall of 2011. No promotional materials or incentives will be used. The study will be explained to participants verbally and a handout will be available (attached). Consent will be implied by participation in the survey.

Further assessments made in the study will include availability and prices of ingredients necessary to make a waterless hand sanitizer. This will be conducted by visiting local markets and buying the necessary items.

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