

Water Filter Distribution Assessment by Kiretono Resource Centre In Oloirobi Village, Ngorongoro

Introduction

Fifty (50) Safe Water filters were distributed to residents of Oloirobi village in Ngorongoro, Tanzania, on April 2, 2014. Forty (40) of them had been donated by Safe Water Now, and ten (10) had been donated by individuals through the Aid Tanzania website. At the time of distribution, the filters were registered (Appendix 2, form 1) and all recipients received training on the proper use and maintenance (cleaning) of the units from Kim Mesiaki, the Production Manager of Safe Water Ceramics of East Africa in Arusha (see Appendix 1, fig. 4). Sadera Laizer and Mosses Irmakesen, Director of Kiretono Resource Centre, assisted him. The verbal training was presented in Maasai and Swahili. Each recipient was given the ceramic filter, the Healthy Practices booklet in English and the Use and Care booklet in Swahili, the outer plastic bucket and lid with tap, and a plastic brush for cleaning the unit (see Appendix 1, fig.1).

Prior to the distribution, residents of the Irmuli area were invited to a meeting where the healthy practices booklet was explained and the importance of treating drinking water to prevent the transmission of water-borne diseases was discussed. The Safe Water Now filter was introduced and a cursory explanation of its use and care was discussed. This introductory meeting was an additional step in the process, implemented based on the low uptake from the first distribution of 25 filters. Another modification to our methodology was to choose recipients based on their interest rather than on their inability to pay, the number of family members and our desire to distribute the filters evenly over a pre-defined geographical area. We also asked that recipients contribute something with a 10,000 tsh suggested amount as a means of increasing the uptake rate. Additionally, one week after the distribution, Mr. Laizer with the assistance of the village experts, visited every recipient in her home to ask if they had questions on the use and care of the filter.



The follow-up assessment was conducted during the week of May 14-20, 2014. Mr. Laizer, a Maasai and resident of Oloirobi village with a 2-year college diploma in gender issues and development, conducted the interviews and observations. Of the 50 filters distributed, 38 interviews were conducted in person, whilst 12 were conducted by telephone as 12 of the filter recipients' families had moved from their huts to better grazing land in another area.

The questions asked were the same for each interviewee and followed a common template (see Appendix 2, form 2).

Mr. Laizer had 3 main objectives whilst speaking to the person responsible for the care and maintenance of the unit:

- 1) **To determine whether people were using the filter for all their drinking water needs;**
- 2) **To find out if people felt that the filter was contributing to an improvement in the health of their family;**
- 3) **To check for understanding of the recommended use and cleaning procedures and to provide further instruction, if needed.**

Results

The data collected shows strongly positive results for both objectives 1 and 2. Out of 50 interviews, 100% state that they filter their water prior to drinking it and that their filter works. There was only one case out of 50 in which a bucket was leaking which was promptly adjusted thereafter. 96% had clean filters, whilst 94% had clean buckets (assuming the phone interviewees used an acceptable standard of judgment), where the lack of cleaning was the result of poor health of the woman in charge of cleaning the filter/bucket. With regards to the second objective, 100% claim to be free from stomach problems (a 28% increase compared to their reported health status pre-filter-distribution).



With regards to the third objective, Mr. Laizer systematically asked the ladies to explain how they cleaned the filter and bucket. He then noted down behavior that could possibly contaminate the water after it was filtered, pointing out and providing suggestions for improvement. Overall, he found that most women were indeed familiar with the cleaning procedure, and, in the cases where the women were unfamiliar or were confused regarding the cleaning process, Mr. Laizer instructed them accordingly until he was satisfied with their response. In cases where the

respondents seemed uneasy with the cleaning procedures, he suggested they visit with one of the identified “village experts” for support. The village experts were women who had received a filter in the prior distribution and who were deemed to be using it properly. These women also took an active role in the training on the day of the distribution.

It is also worth noting that 88% of all interviewees found that the filters were easy to clean; the 12% who found difficulty in cleaning the filters all claimed that there were too many steps to the cleaning procedure. This could be a potential indication that the women need to be provided with a simpler cleaning method.

A table summarizing the most relevant interview results out of 50 responses is presented below.

Average Number Of People In Hut	6.2
Average Frequency of Filter Cleaning (1x per days)	20.6
Number Who Said Filter Was Easy to Clean	44
Number Who Reported Always Using Filtered Water to Drink	49
Number Who Reported Stomach Problems Post-Distribution	0
Number Who Reported Stomach Problems Prior Filter Distribution	14
Average Water Collected Daily (Liters)	42
Average Number of Liters of Drinking Water Consumed Daily	6.88
Number Who Reported Filtering Their Water	50
Number Who Perceived That Their Family Health Had Improved	49
TOTAL NUMBER INTERVIEWED	50

The below table summarizes the improvement in the uptake rate we've seen from the first distribution to the 2nd distribution.

1st Distribution 25 filters		2nd Distribution 50 filters
Not in use because unit was broken (ceramic filter, bucket or tap were broken to an extent that the unit was not functioning)	3	0
Not in use because recipient had chosen not to use it (decided it was too difficult to clean, there was no advantage to using it or they were moving houses and "preparing" a place for the filter)	3	0
Minimally used and used properly (ex: the bucket was	0	8

leaking but unit was still being used)		
Minimally used and not used properly	3	2
Used on a regular basis and used properly	9	35
Used on a regular basis but not used properly	6	5
TOTAL	24	50

Based on the above results, we have seen a 28% increase in uptake, defined as used regularly or used minimally regardless of whether it's used properly or not, from the first distribution (18/25) to the 2nd distribution (50/50). More importantly, we have seen an increase from 36% (9/25) to 86% (43/50) using the filter either regularly or minimally AND using it properly. So, we believe that the changes made to our method of distributing the filter have greatly improved the results.



Observations

Mr. Laizer observed that some women did not have proper places in which to place the filter, such as a shelf or stand, or that they set the ceramic filter upside down on the ground to dry in the sun for lack of a clean surface on which to place it. Also, having questioned each lady on how the water was served to each family member, he found that a large number of them were using the same cup without washing it between users, a practice that encourages the spread of communicable diseases. In such cases, where families shared cups or the serving cup was not clean, he mentioned the importance of adopting hygienic methods in sharing the water in addition to filtering it in the first place. He also encouraged the women to be the sole dispensers of water as children or other people not familiar with the filter's use could inadvertently contaminate the water.



On the day of distribution, some recipients promised to pay between 2,000 tsh and 5,000 tsh for the filters. Thirty-six thousand (36,000) tsh was collected that day. No other contributions have been received since then. By asking recipients to contribute a nominal fee in the second distribution (we had suggested a 10,000 tsh contribution), we hoped to increase the uptake percentage. However, it appears that despite only receiving 36,000 tsh in contributions, that the uptake percentage has vastly increased over the first distribution.

The respondents are all still collecting their water from either a community tap or from water holes that are located closer to their homes. Most people who have a filter in their homes are only drinking filtered water and many people commented that because filtered water was available, the family's consumption of drinking water had increased.

Future Recommendations

1. Mr. Laizer believes the issue of where to place the bucket and ceramic filter in the hut needs to be addressed in order to provide easier access to the water and to store the fragile ceramic filter appropriately. Given that the furniture (or lack of) and shelves varies from hut-to-hut, we want to experiment with methods of hanging the bucket above the ground in order to make it more accessible, to keep it cleaner and to prevent its being knocked over.
2. We are going to consider revising the questionnaire slightly in an attempt to determine whether despite having access to clean drinking water, the recipients might be inadvertently sabotaging their health by cup sharing or not washing the cup after each use.
3. A possible drawback of the interview has been the absolute reliance on the recipient's recollection of the incidence of ill health among the family; in order to improve the interviews' accuracy, we are considering implementing a system that would have the recipients recording each time they have had stomach problems, or each time they clean the filter etc. so as to have a set of evidence reinforcing the collected results.
4. We are currently devising a plan with Kim Mesiaki for testing the water source and water from several filters to determine the quality of the water prior to its filtration and to determine whether the women are in practice maintaining the filters properly so as to not contaminate the water.

Conclusion

The results collected clearly show a vastly improved uptake over the first distribution and a better understanding of the proper use and care of the filters. We will continue with the current program which consists of a pre-distribution introductory meeting, candidates self-selecting to participate, an intensive training on the day of distribution, a follow-up visit one week after the distribution and a final assessment conducted within six weeks of the distribution. We have to conclude based on the very positive responses of the recipients and the improved uptake of this distribution that the Safe Water Now filters have been adopted as a part of everyday life in the village thus providing access to safe drinking water for at least 450 people in the Irmuli area of Oloirobi Village.

