

# A conversation with Arjun Pant and Grace Morgan, June 20, 2018

## Participants

- Arjun Pant – Director, Dispensers for Safe Water, and Chief of Staff, Evidence Action
- Grace Morgan – Cost-Benefit Analyst, Evidence Action
- Chelsea Tabart – Research Analyst, GiveWell

**Note:** These notes were compiled by GiveWell and give an overview of the major points made by Mr. Pant and Ms. Morgan.

## Summary

GiveWell spoke with Mr. Pant and Ms. Morgan of Evidence Action as part of its investigation into Evidence Action's Dispensers for Safe Water (DSW) program's progress and future plans. DSW is a GiveWell standout charity. Conversation topics included DSW's progress in 2017, updates about its scale, its plans with its existing budget, and its room for more funding.

## Progress in 2017

In the last year, DSW prioritized maintaining its existing dispensers and its high adoption rates.

### Maintaining existing dispensers

Over the last 1.5-2 years, DSW has maintained approximately 27,600 chlorine dispensers. Occasionally, DSW replaces dispensers that have failed hardware. Funding constraints prevent DSW from installing new dispensers and expanding to new communities. Evidence Action would like to increase the reach of the program if additional funding were available.

### Maintaining high adoption rates

The adoption rate (i.e. the proportion of households in communities with a DSW chlorine dispenser that use it to chlorinate their water) is one of DSW's key performance indicators. DSW aims to maintain a program-wide adoption rate of at least 50%. In the first two bi-monthly monitoring rounds of 2018 (January/February and March/April), this rate was 53%, which is higher than the program-wide adoption rate one year ago. Adoption rates vary by country. Most recently, the adoption rate was 42% in Kenya, 76% in Malawi, and 58% in Uganda.

*September 2018 update: In the May/June and July/August monitoring rounds, the program-wide adoption rate was 58%. In the July/August round, the adoption rate was 48% in Kenya, 81% in Malawi, and 64% in Uganda.*

### *Measuring adoption rate*

DSW's monitoring and evaluation (M&E) officers conduct a community survey of 1.5% of communities every two months (for a total of 9% every year). At a random sample of households within the community, officers test the drinking water for total chlorine residual. The adoption rate is then calculated as the number of households that test positive divided by the total number of households tested.

Each of DSW's communities has a promoter who was elected at the time of dispenser installation and whose responsibilities include storing chlorine refills, refilling the dispenser, and educating fellow community members about the importance of safe drinking water. To initiate the community survey, M&E officers visit the community's promoter and conduct the promoter survey, during which they ask the promoter to list the households that use the water point where the dispenser is installed. Officers then use an in-field randomization form to randomize the order of the listed households and visit the first eight of those households.

If no one is present at a household, officers consult the form to visit the next household on the list, until eight households are tested. Because households are typically within a short walk of the water point and each other, officers should be able to visit the correct order of households without difficulty. Mr. Pant has not heard of officers ignoring the form in order visit closer households, and he does not consider this a likely issue. Additionally, lead M&E officers perform back checks to ensure that the field M&E officers are performing their jobs correctly.

### **Scale update**

DSW recently determined that its dispensers reach approximately 4 million people, a decrease from its previous estimate of 4.7 million. The program's updated reach was calculated during the first round of a biennial population crosscheck survey that is required to generate carbon credits through the United Nations' Clean Development Mechanism (CDM). The updated numbers were finalized in May 2018 and varied by country, with the population reached declining by approximately 6% in Malawi, 11% in Kenya, and 25% in Uganda. Despite this change, DSW still believes that the program is highly cost-effective.

### **Possible causes of the decline**

DSW has identified four possible causes of the decline:

- 1. Inflated original estimate** – Before conducting this crosscheck survey, DSW was using a population estimate made several years ago, when the program began and dispensers were being installed. Village-level population may have been inflated by the village elders or landowners of the DSW water points. When M&E officers asked these individuals to list the households using these water points, they may not have known the accurate list. Additionally, at the time, water points serving ten or more households were eligible for a dispenser; these individuals may have

learned this from neighboring communities and inflated their answers so DSW would install dispensers.

2. **New water points** – Due to climate change or seasonality, more convenient water points may appear and divert people away from water points with DSW dispensers. In addition, some households may have started to source water from private boreholes. As a policy, DSW does not install new dispensers or move current dispensers to water sources that are private or serve fewer than ten households.
3. **Rural-to-urban migration** – People may have migrated away from communities served by DSW dispensers in search of improved employment or education in urban areas.
4. **Attrition due to vandalism** – Some communities vandalize or choose not to maintain their dispensers (see example below), usually because of rumors that they cause health issues (e.g., male sterility). DSW works to dispel such rumors and to educate communities about the importance of safe drinking water. It also repairs vandalized dispensers. However, after three instances of vandalism or another issue, DSW removes dispensers. Occasionally, DSW re-installs dispensers at the request of communities that agree to maintain them.

#### *Vandalism in Zomba District*

In March 2018, dispensers were vandalized in Zomba District, Malawi due to a rumor that they contained birth control. This example illustrates DSW's typical discovery of and response to vandalism.

DSW field staff members regularly visit dispensers and deliver chlorine refills, thereby gathering feedback from promoters and communities. In addition, senior field staff members regularly meet with government stakeholders. Both channels provide ongoing insight into sentiment about the program and surface any issues, which is how DSW learned about the vandalism in Zomba District.

DSW addresses any issues through community sensitization and stakeholder engagement, working with community leaders, village elders, and local government officials or health officers who have relationships with communities. Accordingly, in Zomba District, DSW staff worked with community leaders and government officials to dispel the birth control rumor. An issue is considered resolved once the dispensers in question are no longer being vandalized, which is now the case in Zomba District.

#### *Investigation of possible causes*

To quantify the contribution of each of these possible causes to the population decline, DSW's M&E team is currently asking promoters:

1. Have you noticed a population change?
2. If so, what are the reasons for the change?

DSW's M&E team already conducts a community survey (described above) and a promoter survey, which is also conducted on 1.5% of communities every two months (for a total of 9% every year). The above questions have been integrated into the existing schedule of surveys and will be asked of a statistically significant sample of promoters. Results of this survey are expected to be available by the end of summer 2018. Outside of this one-time investigation, DSW does not plan to change its existing M&E surveys.

### **Future monitoring**

As part of the crosscheck survey to measure population served, DSW visits each of its dispensers and asks the relevant promoter to list the households using that water point. This provided a more accurate number than the original population estimate for three reasons:

1. Unlike the village elders and landowners surveyed originally, the promoters are responsible for tracking this list.
2. The promoters are not incentivized to inflate the list because the dispensers are already installed.
3. The promoters, who have been working with DSW for multiple years, are frequently surveyed about program performance and are comfortable answering questions.

Moving forward, DSW plans to repeat this type of survey at least biennially, as required by the CDM. The cost of such a survey is very roughly \$100,000.

### **Room for more funding**

#### **Carbon credits**

DSW generates carbon credits through the CDM. It earns 5 euros per credit through a futures contract with a committed buyer. DSW is confident that it will continue to earn at least this price and hopes to extend the contract indefinitely. However, the current contract expires at the end of 2020, when the CDM ends, though the final revenue expected from the futures contract would accrue in late 2021/early 2022 (it typically takes about one year to receive the revenue from carbon offsets generated in a prior year).

The United Nations Framework Convention on Climate Change is leading development of a successor mechanism to the CDM and will hold the next round of negotiations in late 2018. One possibility is that a new multilateral mechanism will replace the CDM, and another is that individual governments will sign bilateral agreements. DSW is following developments closely and anticipates further information in the next year.

#### **Budget and available funding**

DSW's expected 2018 budget is \$5.4 million (an increase from the original estimate of \$5.1 million). For 2018, DSW has \$4.8 million in confirmed funding and

approximately \$300,000 in likely funding. This money will fund the program through 2018 and will be allocated entirely to maintaining its current reach.

In the near future, DSW's budget is expected to grow 3-5% per year due to staff salary increases and cost inflation (for example, of inputs including chlorine and dispenser spare parts). Expected future funding includes two multi-year agreements that will fund some of its operations. It also includes carbon revenues, which should be approximately \$2.2 million in 2019, \$2 million in 2020, and slightly lower amounts in 2021 and 2022. These carbon revenues will fund between 25% and 40% of DSW's total budget between 2019 and 2022.

In total, approximately 30% to 45% of DSW's total budget has been raised up to 2020. DSW is working to fundraise the remainder and plans to allocate all funding to maintaining its current reach.

### **Uses of additional funding**

DSW would use additional funding to fund the remainder of its budget for the next few years. With funding beyond that amount, it would expand its reach by installing new dispensers. Additional funding could also be used to pilot self-sustainability mechanisms, such as self-help groups, within the communities that the program serves. Finally, it could be used to support two of DSW's other priorities: government engagement and partnership development.

#### *Self-sustainability mechanisms*

Self-help groups are savings and loan associations in which community members pool their resources, loan money with interest, and use the interest for community purposes. DSW is in preliminary discussions with a potential partner organization that has successfully piloted this mechanism to generate funding to maintain water pumps. DSW wants to apply this same mechanism to maintaining dispensers in its communities and hopes to conduct a pilot in 2019. Though details are unconfirmed, Mr. Pant expects that DSW will at least pilot the program in a few communities.

This pilot will not be conducted in DSW's existing communities. Instead, DSW will install dispensers in new communities, while its partner organization establishes complementary self-help groups. This partnership will give DSW the opportunity to observe how its partner organization implements and manages a successful program of self-help groups. Mr. Pant expects that DSW and its partner organization will share the costs of this pilot, though no funding negotiations have occurred. If the pilot is successful (i.e., if the self-help groups can raise enough to fund a worthwhile portion of dispenser maintenance costs), then DSW may roll out the mechanism to its existing communities.

#### *Government engagement*

In order to increase program sustainability, DSW's leaders want to prioritize engaging the government in two ways:

1. DSW's leaders want to obtain greater funding for the program from national and county governments. Evidence Action staff in Nairobi have already started identifying the stakeholders in the Kenyan government with whom DSW should have funding conversations.
2. DSW's leaders want to obtain support in national governments for the bilateral agreements that may be required by the successor mechanism to the CDM. They plan to have conversations with the stakeholders who would be responsible for developing policy and signing agreements. DSW is focusing first on the Kenyan government but also hopes to engage the national governments in their other countries of operation.

#### *Partnership development*

Because of the impact and cost-effectiveness of the program, DSW's leaders want to prioritize developing partnerships that can scale it. DSW could provide partners with technical assistance to install dispensers in the regions where they operate. Other non-governmental organizations have already expressed interest in doing so in other regions of sub-Saharan Africa.

*All GiveWell conversations are available at  
<http://www.givewell.org/research/conversations>*