

Summary of Evaluation

From January until June 2012, Owen Henkel conducted an evaluation of El Porvenir, during which he visited six regions where El Porvenir carries out projects and gained an in-depth understanding of the organization's operations. Owen worked with staff and numerous paid volunteers (local high school and college students who received minimal stipends) to conduct interviews and site visits primarily in the Camoapa and San Lorenzo region. The figures quoted in this report are the results of over 450 beneficiary surveys, site visits to over 80% well/water system projects that El Porvenir has supported since 1993 in the regions of Camoapa and San Lorenzo, and extended interviews with community leaders.

Goals and Key Conclusion

1. Observe the state, function of well and water systems, and the strength of the community CAPS (Comité de Agua Potable y Saneamiento/ Potable Water and Sanitation Committee)

El Porvenir's well and water systems are well made, strategically located, and serve communities that would have little or no access to clean water otherwise. El Porvenir should focus on getting its (quite respectable) 15% failure rate for hand pump wells down below 10%, but boasts a remarkable 100% success rate for its more complex water system projects. While more complex, expensive and time consuming to build, El Porvenir should focus more of its future resources on these water system projects as they help build greater community investment and most dramatically improve health behaviors of beneficiaries.

2. Assess health knowledge and behavior of beneficiaries

Survey responses indicated good knowledge and attitudes toward sanitary practices (i.e. hand washing) and the observed condition of most latrines was quite good. However, the frequent lack of active hand washing stations and improbable responses (i.e. average of 11 hand washes per day) suggest a gap between health knowledge and health behavior, highlighting the importance of effective community education. Additionally El Porvenir should begin building hand washing stations into their latrine design, "nudging" the beneficiary into more healthy behavior.

3. Examine the structure and day to day functioning of the education program

Health education in rural areas poses enormous challenges but is an essential part of successful interventions. While the quality of education outreach varied widely between communities, El Porvenir educators were active in most areas where El Porvenir had a presence, areas that most large NGO's have never even seen. El Porvenir should rely less on talks and more on "standard compliance" when working with communities. Additionally, El Porvenir should begin to pay modest incentives to selected members of the community to monitor and promote better health behavior.

Evaluator Background

Owen Henkel is currently pursuing a joint MBA/MA Education at the University of Michigan. He has worked for Teach for America, the '08 Obama Campaign and Grassroots Business Fund and has international work experience in India, Ecuador, and Mozambique.

Methodology and Limitations

Limitations such as inaccurate self-reported data, a lack of reliable census data, non-existence of addresses, and the extreme remoteness of projects made conducting a truly random trial unfeasible. As such the results of the surveys cannot be said to be scientifically verifiable. Nonetheless, I believe the results to be largely reliable for the purpose of evaluating the physical condition of past projects and beneficiaries' health behavior and mindsets.

While figures cited in this report pertain to the series of in-depth surveys and site visits in two regions, the observations and suggestions are representative of all interactions with El Porvenir staff, projects, and beneficiaries. In order to provide a clearer picture of the impact of El Porvenir's work, I made reasonable projections based on generally accepted research.

Detailed Analysis : Increased Access

Wells and Water Systems

Key Takeaway

El Porvenir's wells and water systems are well made, strategically located, and serve communities that would have little or no access to clean water otherwise. El Porvenir invests a great deal of resources partnering with benefitting communities to develop the capacity to maintain their wells/water systems themselves. While I encountered a few (8 out of 75) abandoned/broken hand pump wells, every water system I observed was in excellent condition and had an organized and functioning CAPS.

Positive Impact

El Porvenir works in some of the most remote regions of Nicaragua, far beyond the reach of larger aid agencies such as World Vision, Mercy Corps, or Government Embassies, and thus truly reaching the least-served communities. 86% of El Porvenir's water projects are in rural areas, at the limits, in or in many cases far past, the last signs of governmental infrastructure. Previously, many beneficiaries walked several kilometers to the nearest water sources, whereas over 70% of El Porvenir beneficiaries currently travel less than 100 meters for water.

95% percent of wells and water systems were functioning on the day observed and had excellent water clarity. 92% of well sites were well maintained with no trash in the surrounding areas and no visible signs of animals. 87% had good or excellent water pressure.

On average each of these projects benefited 110 people, providing clean water to those who had none before. This means that a contribution of \$20 can help provide an individual with clean, reliable, proximate drinking water for the life of the well.

Room for Improvement

- Occasional redundancy/ overlap in well placement
- No unified repository of all past projects locations, projects, and current condition
- 8 of the 10 wells that were falling into disrepair were older (more than 6 years) and had suffered a breakdown in contact between community and El Porvenir
- Some beneficiaries continued to use dirty water despite proximity of well, citing ease of use.

Recommendations

- *Customer Service Number* –In many cases, well maintenance is semi-formal and relies heavily on community leaders. If this leader moves out of the community sometimes the communication with El Porvenir is broken, and if something goes wrong with the well, the remaining community members may not know how to fix it or with whom to get in touch. It is not realistic for El Porvenir to actively stay in contact with each and every community in which they have supported wells, so as a solution, El Porvenir should create a “customer service number” that could be placed on all hand-pump casings. This number would route directly to El Porvenir head offices and would allow communities to re-establish contact if necessary.
- *Concentrate more on water systems* – While more expensive and logistically complex, water systems have extremely high impact on the communities. They nearly eliminate the use of unsanitary water sources because they are so convenient to use. Additionally water systems typically had extremely high levels of community involvement: every single community with a complex water system had a strong, well organized CAPS with regular and formal tariff system, in some cases even after over a decade.

Detailed Analysis : Improved Outcomes

Health Knowledge and Behavior

Key Takeaways

Beneficiaries survey responses indicated good knowledge and attitudes toward sanitary practices (i.e. hand washing). Additionally the conditions and state of most latrines were quite good. However, the frequent lack of active hand washing stations and improbable responses (i.e. average of 11 hand washes per day) suggest a gap between knowledge and behavior. This knowledge/behavior gap is well documented in any number of disciplines, including public health. Simply put, even when people know what they should be doing, and why they should be doing it, they have a tendency to maintain old habits, especially when changing their behavior means more work. El Porvenir has made great strides in educating these communities but must continue to think creatively about the arduous task of helping beneficiaries change their habits.

Positive Impact

- 80% of families interviewed indicated that all family members had been free of diarrhea in the previous month, and interviewees nearly unanimously reported washing their hands multiple times per day. 89% of beneficiaries reported being “satisfied” or extremely satisfied with their latrines, and 84% reported cleaning their latrine at least on a weekly basis.
- It was observed that 84% of latrines had appropriate trash baskets for used toilet paper and that 86% of latrines had no trash in or around them and were reasonably well maintained.
- Traditional latrines have a lifetime of between 5-10 years, and only 46% of beneficiaries reported planning to build their own latrine when the current one filled up. Others were not sure what they would do when their current latrine filled up. In 2011, El Porvenir decided that all new latrines would be double pit models. This allows for a continual cycle of use and composting, creating a long-term, sustainable solution.
- With the new double pit composting latrines a donation of \$90 pays for an individual to have a safe, sanitary bathroom for life.

Room for Improvement

- It was observed that only 20% of latrines had visible hand washing stations, and only 74% of toilets were observed to have lids covering the pit.
- The quality and care of latrines varied widely by community, much more so than between individuals within a single community.
- While beneficiaries of double-pit latrines understood that they were supposed to add lime to the toilet every week, very few of them understood why. Nor was there evidence of much lime being used on a regular basis.

Recommendations

- *Incorporate hand washing stations, toilet lid, and lime into physical design of latrines* – The gap between knowledge and behavior is often due to convenience. Simple design improvements such as attaching a lightweight hand washing station to the exterior of the latrine or including a small storage receptacle for lime inside the latrines could markedly improve health behaviors.
- *Continue with education efforts* – see next section

Detailed Analysis : Changing Minds

Operations and Impact of the community education program

Key Takeaways

Health education in rural areas poses enormous challenges but is an essential part of successful interventions. While the quality of education outreach varied widely between communities, El Porvenir educators were active in areas most large NGO's have never even seen. High levels of community knowledge belied an active education program, but there is long way to go before sanitary behaviors become normal rather than aspirational.

Positive Impact

- Beneficiaries consistently reported participating in education activities, which is an accomplishment in itself considering the remoteness of many locations. They also reported strong health behaviors including 95% of respondents said they washed their hands multiple times per day, 82 % reported washing latrine at least weekly, and 84% of latrines were observed to have proper toilet paper disposal methods.

- In communities that had radio signal, there was widespread listenership and enthusiasm for the weekly El Porvenir radio program on Radio Camoapa and strong relationships between educators and community members were clearly observed.

- Well decorated latrines seemed to be points of dignity and pride with beneficiaries and significant improvement in the quality of life. With the assistance of EP educators some communities even participated in latrine decoration contests. It is this type of community wide norm-shifting that is the key step in actually changing health behaviors.



Room for Improvement

- Only 61 % of beneficiaries remembered speaking directly with an EP educator.
- Only 42% of respondents were aware of local community health educator.
- Effectiveness of education talks (“charlas”) clearly impact knowledge, but unclear impact on behavior.

Recommendations

Develop Educational materials that demonstrate learning - Education activities are almost 100% talks. While talks are the easiest to conduct, they produce lower levels of information retention and are hard to ensure that community educators accurately convey information. I would recommend developing some type of worksheet/survey tool that the EP educator would give to the community educator; this educator would use these in their chats and trainings with neighbors and return the completed sheet/form/tool to the EP Educator. This would serve both to improve and standardize instruction and make it easier to track and measure activity.

Incentives for community educators- To truly change behavior, an active core of community educators must be maintained. While involved community members are likely to be willing to help a few times, additional incentives are the only realistic way to keep activities going. Modest cell-phone stipends would be a practical, controllable, and appreciated incentive.

Photo courtesy of RippleEffectImages.org.