A Health Promotion Partnership: Cholera Mitigation Along the Haitian-Dominican Frontier

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Introduction

In October of 2010, Haitian authorities reported the first cases of a cholera epidemic that quickly spread across Hispaniola, resulting in over 580,000 confirmed cases and almost 7,500 deaths in Haiti, including over 22,000 confirmed cases and 162 deaths in the Dominican Republic. In the absence of an effective vaccine, cholera is no longer expected to remain endemic on Hispaniola until the underlying structural, behavioral and social conditions are addressed. In general, while communities in the Dominican Republic are at a lower risk for the transmission of cholera than their Haitian neighbors, bateyes and urban barrios are highly vulnerable due to a lack of basic government services like water, sanitation and health education. In response, the University of Texas Health Science Center at San Antonio (UTHSCSA) is collaborating with the Children of the Nations (COTN) organization and the Universidad Iberoamericana (UNIBE) to implement and evaluate a Community Health Club (CHC) project in 2 barrios and 3 bateyes to mitigate cholera in the Dominican Republic.

Community Health Clubs

The Community Health Club (CHC) approach1 is a Participatory Health and Hygiene Education methodology developed by Zimbabwe AHEAD in 1995 that has been recognized as one of the most effective cost-efficient approaches to WASH education and service provision in under-resourced regions. The CHC approach emphasizes participation, education, and mobilization by empowering community residents to become responsible for improving their own health and the health of their families.

Methods

2 Surveys:

- Household Inventory: measures WASH knowledge, attitudes and practices (Hygiene & WASH Knowledge Indices) types of information sources used and group membership.
- Hygiene & WASH Knowledge Indices: a summary of the progress expected to remain endemic on Hispaniola until the underlying structural, behavioral and social conditions are addressed.

Assessing Local Knowledge, Attitudes and Practices

• Various student data collectors from UNIBE, divided into 4 teams of 2
• 8 data student collectors from UNIBE, divided into 4 teams of 2

WASH Knowledge Scores

- Women (0-112) had significantly higher scores than men (14.8) (t=3.85) p<0.001.
- Weak, positive correlation with age (r=0.179, n=386, p=0.001).
- Those who never attended school (6.6) had significantly lower scores than those who completed Primary (6.9), Secondary (7.7) or Tertiary (7.7) education (ANOVA F(3,386)=13.1, p<0.0001).
- Households in bateyes (5.4) had significantly lower scores than households in barrios (6.5) (t=3.685) p=0.002.
- Weak, positive correlation with the number of households is active with (r=0.22, n=187, p=0.01).
- Weak, positive correlation with the number of news sources a household has (r=0.33, n=186, p<0.0001).

Discussion

This data suggest that a CHC program is appropriate for both bateyes and barrios in the Dominican Republic due to low sanitation coverage, unhygienic practices and limited WASH knowledge. While 70% of all households reported access to a latrine, barely 50% of households in bateyes have access to a latrine. In general, households use safe water sources (mainly bottled or purchased water), but only 48% of households safely store their drinking water. Finally, only 45% of households in bateyes provided soap for hand washing. CHCs should rephrase address safe water storage and soap usage during hand washing, and it is hoped that over time they will work towards achieving Zero Open Defecation.

Progress to Date

With an average score of 5.8 out of a possible 23 points on the WASH Knowledge Indices, it is expected that basic knowledge and scores on the hygienic conditions of common WASH conditions will increase. The correlation between WASH knowledge and scores on the Hygiene Indices is not surprising and as a result, it is expected that increases in WASH knowledge will result in marked increases in hygiene indices scores. With clear disparity between the barrios and bateyes in terms of both knowledge and practices, it is expected that the bateyes will see greater improvements by the end of the program. Finally, with group membership positively correlated with WASH knowledge, we believe that Club Membership should result in additional increases in WASH Knowledge and subsequent behavioral changes.

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References

5. www.who.int.

Figure 1: Water and Nutrition in Dominican Bateyes

Figure 6: Adopted CHC Toolkit for the Dominican Republic

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