Enhancing Community Health Education through Technology in Lagos, Nigeria

Alexandra Tarzikhan[1], Juliet Sorensen[1], Shannon Galvin[2], Annie Conderacci[3]

[1]Center for International Human Rights, Northwestern University Pritzker School of Law, Chicago, IL; [2]Center for Global Health, Northwestern University, Chicago, IL; [3]Slalom

Background

Access to basic health knowledge and care remains elusive to many communities in Lagos , Nigeria. In partnership with Justice Empowerment Initiatives (JEI) and the Nigerian Slum/Informal Settlement Federation, a Health Needs Assessment of informal-urban communities was conducted . The assessment revealed that residents of communities lacked access to health information, were unsure of where to access health resources, and had low health literacy rates.

Objective

Our objective was to develop a community health education curriculum responsive to the needs of the informal-urban communities at our partner site.

Methods

Curriculum Development
Guided by the communities' needs, ATH developed an innovative community health educators (CHEs) curriculum with components of health education and adult learning techniques. ATH based the curriculum on JEI's existing community paralegal program, adapting it from existing validated curricula from USAID, Pathfinder, Peace Corps; integrating Nigerian guidelines; tailoring to topics relevant to the communities' interests; and developed written materials. The CHE program was implemented impacting 112 communities of 1,000 to 30,000 people.

Curriculum Evaluation
ATH tested the effectiveness of this first iteration of the curriculum using multiple choice and open-ended questions. Knowledge-based pre-and post-tests were also developed to assess the initial class of educators' baseline knowledge and understanding of the material presented. Descriptive statistics were used to describe response rate. A t-test was used to compare response rates between pre and post testing results. Percent of correctly answered questions were calculated and statistical analysis was performed using Microsoft Excel.

Results

| | Correct answers out of 23 | | Correct answers out of 23 |
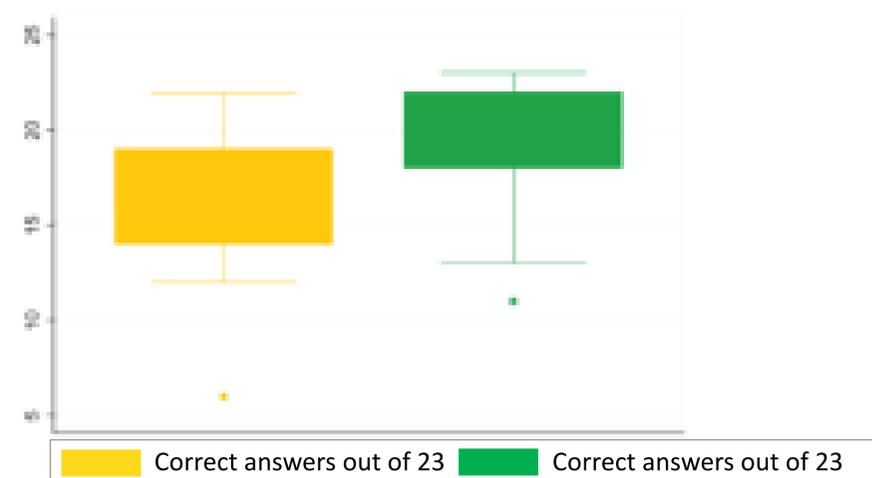
Pre-Test Mean	Post-Test Mean
16.5	19.1

- P = 0.003

- The mean of Group One minus Group Two equals -2.63

- 95% confidence interval of this difference: from -4.36 to -0.91

We found a moderate but statistically significant increase in percentage of questions correct from the pre-and-post test, indicating the curriculum was effective. The survey provided a nuanced analysis, allowing our team to revise the curriculum, emphasizing the areas with low baseline knowledge and minimal improvement and deemphasizing areas with high baseline knowledge.

However, providing the CHEs with updated training materials and other health information proved to be difficult. Faced with inconsistent internet access and, at times, no access to power, the CHEs have to rely on memory to deliver trainings and answer questions from the community.

Technological Solutions

ATH partnered with Slalom LLC to design a website and mobile application solution, which would increase access to health information and transparency to services. The website provided updated, visual training materials to the CHEs through a scalable, user-friendly medium. A mobile platform was also developed allowing a full public health curriculum to reach even the most remote populations. The functionality of these solutions were tested in the field and communication vehicles were assessed to foster collaboration across CHEs and communities. Community members requested SMS recaps of information. Visual information supplemented trainings with diagrams and videos providing deeper understanding.
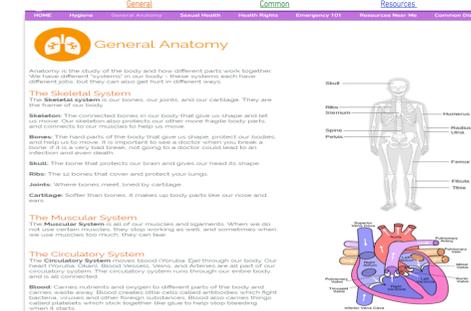
Next Steps

ATH will update the solutions based on user feedback and create more content for low literacy populations. A data collection and analysis strategy will be developed to collect health data, map health facility information, and continuously assess healthcare landscape.