

Background: As small-scale gold mining increases around the world, so does the use of mercury in gold extraction. Mercury is a dangerous neurotoxin, and mining communities often engage in worst-practices, such as burning mercury indoors. Peer education within formal educational campaigns may provide a sustainable way to teach safer handling practices and extend appropriate technology, but its impact within a transient mining community has not yet been studied. We aimed to assess the effect of combined community health talks and peer-to-peer discussions on the occupational behaviors of transient mining communities.

Methods: This community trial took place across 8 mining communities (estimated 16,722 people) in the Health District of Saraya, located in southeast Senegal. The study consisted of a baseline survey and two post-intervention surveys, supervised by health district staff and Peace Corps Volunteers. All mining communities were exposed to a 3-week educational intervention consisting of formal health talks by community health workers, informal discussions by peer educators, and appropriate technology extension. Data collectors used a probability sampling technique to invite participants to the study. All working age members of the mining communities were eligible to participate in the survey. Informed consent was requested prior to administration of the survey. A 36-item survey on socio-demographic and occupational behaviors, modified from a United Nations Industrial Development Organization health assessment questionnaire, was translated and read aloud by data collectors. The primary outcome of interest was location of burning mercury. A multivariate logistic regression was performed using a dichotomous outcome to assess impact on burning location. The study protocol was reviewed by the institutional review boards at Ben Gurion University and the Senegalese Ministry of Health.

Findings: 599 responses were collected for the baseline survey (January 2013), and 557 for the first post-intervention survey (April 2013). These surveys did not vary by ethnicity, nationality or marital status, but varied by age, gender, education level, profession, time spent at the mine, mercury use and previous participation in a safe handling program. A significant association, controlled for significant confounders, was found between the community intervention and a reduction in burning mercury inside a home or shop (OR=0.83, $p < .01$).

Interpretation: An educational campaign using peer educators may improve uptake of safer handling practices in small-scale mining communities. Limitations: the study lacked control villages to assess external influences on behavioral change; it also relied on self-reported outcomes. Strengths: the estimated effect is highly generalizable to other mining communities since the study population is transient in nature and unlikely to be biased by the strong rapport established between permanent residents and other stakeholders.

Funding: This project was funded by the U.S. Department of State.
Abstract #: 01ETC087

Second chance education in Zimbabwe: An inclusive model to achieve education for all

J. Smolow¹, J. Smolow², E. Huruba³, A. Badza³; ¹World Education Inc./Bantwana Initiative, Boston, MA/US, ²World Education Inc./Bantwana Initiative, Boston, MA/US, ³World Education Inc./Bantwana Initiative, Harare, Zimbabwe

Program/Project Purpose: Recent statistics indicate that approximately 30% of Zimbabwean children do not complete primary school, and only 68% graduate to secondary school. In response, in 2009, World Education, Inc./Bantwana (WEI/B) with support from Open

Society Initiative of Southern Africa (OSISA), developed and piloted a Second Chance Education program for out-of-school children in Zimbabwe to receive primary education and reintegrate into formal schooling. This accelerated learning model was piloted in non-formal community learning sites with trained community volunteer facilitators teaching an accelerated primary school curriculum.

Structure/Method/Design: In 2012, building on the results of the pilot, and in support of the Government of Zimbabwe's goal of Education for All, WEI/B, in partnership with UNICEF, USAID, the Education Development Fund and the Ministry of Primary and Secondary Education (MoPSE), initiated an in-school accelerated learning program (ALP) using a non-formal education model that utilizes methodologies and tools adaptable for the formal schooling system. The ALP model compresses the seven-year national primary school curriculum into three years and utilizes a participatory approach, incorporating multi-grade teaching and learning. ALP's objectives are to: 1) build the capacity of 600 schools in 32 districts to reintegrate 30,000 out-of-school-learners; 2) strengthen the non-formal education system to support Second Chance Education for hard to reach children and link them to formal delivery structures; and 3) test and finalize the ALP curriculum to enhance MoPSE standards and guidelines. To ensure sustainability, WEI/B's inclusive approach encourages the community to take responsibility and identify out-of-school children through community sensitization meetings. Teachers with experience in multi-grade teaching are selected by the school management committee, and given intensive training in the new accelerated learning syllabus. To ensure sustainability, MoPSE Provincial and District staff are fully involved in all stages of program implementation.

Outcomes & Evaluation: To date, the program is being implemented in 593 formal school sites, 20 community learning sites, and has reached 28,607 learners including 1,379 children who have been reintegrated into mainstream schooling. The WEI/B ALP tools utilized by facilitators include a compressed national syllabus, an ALP Student Handbook, and an ALP Facilitator's Handbook. All are currently being reviewed by MoPSE's curriculum board for approval for national roll-out. Based on the results of the Second Chance program, WEI/B contributed to the writing of Zimbabwe's first Non-Formal Education policy earlier in 2014.

Going Forward: The main challenge facing the program is the payment of school fees for children transitioning from ALP into mainstream schooling. WEI/B is engaging private-sector donors in Zimbabwe to contribute to these efforts and is working with MoPSE to take on the cost of teacher stipends.

Funding: The WEI/B ALP program is funded by UNICEF, the Education Development Fund and USAID/PEPFAR.

Abstract #: 01ETC088

Mentoring to promote nurse-midwife retention in Tanzania

A. Squires¹, M. Martelly², M. Niles¹, W. Budin¹; ¹New York University, New York, NY/US, ²New York University, Flushing, NY/US

Program/Project Purpose: In an effort to reduce maternal and infant mortality, Tanzania aims to increase access to skilled nursing and midwifery care. Evidence suggests strengthening clinical mentorship and supportive supervision of novice nurse-midwives will facilitate retention of them. The purpose of this poster is to discuss the development, implementation, and ongoing evaluation of a week long train-the-trainer program designed to improve the teaching, clinical supervision and mentoring capacities of nurses-midwives at two rural hospitals in Tanzania over a one year period.