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MDGs and SDGs

Mothers teaching mothers: Decreasing childhood diarrhea in rural Uganda

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Background: Diarrheal-related diseases are the second leading cause of postneonatal deaths in children under five years worldwide. Per the World Health Organization, 18.2% of deaths in children under five in Uganda were attributable to diarrhea in 2014. We conducted a needs assessment and developed an educational intervention for mothers aimed to decrease risk factors for childhood diarrhea.

Methods: Conducted at Mpigi Health Center IV in rural Uganda, this three-part study involved: a pre-test to understand childhood diarrhea prevalence and current hand hygiene and food preparation practices; an educational session with women learning and demonstrating proper hygiene techniques; and a post-test to assess mothers' desire to augment household practices. One hundred mothers or female caretakers of small children were approached via convenience sampling, and written, informed consent was obtained. Chi-squared tests were performed to examine household hygiene practices versus childhood diarrheal prevalence.

Findings: Of the 100 women who participated, 67 were mothers, and 39.3% (n= 26) of their children had had diarrhea in the past six months. Of mothers who washed their hands with water only after using the toilet, 21 (48.8%) of their children had diarrhea compared to five (21.7%) children of mothers who washed with soap and water after toileting ($p = 0.032$). Children of mothers who always washed their hands prior to cooking had less diarrhea compared with those who did not (5[33.3%] vs. 21[41.1%], $p = 0.03$). Only seven children were reported to always wash their hands after toileting. One hundred women participated in the educational intervention to demonstrate proper hand washing techniques and practice. The post-test found that over 70% of all participants felt that they would change their hand hygiene, food preparation, and cooking utensil use; however, only 56% of respondents felt they would change their children's hand hygiene.

Interpretation: Mothers teaching each other proper techniques for hand washing and food preparation may mitigate known childhood diarrheal risk factors, as most of the women were eager to learn how to prevent diarrhea. However, continued research needs to be done to see if household changes were implemented and sustained.

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Abstract #: *2.001_MDG*

Tobacco growing and the United Nations post-2015 development agenda: The example of Malawi

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Background: The negative impact of tobacco is not limited to its consumption but also includes its production, which has mostly moved to lower and middle income countries (LMICs), and has effects beyond those on health. Malawi, the world's largest producer of burley tobacco, and one of the poorest countries in the world, is particularly hard-hit by multiple negative consequences of tobacco. In countries like Malawi, tobacco control does not primarily mean control of tobacco consumption, but rather the control of the supply chain of tobacco. The issues are not only those of preventing tobacco-related diseases and deaths but include a country's economic dependence on tobacco, its negative health impact related to tobacco growing, families trapped in a cycle of poverty, and environmental degradation.

Methods: We review the negative impacts of tobacco cultivation on a country. We use Malawi, the economically most tobacco-dependent country in the world, as an example of the issues that need to be tackled in the health, economic, social, and environmental realms in African tobacco-growing countries. We place these problems in the context of the UN Post-2015 Global Development Agenda and the Sustainable Development Goals (SDGs). We discuss how low-resource tobacco producing countries stand to benefit from being part of that agenda.

Findings and Interpretation: Not only do the SDGs give a prominent position to the Framework Convention on Tobacco Control (FCTC) within health-related goal 3 and act as a catalyst for tobacco control, but many of the remaining 16 goals are directly related to the negative effects of tobacco cultivation on development. Being party to the FCTC might not be a sufficient motivator for successful tobacco control implementation in LMICs. However, the FCTC presents a huge incentive to implement the policies embedded in the treaty. The SDGs stress the importance of the implementation of the FCTC and offer a new opportunity for LMICs that are dependent on tobacco production, and particularly those that have not yet become FCTC parties – like Malawi – to reconsider signing on to the treaty.

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Bangladesh village health workers: Addressing childhood micronutrient deficiencies

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Program/Project Purpose: In Bangladesh, the 2012 under five mortality rate was 44 per 1,000 live births (World Bank, 2013). In rural Chittagong Hill Tracts (CHT), pre-school children are more vulnerable with 51% underweight and 62% anemic compared to national statistics 48% and 49%, respectively. Of these children,

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there are 21.7% vitamin A, 34% iodine, and 68% iron micronutrient deficiencies. In order to better address malnutrition, nonprofit organizations and nursing education institutions will partner with CHT community health worker (CHW) programs from Fall 2016 through Fall 2017 targeting the Millennium Development Goal 4: reduction of child mortality (UNICEF).

Structure/Method/Design: In the prospective study of the CHW malnutrition pilot program, the trainee participation is limited to 20 enrollees to ensure optimal learning resulting in increased knowledge and skills in detection and management of malnutrition. Community elders identify health priority areas, successes and challenges with addressing the health concern, sustainable solutions utilizing existing health services, and key stakeholders to implement the CHW health pilot program. The project viability is dependent upon formal (health system and nongovernmental agencies) as well as cultural (community elders) partnerships.

Outcomes/Results: Education institutions will provide nursing instructors to facilitate learning sessions to identify early and chronic symptoms as well as risks for complication of malnutrition (Phillips & Jensen, 2013). CHWs apply their knowledge in malnutrition with height, weight, head circumference, and anthropometric measurements skills. Trainees show increases in knowledge, attitudes, and beliefs on key training topics selected by the community elders. The health education intervention builds upon nonprofit and community-led partnerships to prevent and to treat children's micronutrient deficiencies. There are clinical, program, and policy implications with improved pediatric morbidity and mortality.

Going Forward: January 2014 saw hartal demonstrations which hindered movement necessary for outreach camps targeting staff training and specialty delivery of patient services. International sponsors expected uninterrupted program activities; however, international aid organizations were unable to sustain funding through the political insecurity. Unmet goals include patients requiring identification and management of malnutrition and staff requesting nutrition training updates. Future program activities were deferred by demonstrations until Fall 2016 requiring additional fundraising efforts.

Funding: No current funding.

Abstract #: *2.004_MDG*

Research-driven schistosomiasis mass drug administration campaign in four Tanzanian villages along Lake Victoria

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Background: Schistosomiasis is the deadliest neglected tropical disease, and it impacts primary school attendance, lowers growth proportions, and delays cognitive development. Previous unpublished research showed that the schistosomiasis prevalence among school-aged-children in one lakeside community was 95%. This program aimed to conduct research on schistosomiasis prevalence to guide the implementation of a mass drug administration (MDA) campaign against schistosomiasis. This program lasted between May and September 2015.

Methods: The first part of the program aimed (1) to quantify the burden of the schistosomiasis infection in four communities in Rorya District, Tanzania, (2) to identify risk factors for infection, and (3) to determine if prior treatment campaigns lowered prevalence. The second part of the program utilized this community-based research to scale an existing MDA. Program participants were recruited through mass community advertising. The project will be continued through a new partnership between SHED Foundation and Duke GlobeMed.

Outcome & Evaluation: By using CCA-antigen urine rapid tests (N=1600), schistosomiasis was found to be highly prevalent among both adults and children in the four tested communities, with prevalence ranging from 90% to 97% for adults and 85% to 90% for children. Major risk factors implicated in such high prevalence include youth, no prior treatment, and proximity to Lake Victoria. Comparing the number of uninfected people who were previously treated in a 2014 campaign (N=216) and the number of people not previously treated (N=216) showed that SHED Foundation's 2014 MDA led to a 57% increase in the percent of uninfected people (7% to 11%). As a result of these findings, an MDA was launched in the four communities in coordination with the SHED Foundation. In total, over 8,000 community members were given free praziqauntel during the program period.

Going Forward: SHED Foundation is exploring the feasibility of using mass texting to increase future MDA coverage.

Funding: None.

Abstract #: *2.005_MDG*

Bi-directional model for International and local collaboration among student initiatives towards Global Health Education and practice

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Program/Project Purpose: In partnership with the Rwanda Village Concept Project (RVCP), the Rwanda Health and Healing Project (RHHP) at Thomas Jefferson University (TJU) in Philadelphia USA provides health professional students with opportunities to serve communities at both the local and the global levels. Working with community based organizations like Barefoot Artist in Rugerero in Northwest Rwanda and the RVCP, medical students from TJU were involved in implementing community building through art and public health programming. These programs and activities expanded to Akarambi, near Kigali, where students, with the help of local leaders and the RVCP, implemented longitudinal, interdisciplinary programming in health and hygiene, nutrition, village gardens, helminthic prevention, HIV/AIDS education and support groups, and family planning providing students from TJU hands on knowledge of tropical diseases.

Structure/Method/Design: In 2006, to enrich the partnership, the RVCP and RHHP developed an exchange program for