ISSN 2214-9996/$36.00

INFECTIOUS DISEASES OLD AND NEW – IMPLICATIONS FOR GLOBAL HEALTH

Achieving Open Defecation Free Communities: Evaluating Knowledge, Attitudes, and Practices: Post- Community Led Total Sanitation Campaign

R. Abaka-Yankson[1], *S. Shaw*[2]; [1]*Drexel University, Philadelphia, Pennsylvania, USA,* [2]*Drexel University, Philadelphia, USA*

Program/Project Purpose: Diarrheal diseases cause approximately 11% of deaths worldwide and this burden is usually due to fecal contamination of water sources (CDC, 2015). Without proper sanitation facilities and sufficient hygiene, rural communities in Zambia often practice open defecation, which perpetuates a high incidence of diarrheal cases (UNICEF, 2011). The purpose of this research is to evaluate the health and social impacts of a Community Led Total Sanitation campaign that was triggered in the Madzimawe chiefdom in the Eastern Province of Zambia in 2012.

Structure/Method/Design: The Knowledge, Attitudes and Practices (KAP) survey was used in the Open Defecation Free (ODF) evaluation. KAP is a survey model that provides quantitative and qualitative information. (WHO, 2008).

A total of 81 residents including Chief Madzimawe participated in a questionnaire that assessed knowledge, attitudes, and practices surrounding open defecation as well as the health impacts of having latrines within the chiefdom.

Representative sampling is the sampling method that was chosen for this research. This is a method where participants whom are chosen are reflective of the total population and are selected at random. (University of California-Davis, n.d).

Outcome & Evaluation: Results of this research showed CLTS had a positive influence on the health of the community and there has been increased knowledge on the importance of hygiene and sanitation. It has been four years post the CLTS campaign and latrine usage has been normalized within the chiefdom, with little to no traditional barriers preventing their use.

Going Forward: *Focusing on Latrine Sustainability.*

Both community members and headmen noted the need for more durable resources to construct their latrines. During the rainy season, harsh winds and rains may destroy latrines constructed from straw and wood. Additionally, most latrines in the four villages had a wooden shelter, which can prove to be insufficient during the rainy season. There needs to be more education and training on how to construct a latrine using alternative, cost friendly and durable materials within the Madzimawe chiefdom. Perhaps exploring how latrines are constructed around the world would lend a hand in being able to find these materials within their village.

Source of Funding: None.

Abstract #: *1.001_INF*

Factors influencing risky sexual behavior among young adults (15-24) years living with HIV attending Mulago HIV/ AIDS Clinic

R. Abenakyo*; Makerere University Joint AIDS Program, Kampala, Uganda, Uganda*

Background: Estimates of 34 million people are living with HIV (PLWH) globally. Of these, 11.8 million are young adults (YAs) meaning for every three PLWH, one is a youth. In developing countries risky sexual behavior (RSB) among YAs is on the increase. In Uganda, the demographic health survey reported that 36% and 49% of young women and men respectively engage in high risk sexual activity. The report by UNAIDS quotes HIV rates of 4.8 %(males) and 2.3% (females), clearly indicating that these behaviors were placing YAs' health and lives at risk. However, a quarter of young women reported their first sexual encounters were coerced. A study in Tanzania, suggested the role of HIV counseling and Testing in improving sexual health among YAs not be underestimated.

Methods: A descriptive cross sectional study done from June to August, 2013. Quantitative data was collected from a convenient sample of HIV seropositive young adults.

Findings: Of the participants, 85.71% were practicing RSB. The RSBs assessed included early sexual initiation, having sex without condoms, multiple sexual partners, sex under influence of drugs or substances. The significant factors revealed were female gender, (COR 2.3634, CI 1.090-6.368, P-value 0.031) being more at risk and level of education i.e. secondary level (COR 0.289, CI 0.101-0.828, P-value 0.021) and tertiary level (COR 0.152, CI 0.043-0.536, P-value 0.003) putting one at risk as a result of exposure.

Interpretation: Majority of HIV seropositive YAs were still indulging in RSBs despite the effort to intervene through ongoing counseling on behavioral change and free condom provision.

Source of Funding: Research interview of participants.

Abstract #: *1.002_INF*

Zika Virus Knowledge and Attitudes among Ecuadorian Adults

G. Aidoo-Frimpong[1], *T. Basta*[2], *G. Gomez*[1], *S. Casapulla*[1], *M. Grijalva*[3]; [1]*University, Athens, USA,* [2]*Ohio University, Athens, Ohio, USA,* [3]*Tropical Disease Institute, Department of Biomedical Sciences, Heritage College of Osteopathic Medicine; Center for Infectious Disease Research, School of Biological Sciences, Pontifical Catholic University of Ecuador, Athens, OH, USA*

Background: ZIKV is a public health issue because of the consequences that can result from infection, including microcephaly and Guillain-Barre Syndrome. To date, 47 countries and territories in the Americas have confirmed ZIKV cases. Ecuador has reported 2,150 suspected cases and 761 confirmed ZIKV cases, with the largest amount reported in Manabi Province, the coastal area affected by the recent earthquake. The purpose of this study was to assess 1) ZIKV knowledge and 2) ZIKV attitudes, based on the Health Belief Model (HBM), among Ecuadorian adults.

Methods: Quantitative self-report data were collected from 151 participants living in Ecuador, including areas in the Amazon and the Andes, during May and June 2016.

Annals of Global Health, VOL. 83, NO. 1, 2017
January–February 2017: 59–70

Findings: Half of the sample were female (51.7%, n = 78), nearly 43% (n = 55) had the equivalent of a high school diploma, and over half of the sample were single (51%, n = 77). The majority of the participants had heard of ZIKV (90.1%, n = 136) and knew it was transmitted via mosquito bites (82.8%, n = 125); however, only 7.9% (n = 21) knew that ZIKV was transmitted via sexual contact and 13.9% (n= 21) knew that it was transmitted via mother to child. Only 18.5% (n = 28) of the sample knew that ZIKV was transmitted via day biting mosquitoes and only 9.3% (n = 14) knew that using condoms would prevent ZIKV. For the HBM items, half of the sample agreed they were at risk for contracting ZIKV, 80% (n = 104) agreed that ZIKV causes serious complications, and the majority agreed that preventive actions (wearing bug spray and long clothing) could prevent transmission, however, only 28.1% (n = 36) agreed that condoms could prevent transmission. The majority agreed that the media impacted their decision to take action to prevent ZIKV (68.2%, n = 88), and the majority were confident they could prevent getting ZIKV (66.4%, n = 85).

Interpretation: More credible information is needed in Ecuador to combat misconceptions about ZIKV through the mass media. Finally, the Health Belief Model seems appropriate for designing ZIKV intervention messages.

Source of Funding: Internal Ohio University funding.

Abstract #: *1.003_INF*

Strengthening Health Care Waste Management through Strategic Mentoring and Supportive Supervision in Rural HIV Clinics, South-Eastern Nigeria

P.O. Anyanwu[1], *O. Okunoye*[2], *S.N. Okon*[3], *G. Odunze*[4], *O. Onyedinachi*[5], *A. Ebong Caleb*[2], *A. Eyo*[2]; [1]*Excellence Community Education Welfare Scheme, ECEWS, Abuja, Abuja Capital Territory, Nigeria,* [2]*Excellence Community Education Welfare Scheme (ECEWS), Uyo, Nigeria,* [3]*Excellence Community Education Welfare Scheme (ECEWS), Enugu, Nigeria,* [4]*Excellence Community Education Welfare Scheme (ECEWS), Owerri, Nigeria,* [5]*Excellence Community Education Welfare Scheme (ECEWS), Abuja, Nigeria*

Program/Project Purpose: HIV pandemic placed additional burden on the weakened health care systems in Nigeria. With an estimated population of over 180 million and national HIV prevalence of 3.6%, the poorly organized health systems were put under serious stress; especially in the rural areas were large number of persons infected with HIV accessed services. The high volume of clients accessing care at these rural health facilities translated into more health care waste being produced without adequate waste management plan. This was complicated by indiscriminate dumping of health care wastes at non-designated points by health workers. Lack of proper waste segregation and disposal systems was observed in 209 rural HIV clinics in Ebonyi, Enugu and Imo States, South-Eastern Nigeria during a pre-service assessment of the health facilities for comprehensive HIV care and treatment program in 2013. This study evaluates the outcomes of mentoring and supportive supervision to health care workers on Health care waste management between October, 2013 and June, 2016.

Structure/Method/Design: Health care workers in the supported states were mentored on the segregation and disposal of waste collected into the different color coded bins. 22,207 color-coded bin liners and 1,252 injection safety boxes were provided to the facilities. Guidelines on healthcare waste management were provided at the supported facilities. Facilities were also supported to dig infectious diseases waste disposal pits. Continued Medical Educations were strengthen by incorporating messages on waste management of infectious materials. Program monitoring visits were conducted across the three states to reinforce messages on the use of color coded bin liner for segregation of waste, proper disposal of injection safety containers using burn and bury approach.

Outcome & Evaluation: Program monitoring visits revealed increased compliance on the use of color coded bin liners as waste segregation method and utilization of the dug pit from 10% in October, 2013 to 95% in June, 2016 across the supported sites.

Going Forward: Health waste management practices improved with provision of commodities and continuous mentoring of health care workers. Routine supportive supervision is need to maintain good waste management.

Source of Funding: None.

Abstract #: *1.004_INF*

Redefining the Target Area for Leprosy Elimination Programs Through Serological Evaluation of a Broader Definition of Leprosy Contacts

M.D. Arulraja[1], *A. Toepp*[2], *F. Amorim*[3], *T. Kummer*[3], *G. Monteiro*[3], *M. Nobre*[3], *M. Duthie*[4], *S. Reed*[4], *M. Wilson*[2], *S. Jeronimo*[3]; [1]*University of Iowa Carver College of Medicine, Iowa City, Iowa, USA,* [2]*University of Iowa, Iowa City, USA,* [3]*Universidade Federal Do Rio Grande Do Norte, Natal, Brazil,* [4]*University of Washington, Seattle, USA*

Background: With 33,000 new cases in 2014, Brazil has the highest incidence of leprosy worldwide. Incidence fails to decrease while case-finding campaigns mostly evaluate household contacts (HHC's). In Northeast Brazil several studies have explored risk of exposure to neighbors. Regarding multibacillary leprosy cases, (the primary source of infection) no significant difference was found between *Mycobacterium leprae* seropositivity rates of HHC's compared to next door neighbors. Therefore, the foci of infection could be larger than the current definition of HHC's identifies. The purpose of this study was to compare the rate of seropositivity in individuals living near a leprosy case to those living farther away from a leprosy case.

Methods: This cross-sectional study was conducted between June to October 2016 in five neighborhoods of perimetropolitan areas of Natal, in Rio Grande do Norte, Brazil. Index leprosy cases were individuals under current treatment at the referral center for leprosy, Hospital Giselda Trigueiro. Home visits were made to the 9 index cases, 59 participants living within 3 blocks of the patient (contacts), and 80 participants living farther than 3 blocks from the patient (controls). A consent form and a questionnaire were administered verbally. Blood samples were tested for *M. leprae* using ML Flow and LID-NDO standard ELISA. Data analysis