utilized logistic regression to determine potential risk factors for *M.leprae* seropositivity.

Findings: Of the 148 participants, 62% were female. Ages ranged from 4 to 89 with an average of 35. Concordance between the ML Flow and ELISA LID-NDO results was 84%. 20% of women were seropositive compared to 16% of men. Seropositivity among contacts was almost twice that of controls (22% vs 13%).

Interpretation: Surveillance of multibacillary leprosy patients should include neighboring residents in order to obtain elimination as current programs fail to include individuals with high rates of seropositivity. In addition, PGL-I or NDO-LID assays are effective and affordable tools for diagnosis in endemic areas that could be part of the final push to eliminate leprosy.

Abstract #: *1.005_INF*

What is the TB Burden in Nigerian Prisons? — An Enhanced TB Case Finding Program experience from 13 Nigerian Prisons

*E. Onu[1], V.A. Enejoh[2], J. Olarewaju[3], I. salihu[4], L. Igwegbe[5], M. Uwaezuoke[5], P. Igweike[6], C. Eze[7], E. Ugwu[7], A. Mpamugo[8], M. Mukiibi[9], I. Olajide[10], **B. Awesu**[11], K. Onu[3], T. Madubuko[12], B. Gobir[13], A. Olutola[11], E.E. Ezeanolue[14], A.E. Nwandu[15]; [1]Center for Clinical Care and Research Nigeria, Abuja, Nigeria, [2]Centre for Clinical Care & Clinical Research, Abuja, FCT, Nigeria, [3]Center for Clinical Care and Clinical Research Nigeria, Abuja, Nigeria, [4]Center for Clinical Care and Clinical Research Nigeria, enugu, Nigeria, [5]Center for Clinical Care and Clinical Research Nigeria, Imo, Nigeria, [6]Center for Clinical Care and Clinical Research Nigeria, Abakaliki, Nigeria, [7]Center for Clinical Care and Clinical Research Nigeria, Enugu, Nigeria, [8]Center for Clinical Care and Clinical Reach, FCT, Nigeria, [9]Centre for Clinical Care and Clinical Research, Owerri, Nigeria, [10]Center for clinical care and clinical research, Nigeria, FCT, Nigeria, [11]Centre for Clinical Care & Clinical Research Nigeria, Abuja, Nigeria, [12]Center for Clinical Care Research Nigeria, Enugu, Nigeria, [13]Maryland Global Initiative Corporation, Nigeria/ University of Maryland Baltimore, FCT, Nigeria, [14]University of Nevada School of Medicine, Las Vegas, NV, USA, [15]University of Maryland, Baltimore, MD, USA*

Program/Project Purpose: In resource-limited settings like Nigeria, prisons and correctional facilities are typically congested and lack adequate ventilation. Inmates are therefore particularly vulnerable to infections like TB and Nigeria ranks 4th among the 22 high burden countries with TB (WHO report 2015: Global Tuberculosis Control). WHO recommends active case detection to reduce the burden of TB. TB case detection in Nigerian prisons is passive. Our project was designed to actively increase TB case finding among inmates at 13 prisons in Nigeria.

Structure/Method/Design: From July 2014 through August 2015, we implemented an Enhanced TB Identification program. A baseline needs assessment of staff and equipment of prison laboratory and DOTS center was conducted to identify gaps. 12 clinic staff and 5 laboratory staff were trained in active clinical TB screening and AFB microscopy using the National training tools. The laboratories were equipped with microscopes, reagents, slides and reporting tools. Prison **Chest camps** were conducted quarterly during which all inmates were assembled and clinically screened for TB.

Outcome & Evaluation: A total of 8584 inmates were clinically screened. 535 had a positive clinical TB screen. 448 sputum samples were obtained and sent to the prison laboratory for AFB smear microscopy. Only 4 samples (0.9%) had positive AFB smears.

Going Forward: Although prevalence of tuberculosis was apparently low in our study prisons, our program demonstrated that with investments made in training staff and equipping the labs a simple standardized approach to TB screening is feasible, acceptable and can be sustained in prisons in resource-limited settings. Study limitations include the low sensitivity of AFB microscopy.

Abstract #: *1.006_INF*

Epidemiology of Cutaneous Leishmaniasis in an Endemic Pacific Coastal Rainforest Area of Ecuador

***A.O. Balogun**[1], R. armijos[1], M. Weigel[1], W. Cevallos[2], X. sanchez[2], E. Puebla[2], R. Rodriguez[2]; [1]Indiana University, Bloomington, Indiana, USA, [2]Universidad Central del Ecuador, Quito, Ecuador*

Background: Cutaneous leishmaniasis (CL) is present in Ecuador's northern Pacific coastal rainforest area, similar to the rest of the mainland. Our previous studies in the 1990s indicated that this area was hyperendemic for CL and had a complex epidemiologic profile. Since then, a number of significant ecological and population changes have occurred caused by intensive economic development (primary rainforest destruction, increased mono-cropping of palm oil and other crops, in-migration from non-endemic areas, tourist industry development). The present study was conducted to (1) investigate CL prevalence, distribution, and risk factors and (2) to compare changes in those that may have occurred in the two decades since our last survey in the same area.

Methods: The survey was conducted during a 24-month period (2013-2015) in 21 rural communities located in the aforementioned endemic rainforest area. Grid sampling was used to randomly select 10% of households located within each of the 21 community hamlets. Household members who gave their informed consent or assent completed a leishmanin skin test (LST), medical history, and a detailed dermatological exam (n=820). Samples of suspicious lesions were taken for parasitological analysis. Data were collected from an adult participant subsample (n=351) on household and community characteristics.

Findings: Thirty-five percent of the 820 participants showed evidence of prior CL (33%) or parasitological evidence of active disease (2%), mostly caused by *L. guyanesis* (86%). Participants identified a number of changes in household reported major changes from 20 years ago regarding occupation and other sociodemographic characteristics, home attributes (exterior wall construction, window coverings, flooring, electricity, water source, sanitation, wastewater, garbage disposal, cooking facilities), type/proximity of cultivated

crops, and animal reservoirs, the low CL prevalence did not permit meaningful statistical analysis of potential risk factors for active disease. However, the multivariate statistical model identified three factors associated with CL history: age (> 15 years), non-endemic area birthplace, and residential province.

Interpretation: The prevalence of CL was much decreased compared to two decades ago but is consistent with Ministry of Public Health data. The data suggest that improvements in housing and changes in the ecological characteristics appear to have disrupted disease transmission in this area.

HIV Self-Testing Values and Preferences in Rakai, Uganda: A Qualitative Study

V.M. Burke[1], N. Nakyanjo[2], W. Ddaaki[2], N. Hutchinson[3], C. Payne[1], F. Nalugoda[2], C. Kennedy[1]; [1]Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, USA, [2]Rakai Health Science Program, Kalisizo, Uganda, [3]Johns Hopkins University, Baltimore, MD, USA

Background: HIV self-testing (HIVST) allows people who want to know their HIV status to collect a specimen, perform a test, and interpret the test results themselves; reactive results must be confirmed by health workers through national HIV testing algorithms. The privacy afforded by self-testing may encourage more people to learn their HIV status, but uptake and appropriate use of HIVST depends on communities' perceptions and understandings of self-testing. Using qualitative methods, we examined values and preferences related to HIVST among community members and health care providers in mainland and fishing populations in rural Rakai District, Uganda.

Methods: Interviewers conducted 33 in-depth interviews (IDIs) with health care providers and community members in both high-risk fishing communities (including sex workers and fishermen) and low-risk rural mainland communities. We also conducted 6 focus group discussions (FGDs), stratified by sex and location, to examine social norms in both settings. Questions explored perceived positive and negative aspects of HIVST and implementation preferences. Interviews and FGDs were conducted in Luganda or English and audio-recorded after obtaining written informed consent. Qualitative data were translated, transcribed, coded and analyzed using a team-based matrix approach.

Findings: Most participants had never heard of HIVST before. Participants cited HIVST-specific benefits of privacy, convenience, and ability to test before sex with a new partner. Participants voiced concerns regarding the absence of a health professional during testing, careless kit disposal and limited linkage to care. While many preferred to obtain HIVST kits at nearby health centers, others desired kit distribution more accessible on short notice. Key populations were seen as particularly benefiting from HIVST. Almost all participants reported they would be willing to use an HIVST if provided at a low cost and if educated sufficiently.

Interpretation: Our findings suggest a potential role for HIVST across populations in this setting. Though participants were unable to base responses off direct experiences, most concluded that the personal benefits of HIVST outweighed the risks. If HIVST programs are introduced into these communities, implementers will need to consider how to balance accessibility with necessary professional support.

High Spatial Resolution Mapping of Changing Inequalities in Child Mortality Across Africa between 2000 and 2015

R. Burstein[1], N. Golding[2], A. Osgood-Zimmerman[3], J. Longbottom[4], L. Dwyer-Lindgren[3], A. Browne[4], L. Earl[3], C. Morozoff[3], S. Lim[3], H. Wang[3], A.D. Flaxman[5], D. Weiss[6], S. Bhatt[7], T. Farag[8], L.K. Krause[8], S. Dowell[8], P. Gething[6], C.J. Murray[9], C. Moyes[10], S. Hay[3]; [1]University of Washington / IHME, Seattle, Washington, USA, [2]University of Melbourne, Melbourne, Australia, [3]Institute for Health Metrics and Evaluation, Seattle, USA, [4]Oxford University, Oxford, United Kingdom, [5]University of Washington Seattle, Seattle, WA, USA, [6]Oxford Big Data Institute, Oxford, United Kingdom, [7]Imperial College London, London, United Kingdom, [8]Bill and Melinda Gates Foundation, Seattle, USA, [9]Institute of Health Metrics and Evaluation, University of Washington, Seattle, WA, USA, [10]Oxford, Oxford, United Kingdom

Background: Cross-country studies of trends in child mortality have shown, in average, large declines in nearly every country. At the same time, these successes have been varied. It is unknown though to what extent inequalities in child mortality exists and persists within countries, as there have never been contemporaneous and comparable cross-country subnational estimates.

Methods: Herein, we present a novel synthesis of existing survey data from Demographic and Health Surveys, Multiple Indicator Cluster Surveys, and censuses (in total representing over 330 million child-months of exposure) to produce estimates of neonatal, infant, and child mortality for every 5km by 5km pixel across Africa, for years 2000, 2005, 2010, and 2015.

We combine machine learning and model-based geostastics methods in novel ways to increase predictive performance at high spatial resolutions. By modelling child mortality in a Bayesian geostatistical framework, we are able to harness the inherent spatial and temporal correlation in our data in order to produce estimates with full uncertainty.

Findings: We present a series of maps which allow for detailed inspection of highly local trends in mortality across the continent at pixel, district, and province levels of aggregation. We found that, despite overall declines, relative subnational inequality in child mortality remained mostly unchanged. Furthermore, across the continent, the top performing 10% in each country were all very similar, while the worst performing 10% in each country varied dramatically across countries. Annualized rates of change over the study period varied from an increase of 1% to a decreasing rate of greater than 8%, indicating that while several localities experienced