

model conditional on the crowding out of tobacco was created using quadratic conditional Engel curves. X2 tests for consumer separability were also performed. Additionally, an analysis of tobacco tax progressivity was completed in order to enhance policy recommendations. Kakwani indices were generated and dominance tests conducted.

Findings: Overall, households which consume tobacco spend less on certain commodities compared to households which do not consume tobacco (reduction of expenditure on fruits, vegetables, grains, pulses, education, transportation and fuel are significant at a 5% level). These goods have nutrition and family welfare implications. Generally, trends are more pronounced in urban settings. Also, poorer quintiles tended to spend a greater proportion of their budget on tobacco (3.6% poorest quintile, 2.7% richest quintile). X2 tests led to rejection of the separability between tobacco and most other goods, meaning that tobacco consumers have different preferences and behave differently than non-tobacco consumers. The preliminary conditional demand model confirms many of the trends in the descriptive statistics, namely that vegetable and education spending shares are adversely impacted by tobacco consumption. Initial analysis demonstrates that tobacco taxation is progressive, highlighting potential equity implications to increases of tobacco taxation.

Interpretation: There is evidence to suggest that tobacco spending crowds-out the consumption of goods, such as vegetables and education. In particular, poor households and those living in urban areas are most vulnerable. Key policy implications arise regarding the importance of tobacco control measures, such as taxation.

Funding: None.

Abstract #: 01NCD025

Improving access to education for South African children who attend school with a tracheostomy

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Program/Project Purpose: The Greys Hospital Tracheostomy Home Care Service (THCS) in Pietermaritzburg, South Africa was started in 2006 with the aim of allowing children with tracheostomies to be cared for by their families at home. The THCS is only the second such program in South Africa and has discharged over 40 children to trained parents and/or care-givers. As children within the THCS program continue to do well outside of the hospital setting they have begun to attend school. This study, which took place between June and August 2014, is the first study in South Africa to document the school experience of children with tracheostomies and determine whether mainstream public schools are able to accommodate them and how the schools could be made safer and more accessible.

Structure/Method/Design: The four patients that are currently attending school with a tracheostomy were identified from the patient records of a tertiary hospital with a pediatric tracheostomy home based care service. With the aid of a Zulu language translator, the mothers and classroom teachers completed an interview and questionnaire in their home and school respectively.

Outcomes & Evaluation: The key teacher identified barriers to enrollment were: teacher unfamiliarity with tracheostomies and uncertainty about the school's liability and the response of other children. The safety barriers identified were: the children have limited vocalization ability yet attend schools with greater than 60 children

per classroom, pit latrines are separate from the school, and sandy classrooms can block the tracheostomy. Identified needs for successful school placement include providing tracheostomy tubes and suctioning equipment, and training teachers in how to identify respiratory distress, and perform emergency tracheostomy changes and CPR.

Going Forward: Children with tracheostomies can and are currently attending South African mainstream public schools but a training program for teachers is needed. As a first step, an introductory booklet for teachers that explains tracheostomies and provides educational.

Funding: Arnold P. Gold Foundation.

Abstract #: 01NCD026

Pilot program of newborn screening for sickle cell disease in angola- Angola Sickle Cell Initiative (ASCI)

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Program/Project Purpose: Why the program/project is in place, in one or two sentences: To reduce morbidity and mortality of children with sickle cell anemia in Angola Aim: to collaborate on a comprehensive sickle cell initiative to provide screening, diagnosis, care, treatment, health professional training, research, and community mobilization in order to contribute to improved care of children with sickle cell disease in Angola.

Structure/Method/Design: Program/Project Goals, Desired Outcomes – The program trained Angolan laboratory personnel and set up screening laboratories in Luanda (2011) and Cabinda (2012) provinces. We have enrolled 16 birth and health centers in Cabinda and Luanda provinces to collect samples from newborns for testing using isoelectric focusing (IEF). A plan for universal screening of newborns in a small province will be developed. Participants and Stakeholders: How were they selected, recruited? An estimated 12,000 babies are born annually with Sickle Cell Disease (SCD) in Angola alone. Without treatment, most of these babies die before five years of age. Early diagnosis through newborn screening followed by care and treatment including daily penicillin reduces mortality. In March 2011, the Republic of Angola entered into a public-private partnership with Chevron Corporation and Texas Children's Hospital/Baylor College of Medicine to pilot a comprehensive newborn screening and treatment program (Angola Sickle Cell Initiative). Capacity Building / Sustainability: What is the plan, structure in place to encourage viability? Gradual transfer of financial responsibility to public health service, engagement of the Angolan population, and establishment of a formal training programs for health care providers.

Outcomes & Evaluation: To date, what are the successes and outcomes achieved? The program has screened more 85,000 newborns. Of these, 1488 (1.7%) were diagnosed with SCD. An earlier evaluation showed that only 54 percent of affected babies could be located and enrolled in treatment. ASCI has also trained hundred of health care providers. Monitoring & Evaluation Results (if conducted).

Going Forward: What are the ongoing challenges? Failure to locate a significant number of babies affected by sickle cell anemia, limited Ministry of health resources due to competing health priorities. Are there any unmet goals? We have not achieved full transition to Ministry of Health control or diversified our funding source. How are/may future program activities change as a result? Establishment of Advisory group consisting of all stakeholders including affected

families, Ministry of Health, and sponsors, engagement of local organizations in Angola, integration of SCD care into primary care, and investigation of rapid low-cost methods to diagnose sickle cell disease. **Funding:** Chevron Corporation, Angola Ministry of Health, and Texas Children's Hospital.

Abstract #: 01NCD027

Recurrence of cervical intra-epithelial lesions after thermo coagulation in HIV+ and HIV- Nigerian women

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Background: Cervical cancer remains a leading cause of morbidity and mortality globally. Prevalence of Cervical Intraepithelial Neoplasms (CIN) is between 6-8% in Nigeria; with ~10% of high grade lesions progressing to cancer if untreated. HIV infection may play a role in the recurrence of cervical Intra-epithelial lesions following treatment. Screening programs utilizing Visual Inspection with 5% Acetic Acid (VIA) or Lugol's Iodine (VILI) followed by thermo-coagulation (or cryotherapy) for positive lesions are considered viable options for low-resource settings because of cost and practicability. Studies of recurrence following thermo-coagulation in low-resource settings are scarce. **OBJECTIVES:** To investigate the factors associated with recurrence of VIA or VILI positive lesions following treatment with thermo-coagulation in HIV positive and HIV negative Nigerian women.

Methods: A retrospective cohort study of women who were screened in the cervical cancer "see and treat" program of the Institute of Human Virology Nigeria was conducted. We collected data from 5 sites over 4 years in Nigeria: National Hospital Abuja, University of Abuja Teaching Hospital, Garki Hospital Abuja, Federal Medical Centre Keffi and Mother and Child Hospital, Ondo. Inclusion criteria were age ≥ 18 years, baseline HIV status known, VIA/ VILI positive and had thermo-coagulation. We performed logistic regression to examine the proportion of women who returned for scheduled follow-up, those with recurrence and factors associated with recurrence. Ethical clearance was obtained from the Institutional Review Board (IRB) of the University of Maryland Baltimore and the National Health Research Committee (NHREC) of Nigeria.

Findings: Overall, 5,190 women were screened, 7.7% (398/5190) of these were VIA/VILI positive. 65.8% (262/398) had thermo-coagulation (109 were ineligible for thermo-coagulation, 17 did not consent). 67.6% (177/262) were followed up for at least 6 months. Of the 177 included in study, 67.8% (120/177) were HIV positive and 32.2% (57/177) were HIV negative; Mean age (SD) was 34.9 (7.4) years and median follow up time was 531 days (IQR=673). Recurrence occurred in 16.4% (29/177) of participants and was higher in HIV positive women (18.3%) compared to HIV negative women (12.3%) but this was not statistically significant (p-value 0.31). Women aged ≥ 30 years were much less likely to develop recurrence, OR = 0.28 (95%CI = 0.12, 0.65). Among HIV positive women, CD4 cell count < 200 cells/mm³ was associated with recurrence, OR = 3.68 (95%CI = 1.15, 11.7).

Interpretation: Recurrence of VIA/ VILI positive lesions after thermo-coagulation occurs in a significant proportion of women. A high

proportion of VIA/VILI positive women did not return for follow up visits highlighting the challenge of effective screening programs in this population and the need to continue research into most appropriate screening strategies. HIV positive women with low CD4 counts are at increased risk of recurrent lesions and may be related to immunosuppression.

Funding: None.

Abstract #: 01NCD028

Maternal obesity in Africa: Is it time to pay more attention?

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Background: Many African countries are experiencing a double burden of under- and over-nutrition due to factors such as globalisation, urbanisation, changing diet, and cultural perceptions of weight. Pregnancy is a trigger point for the development of obesity, and maternal obesity is associated with short- and long-term adverse effects in the mother and child. However, while the effects of maternal under-nutrition are well known and addressed, there is scarcity of data on maternal obesity in African countries. Nigeria, Africa's most populous country is experiencing rising levels of obesity and efforts to prevent and manage obesity in pregnancy are urgently needed in Nigeria. The study aimed at identifying the components of an intervention for maternal obesity in Nigeria which may be subsequently adapted to similar African countries. The objectives were to assess the prevalence, effects and distribution of maternal obesity; assess the knowledge, attitude and practice of pregnant women and maternal healthcare providers and identify existing interventions for maternal obesity.

Methods: A systematic review and meta-analysis on maternal obesity in Africa was conducted. Following on the results of this review, a cross-sectional observational study utilising both quantitative and qualitative research methods was done. For the cross-sectional study, eight hospitals across Nigeria were selected via multi-stage random sampling. A questionnaire survey of pregnant women and semi-structured interview of maternal health care workers was conducted. Data from the questionnaire survey is being analysed with SPSS using appropriate tests while thematic analysis is being conducted for the interviews.

Findings: Twenty-nine studies were included in the systematic review. Prevalence of maternal obesity across Africa ranged from 6.5% to 50.7%, using body mass index and weight measurements at different gestational ages. Pregnant women who were older, urban dwellers and had higher parity were more likely to be obese than non-obese. Meta-analysis showed increased odds of adverse maternal and child outcomes for obese pregnant women. However, new-borns with significantly lower birth weight were more likely to have non-obese mothers than obese mothers. Questionnaires were completed by 474 pregnant women, and twenty-two health care workers were interviewed until data saturation. Data analysis is presently being conducted. Emerging themes from qualitative study show that barriers to achieving ideal weight in mothers include booking for antenatal care late in pregnancy, and insufficient knowledge on the management of maternal obesity by health care workers.

Interpretation: Culturally adaptable/sensitive interventions should be developed for the management of obese pregnant women in Africa. Education and training of health care workers on efficient and effective interventions may assist health workers in ensuring women are supported to provide optimal maternal and infant health outcomes.