

Funding: No funding listed.

Abstract #: 02SEDH029

Prevalence of water, sanitation and hygiene knowledge, norms and practices in bateyes in La Romana, Dominican Republic

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Background: Bateyes are settlements where migrant Haitian laborers live in poverty while working in agriculture, including privately owned sugar plantations in the Dominican Republic. Approximately 500,000 people, or 5% of the total Dominican population, live in a batey. While national surveys estimate that 86% of Dominicans access improved water sources and 83% access improved sanitation, little is known about water, sanitation and hygiene (WASH) indicators in bateyes. A cross-sectional study was conducted to establish WASH knowledge, norms and practices, so as to contribute to the dearth of literature on the health of batey residents and design a community-based health education program.

Methods: In June 2014, the Center for Medical Humanities & Ethics at the University of Texas Health Science Center San Antonio conducted a cross-sectional study of bateyes in La Romana. Using stratified random sampling, 10 bateyes were selected proportionally to the following variables' distribution within a sampling frame of 53 bateyes; the presence of a bio-sand filter program and health promoter, distance from a town, and batey ownership. 184 self-identified male or female heads of household over the age of 18 years were consented and interviewed using a validated household survey. The primary outcomes were: preventive health knowledge; water treatment, defecation, and hand washing norms and practices; Social Capital; and family-reported diarrhea in children under 5. This study was approved by the UT Health Science Center Institutional Review Board.

Findings: Sample demographics and preliminary results are currently available. Respondents were predominantly female (66%), had only completed primary school (49%), and had an average age of 43 years. The majority of households (65%) obtain drinking water from an outside tap and treat their drinking water with chlorine (47%) or a filter (22%). 34% of the sample use an unimproved sanitation facility, while 14% openly defecate. When asked to provide 5 times it is important to wash hands, only 17% could provide 4 or more correct answers. Chi-square and t-tests will be used to analyze results on preventative health knowledge; drinking water, defecation and hand washing norms and behaviors; social capital, and the incidence of diarrhea in children under 5 years. Regressions will describe predictors of WASH knowledge and behavior, as well diarrheal disease in children under 5.

Interpretation: The results of this study will determine the need for, focus of and key messages for a participatory education program aimed at preventing diarrheal, respiratory and vector borne illnesses. Our rigorous study design and randomized sampling showed widespread prevalence of disease risk factors, in the 53 bateyes sampled. We used validated data collection tools and protocols, so that study observations serve as a reasonable baseline for comparison after future interventions.

Funding: None.

Abstract #: 02SEDH030

Assessing the continuum of care in South Asia and Sub-Saharan Africa

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Background: Increased global focus has been placed on the continuum of care in efforts to improve maternal health. The goal of the continuum approach is to provide women with essential reproductive health services before, during and after pregnancy and delivery. South Asia and Sub-Saharan Africa—where 86% of maternal deaths occur—desperately need improvements in the provision of continuum of care services. The objectives of this study are to (1) quantitatively document coverage of key continuum of care services in these two regions, and (2) examine socioeconomic and demographic differentials in women who received continuum of care services versus those who did not.

Methods: This study used recent Demographic and Health Survey data (from 2010 onwards) from nine countries: Bangladesh, Nepal, Pakistan, Ethiopia, Malawi, Rwanda, Senegal, Tanzania and Uganda. The analytic sample consisted of 15,984 women between the ages of 15 and 49 who had a birth in the past year and had no missing data. Descriptive analyses were used to assess five key continuum of care services: at least one antenatal care (ANC) visit, four or more ANC visits, skilled delivery, postnatal care (PNC) for the mother, and postpartum family planning counseling. Multilevel multinomial logistic regression models were analyzed in Stata 13.0 to examine the factors associated with receiving all or some of the continuum of care services.

Findings: The descriptive results showed that 17.0% of women received all services along the continuum and 13.3% received none of the services. More specifically, the majority of women received at least one ANC visit (84.5%); however, few received the recommended four or more visits (37.9%). The largest drop-out along the continuum occurred between these two early steps (55.1% decrease). Furthermore, few women who did not receive any ANC visits went on to have a skilled delivery or received PNC (less than 5%). The regression results showed that women who received all the continuum of care services tended to be the richest (OR= 13.90; CI: 6.32, 30.59; $p < 0.001$) and most educated (OR=5.73; CI: 2.58, 12.73; $p < 0.001$).

Interpretation: The provision of key continuum of care services can be improved by better understanding where drop-outs occur. For many countries, important focus areas include providing access to four or more ANC visits, PNC, and family planning as well as increasing efforts to reach the poorest women. Despite its limitations, this study provided a current assessment of the continuum of care in regions of the world where the burden of maternal mortality is highest.

Funding: This study was supported by the USAID-funded MEASURE Evaluation project (under Cooperative Agreement GHA-A-00-08-00003-00) as well as the NIH-funded Carolina Population Center (T32 HD007168 and R24 HD050924). The views expressed in this paper do not necessarily reflect those of USAID.

Abstract #: 02SEDH031

Study of the effects of pesticide exposure among the workers of tea estates

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