

Does availability of HIV-related health services affect individual fertility preferences and contraceptive use in Sub-Saharan Africa?

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*Background/Significance:* Two recent trends in HIV-related health services in Sub-Saharan Africa introduce new questions about what this may mean for women's and men's fertility preferences and contraceptive behavior. The first trend is the expansion in anti-retroviral treatment for people living with HIV; in particular, drug treatment for HIV-positive pregnant women to lower the risk of HIV transmission to newborns, and anti-retroviral therapy for HIV-positive people in general, to improve quality of health by reducing the symptoms of the disease, and to lengthen their life expectancy. For example, HIV treatment has risen dramatically in Zambia from just 10,000 people on ARVs in 2004, to about 120,000 by mid 2007. The second trend is the increasing availability of HIV testing in the region, and in particular availability of new rapid HIV tests, combined with increased support for and implementation of opt-out testing in some countries. The expectation of governments and providers is that if more individuals are aware of their HIV status, use of contraception, including the condom, to prevent partner infection and to limit fertility as well, may become more widespread. On the other hand, increased availability of ART may boost people's motivation to have children as the drugs enhance the health and survival of people living with HIV and prevent mother to child transmission of the infection. Little is currently known about how individuals will react to these HIV-related service trends. There is, therefore, a need for research to tease out these program and policy relevant relationships.

*Hypothesis:* We expect that women and men living in areas where a higher percentage of facilities have ART, PMTCT and HIV testing and counseling services will be less likely to want to delay or stop childbearing and to use contraception. We also posit that greater availability of HIV related services will close the gap between the fertility preferences and contraceptive use of HIV positive men and women compared to their HIV negative counterparts.

*Methodology:* We examine three outcomes: 1) Want more children; 2) unmet need for contraception (any method); and 3) used condom at last sex. The key independent variables measure the percentage of health facilities in a geographic area (e.g. province or region) that offer a) voluntary counseling and testing (VCT); b) clinical care and support services for HIV/AIDS patients and people living with AIDS (CSS); c) anti-retroviral therapy (ART); and d) prevention of mother to child transmission (PMTCT). To test the first hypothesis, we will relate these variables to individuals' fertility preferences and contraceptive use, net of the effects of personal factors. For example, we will be able to say whether and in what direction availability of ART or PMTCT is associated with women and men's fertility preferences and contraceptive use. We also construct a composite variable of HIV status (from biomarker data) and likely knowledge of status (from self-report of ever having an HIV test & receiving the results) that has four categories: HIV+, likely know; HIV+, don't know; HIV-, don't know; and HIV-, likely know. We examine associations between this measure of HIV status and fertility preference and contraceptive use controlling for the effects of personal characteristic variables. To test the

second hypothesis, we will determine whether or not any observed association changes when the HIV related services variables are included in the analysis. Logistic regression models control for age, urban/rural residence, education, household wealth quintile, number of living children and union status will be employed.

*Data:* We draw on individual data (self-reported information and HIV biomarker) from the most recent Demographic and Health Surveys (DHS) in Kenya, Rwanda, Zambia and Tanzania. These data are merged with facility-level information on HIV-related services from the Service Provision Assessments (SPA) conducted in each country (Kenya (2004), Rwanda (2007), Tanzania (2006) and Zambia (2005)). In 2004 MEASURE DHS developed a special HIV/AIDS SPA to meet the needs of the President's Emergency Plan for AIDS Relief. These data are now available for a number of countries in Sub-Saharan Africa.

*Findings:* Preliminary findings indicate that the fertility preferences of HIV positive women and men are generally similar to those of their counterparts who are HIV negative, and where there is a difference, the former are more likely to desire to stop childbearing than the latter. On the other hand, people who are HIV positive and likely know it are generally more likely to use condoms at last sex than those who are HIV+ and don't know it or are HIV negative.

*Knowledge Contribution:* The proposed analysis will contribute to knowledge about how availability of HIV related services might affect people's preferences and behavior with respect to fertility and contraceptive use. It will move discussion around these issues beyond mere speculations and provide helpful information to program planners and policy makers to help individuals, irrespective of their HIV statuses, achieve their fertility and contraceptive goals.