Men see lower gains in life expectancy than women in era of HIV treatment in South Africa

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Improvements in availability of antiretroviral therapy (ART) for HIV in South Africa over the past decade coincide with an increased gap in female versus male life expectancy, according to a study published in *PLOS Medicine* this week. The study was conducted by Jacob Bor and colleagues at Boston University in collaboration with Till Bärnighausen and colleagues at the Wellcome Trust's Africa Centre for Population Health in South Africa and the Harvard T.H. Chan School of Public Health. The team found that while HIV mortality declined and life expectancy improved for all adults following scale up of ART in 2004, the improvements were greater for females than males.

Bor and colleagues analyzed demographic data on all deaths and their causes between 2001 and 2011 for nearly 100,000 adults in the rural region of KwaZulu-Natal, South Africa, as well as linked clinical records from the HIV treatment and care program that serves the region. These data were collected by the Wellcome Trust's Africa Centre for Population Health as part of one of Africa's largest population-based longitudinal cohort studies. Between 2003 (the year before ART scale-up) and 2011, female adult life expectancy increased 13.2 years, while male life expectancy increased only 9 years, nearly doubling the gap between female and male life expectancy, from 4.4 years to 8.6 years. Whereas in 2003 women and men had similar HIV mortality rates, by 2011 women were 27% less likely to die of HIV. The researchers also found that half (55% of men, 40% of women) of HIV-related deaths
occurred in men and women who had never sought care for HIV/AIDS. It is possible that causes of death (which were reported through verbal autopsy) were not accurate, and that changes other than ART scale-up may have influenced life expectancy.

The authors conclude that to reach the Joint United Nations Program on HIV/AIDS 2020 targets (90% of people with HIV are tested for the virus, 90% of whom initiate treatment, 90% of whom attain viral suppression), more must be done to bring men as well as women with HIV into care. "Our results suggest that further research to understand male deficits in care-seeking and to design effective interventions to increase uptake of HIV services among men is needed to realize the full benefits of mass ART provision."

In an accompanying Perspective article, Alexander Tsai and Mark Seidner note that the study by Bor and colleagues is unique in its inclusion of all deaths, whether the deceased was enrolled in HIV care or not, as compared to previous studies which only tracked mortality for patients within care. Tsai and Seidner also emphasize the need to identify interventions to provide care to both men and women: "Certainly, the AIDS-free generation will remain a far-off mirage until men also receive the health benefits made possible through the mass provision of HIV treatment which somehow remains out of reach for too many of them."
