Achieving UNAIDS 90-90-90 targets in a high HIV burden district in KwaZulu-Natal, South Africa: HIV linkage to care and treatment cascade in HIPSS

HIPSS
HIV Incidence Provincial Surveillance System Project

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Background:

With the goal of eliminating new HIV infections, the Joint United Nations Programme on HIV/AIDS (UNAIDS) set ambitious 90-90-90 targets to be achieved by 2020. Including 90% of people living with HIV knowing their HIV-status, 90% of these receiving antiretroviral therapy (ART) and 90% of these having viral suppression. Delivery of medical care to HIV-positive individuals requires a sequence of diagnostic tests, assessments and monitoring, termed the 'HIV treatment cascade'. The aim of this analysis is to quantify the current achievement and gaps in this cascade for participants enrolled in the HIPSS in South Africa.

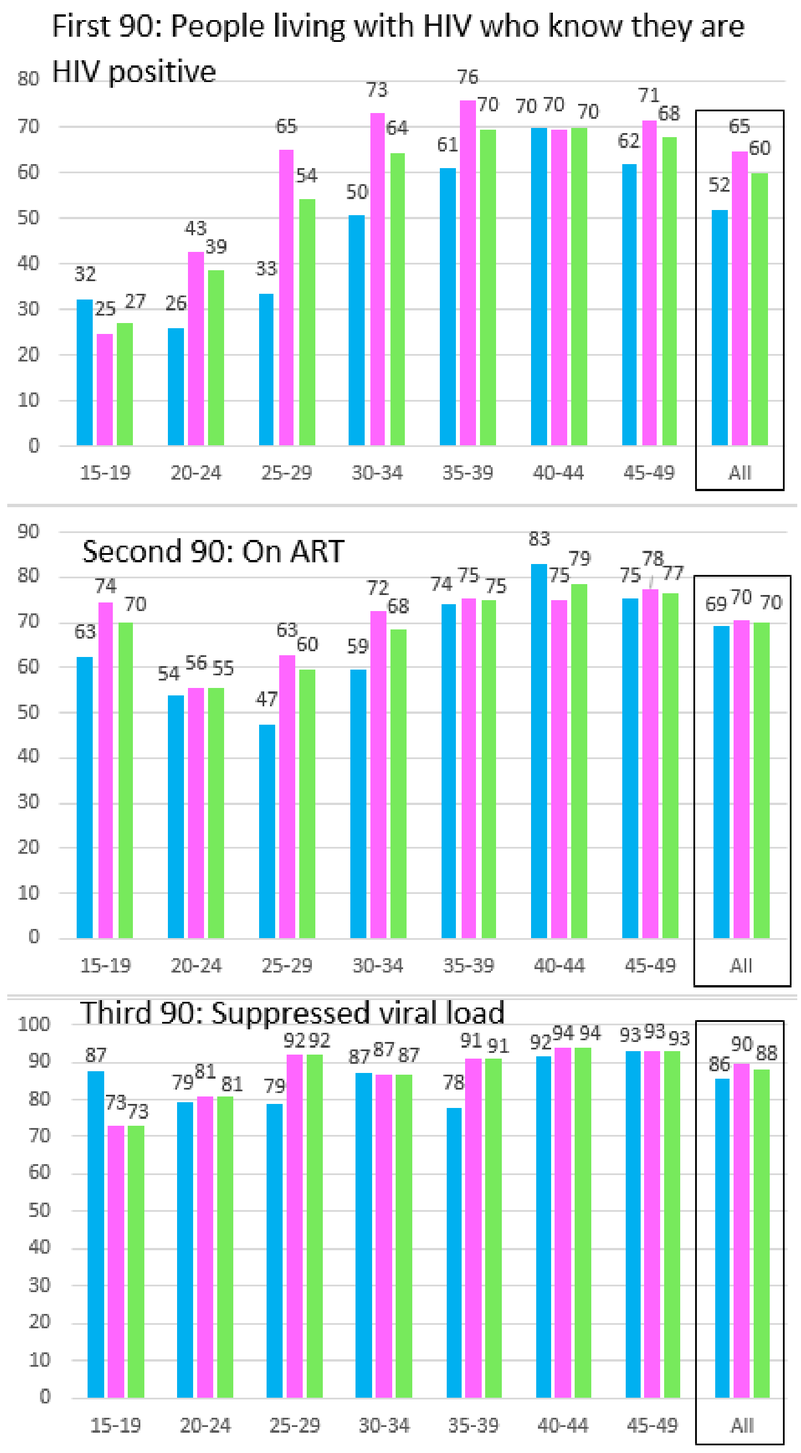
Methods:

HIPSS was a household survey of HIV-prevalence and incidence in the uMgungundlovu District in KwaZulu-Natal in 2014 and 2015. Households within selected enumeration areas were randomly selected. A single randomly selected eligible (15-49 years) individual in each household was asked to participate and provide blood for HIV testing and complete an individual questionnaire. Samples testing positive for HIV were tested for HIV RNA (viral load). Taking into account the complex multi-level sampling design and adjusting for non-response, weighted data were analysed using SAS survey procedures.

Results:

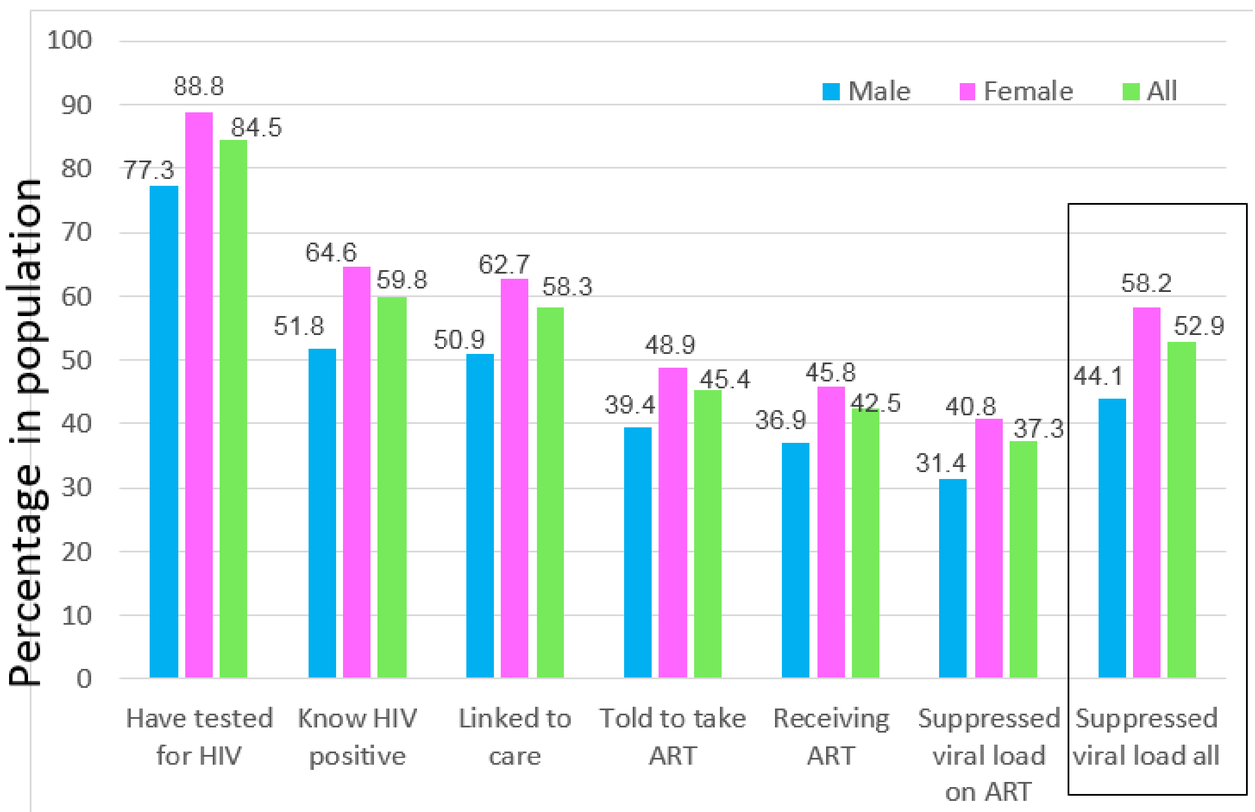
A total of 9812 participants, 3547(36.1%) males and 6265(63.9%) females was enrolled. HIV prevalence was 28.0% [95% confidence interval (CI):25.9-30.1] among males and 44.1%(95%CI:42.3-45.9) among females. Overall, 51.8% (95%CI: 47.4-56.3) males and 64.6% (95%CI: 61.9-67.3) females who were HIV positive knew their HIV-positive status. Overall, 31.2% (95%CI: 29.0-33.4) of males and 18.1% (95%CI: 16.1-20.2) of females self-reported never having been tested for HIV. Of those who knew their HIV positive status, 69.1% (95%CI: 63.4-74.9) males and 70.3% (95% CI: 67.6-73.0) females were on ART.

Of those on ART, 85.5% (95% CI: 80.1-90.1) males and 89.7% (95%CI: 87.3-92.0) females had viral loads <1000 copies/mL. Among HIV positive participants 44.1% of males and 58.2% of females had viral loads <1000 copies/mL.



HIV cascade of care by age groups

Percentages calculated out of the number in the previous element of the 90-90-90 cascade



HIV cascade of care: males and females aged 15-49

Percentages are based on the number of HIV positive people and are population weight adjusted percentages. All subsequent elements in the cascade are subsets of the previous elements, with the exception of suppressed viral load all. This includes all HIV positive people who have suppressed viral loads, regardless of ART status, whereas the previous element (Suppressed viral load on ART) only include participants who are on ART.

Discussion:

In this population, all the UNAIDS 90-90-90 targets were below 90% with the largest gap in knowledge of HIV status, and much lower in males than in females. The target best achieved is viral suppression with ART use. Major campaigns are needed to increase HIV-testing, especially amongst males.

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