

ZAMPHIA 2021 showed reduction in advanced HIV disease (AHD) prevalence but further scale up of AHD screening and management needed

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BACKGROUND

- Zambia Population-based HIV Impact Assessment (ZAMPHIA) 2021 showed marked progress towards HIV epidemic control: 89% of people living with HIV (PLHIV) knowing their status, 98% of those on antiretroviral treatment (ART) and 96% of those on ART virally suppressed.
- While Zambia has demonstrated marked achievements in the national HIV response, the number of HIV-related mortality from advanced HIV disease (AHD) remains high at 19,000 (UNAIDS, 2021).
- Reducing mortality from AHD and opportunistic infections is a key program priority.
- We analyzed ZAMPHIA 2021 data to assess the population-level AHD prevalence and compared to results from ZAMPHIA 2016.

METHODS

- We measured AHD prevalence among PLHIV aged 15-59 years and compared findings from ZAMPHIA 2021 and ZAMPHIA 2016.
- Participants completed a questionnaire and whole blood was collected, of which CD4+ testing was done for all who tested HIV positive.
- Awareness of HIV-positive status and treatment status were based on self-report or having a detectable antiretrovirals in the blood.
- AHD was defined as a CD4+ count of <200 cell/mm³.
- Analyses were weighted to account for survey design.

RESULTS

- Overall AHD prevalence among PLHIV was 7.0% (CI: 5.7-8.5%) in 2021, compared to 13.9% (CI: 12.5-15.3) in 2016 (figure 1).
- Among PLHIV who were *unaware of their status*, AHD prevalence was 18.8% (CI: 13.5-25.1) in 2021 compared to 17.7% (CI: 15.0-20.6) in 2016 (figure 1).
- Among those *aware of their status and on ART*, AHD prevalence was 4.8% (CI: 3.5%-6.3%) compared to 37.9% (20.6-57.5%) among those *aware but not on ART* (figure 1).
- While those who were *aware but not on ART* only comprised 1.8% (CI: 1.2-2.3%) of PLHIV, they represented 9.7% (CI: 4.5-14.9%) of those with AHD (figure 2).
- Similarly, while only 11.6% (CI: 9.9%-13.4%) of PLHIV in ZAMPHIA 2021 were *unaware of their status*, this group represented 31.2% (CI: 22.2%-40.3%) of those with AHD (figure 2).
- Over 59% of PLHIV with AHD are among those who are aware of their HIV status and on ART, representing the largest group.
- In 2021, among PLHIV 15-59 with AHD overall, 51.6% were female (compared to 64.7% of all PLHIV), average diagnosis was 6.1 years ago and 90.6% had ever taken ART (table 1).
- In 2021, among those who are aware but currently not on ART, 74.3% were female, time since HIV diagnosis was 4.1 years and 37.1% had reported ever taking ART (table 1)

Figure 1: Weighted proportions of PLHIV 15-59 with AHD, ZAMPHIA 2016 vs. 2021

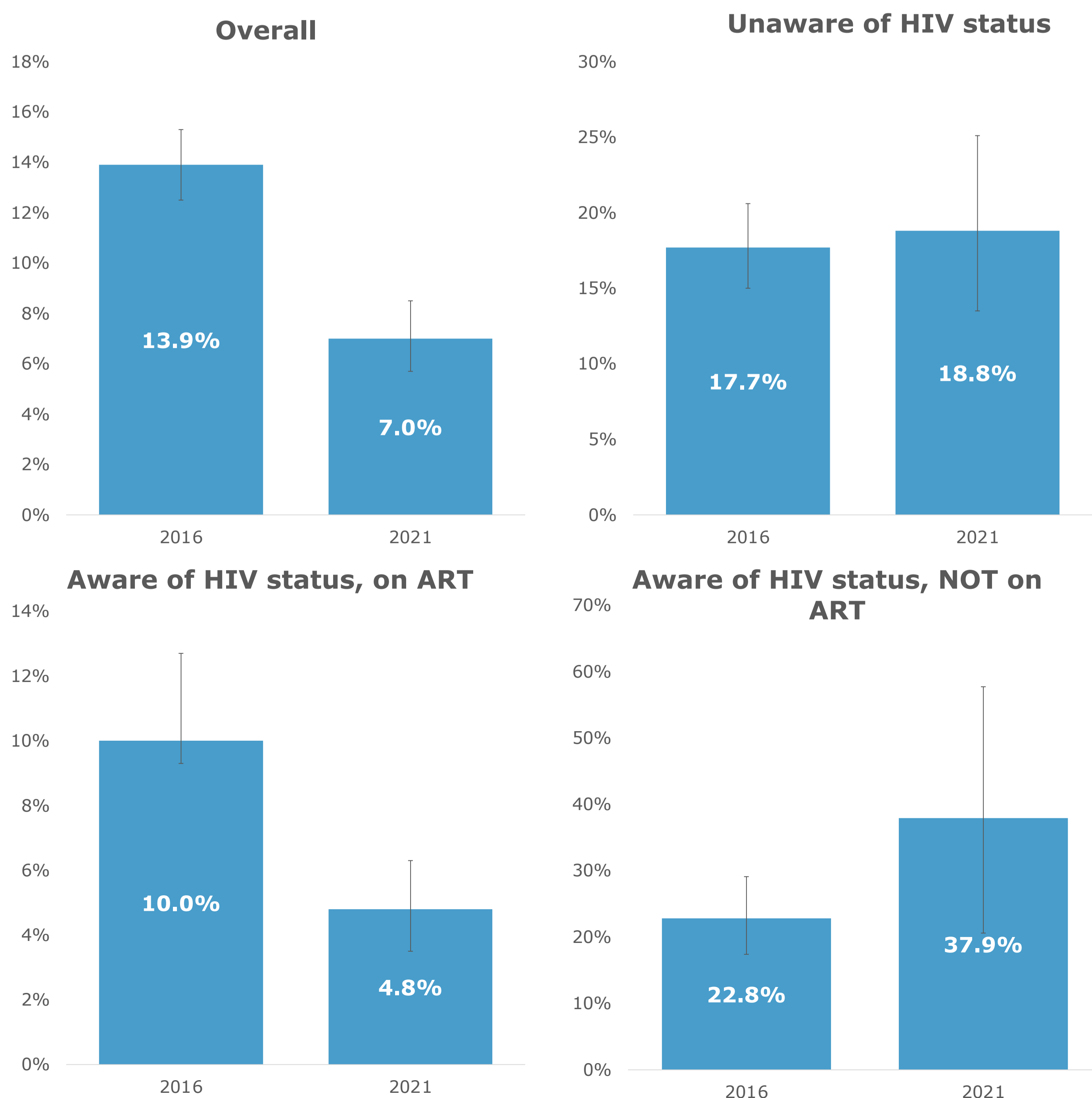


Figure 2: Proportions of HIV awareness status among all PLHIV vs. among those with AHD



Table 1. Characteristics of PLHIV 15-59 with AHD by HIV awareness status, ZAMPHIA 2021

Characteristics	Overall (n=148)	Unaware of HIV (n= 46*)	Aware, currently on ART (n=88)	Aware, currently not on ART (n=14*)
Proportion virally suppressed (<1,000 copies/ml), % (95% CI)	48.7 (38.5-58.9)	0.9 (0.0-5.0)	81.3 (71.5-88.9)	3.5 (0.1-18.2)
Time since HIV diagnosis, mean years (95% CI)	6.1 (4.7-7.6)	n/a	6.4 (4.8-8.1)	4.1 (2.0-6.1)
Ever taken ART, % (95% CI)	90.6 (82.7-95.7)	n/a	100.0 (-)	37.1 (8.1-75.5)
Mean age, years (95% CI)	40.3 (38.7-41.9)	41.2 (38.9-43.5)	40.1 (37.8-42.5)	38.8 (35.1-42.5)
Female sex, % (95% CI)	51.6 (41.6-61.5)	51.1 (34.4-67.6)	48.1 (35.1-61.4)	74.3 (45.5-92.9)

*Analyses with sample size <50 participants should be interpreted with caution.

CONCLUSIONS

- The population-level burden of AHD has decreased in Zambia since 2016, likely reflecting achievements of Zambia's universal test-and-treat strategy (which has been implemented since late 2016).
- The prevalence of AHD among PLHIV who are not yet diagnosed (*unaware of status*) has remained stable at ~20% from 2016 to 2021. This group represents 31% of those with AHD.
- AHD was very common (>one-third) for PLHIV who were *aware but not on ART*. However, because they are such a small portion of all PLHIV, they only represent ~10% of the total AHD burden.
- Conversely, while only ~5% of those currently on ART have AHD, they represent the largest (59% of all PLHIV with AHD) group with AHD.
- Thus, addressing AHD in Zambia will not only involve diagnosing those who are unaware of their HIV status, but it will require broad implementation of AHD screening and management among PLHIV who are already aware of their status, especially among those who have disengaged from ART services or have not achieved viral suppression.
- Patient-centered care and ensuring quality services that address the long-term care needs of PLHIV is central to the next chapter of the national HIV response, including addressing mortality due to AHD.

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