



Around one third of people beginning treatment for HIV have advanced disease with severe immune suppression, (CD4<200) putting them at very high risk of opportunistic infections (OIs) and death. However, there has been very little attention paid to the detection and management of people with advanced HIV.

We call upon policy makers, international organisations, ministries of health, donors, and partner organisations in both high- and low-HIV-prevalence settings to allocate sufficient resources to reduce mortality among people living with advanced HIV. These resources should be used to fund effective and strengthened interventions at community, primary and hospital levels; complementing the established strategies and targets on testing and treatment coverage and incidence reduction.



Late diagnosis and suboptimal treatments keep mortality rates high.

Of 36.7 million people living with HIV globally, 18.2 million people have access to antiretroviral therapy (ART), yet 1.1 million people still died from AIDS-related illnesses in 2015 . While increased access to ART has led to a reduction of overall mortality over the last 10 years, these gains have been limited for those people with advanced HIV due to late diagnosis and suboptimal treatment of the associated diseases that affect people living with HIV the most. Governments and donors need to invest in this in order to tackle these challenges and save lives.



High prices limit access to treatment of opportunistic infections.

Access to current treatments and diagnostics to address many opportunistic infections is severely limited by high prices in the settings where they are needed most.

One in every three HIV/AIDS-related deaths globally is due to tuberculosis (TB). Cryptococcal meningitis is a disease that affects hundreds of thousands of people with HIV every year, and is the cause of 15-20% of AIDS-related deaths. Other severe opportunistic infections (OIs) including pneumocystis jirovecii pneumonia (PJP/PCP), toxoplasmosis, histoplasmosis and talaromycosis contribute to HIV/AIDS-related mortality, despite being curable.



Late diagnosis of advanced disease costs lives.

A recent study in low- and middle income countries (LMICs) indicates that people living with HIV with a median CD4 count of less than 200 cells at ART initiation have a 50% higher mortality rate than those with a median CD4 count above 200 cells. With targeted testing and treatment, and greater prioritisation of those at highest risk, many of these deaths could be prevented.

Meeting The Challenges:

#1 Prioritisation

- **We call on governments and donors to increase investment to deliver on this agenda to prioritise the needs of those people with advanced disease, and on UNAIDS and WHO to place greater focus on mortality reduction in global targets.**

Achieving the 90-90-90 goals set out by UNAIDS will reduce mortality from HIV at all stages of disease, but additional focus on targets that specifically address those at greatest risk of mortality and morbidity are needed. We highlight the need for death reduction targets (to complement the 90-90-90 targets), to focus attention on those people most in danger of dying, and for governments to prioritise the targets and strategies aimed at achieving them.

#2 New packages of care

- **We call for the development, implementation and funding of new packages of care for people with advanced HIV at community, primary care and hospital level.**
- **We call on countries to improve and support specific funding for hospital care for people with advanced HIV, making such care more accessible by removing health-care related user fees.**
- **We call for concerted pressure on drugs and diagnostics manufacturers and national regulatory bodies to increase affordable access to testing and treatment to improve the care for people living with advanced HIV.**

Properly preventing, diagnosing and treating opportunistic infections associated with advanced disease requires new packages of care including specific guidelines, training, improved access to affordable, quality-assured diagnostic tools and medicines and research into innovative new diagnostics and medicines adapted to resource-limited settings.

#3 Guidelines

- **We call for full implementation of the new 2017 WHO guidelines for the management of advanced HIV and timing of ART initiation.**

While advocacy for differentiated care for stable people (6-12 months on ART and virologically suppressed) has been beneficial and is widely supported by donors,

packages of enhanced care for those most at risk of HIV/AIDS-related illness and death should also be recognized by national governments and implementing partners as part of this approach. This should help providers focus increased care on the sickest.

- **We call on WHO and ministries of health to include differentiated care in their guidelines, with tailored services based on need, through spacing clinic visits for people who are well, and thus allowing for increased attention for those people who are most sick**

#4 Diagnostics

- **We call on programs to focus resources on HIV testing and counseling services, particularly for those people that are hard to reach, to ensure their timely diagnosis of HIV, their linkage to treatment and removal or other obstacles that contribute to delayed ART initiation.**
- **We call for a clear consensus on the use of baseline CD4 measurement and the development of a semi-quantitative, point-of-care CD4 rapid diagnostic test to determine the level of care people requires.**

Measuring CD4 count at initiation of ART and for people with clinical deterioration while on ART is essential for detection of people with advanced HIV disease. Worryingly, donor support for CD4 testing at the primary care level is decreasing since the introduction of the 'Test and Start' strategy, despite the fact that WHO's recommendation for baseline CD4 measurement at initiation of ART remains unchanged.

- **We call for existing point-of-care opportunistic infection diagnostic tests, including TB LAM and CrAg LFA, to be made available at affordable prices. We call for new, simple, point-of-care assays that can accurately identify HIV/AIDS-related opportunistic infections all at once by using one test, including TB, cryptococcal meningitis, pneumocystis pneumonia, toxoplasmosis, as well as bacterial infection.**

Screening for advanced disease will be better implemented if diagnostic tests are simplified. In addition, development of a single, affordable test to diagnose multiple OIs quickly and easily in resource-limited settings is essential for advanced HIV care.

- **We call for increased research into TB screening tools and the increased use of existing tools such as urinary TB LAM and for continued improvement of the diagnostic performance of this assay.**

The urinary TB LAM test is recommended by WHO as a useful additional diagnostic test for those with advanced HIV, but the test has limitations. Further investment is required to improve the diagnostic performance of this assay, along with increased competition from other companies to reduce its price and improve supply stability.

#5 Treatment & Prevention

- **Cryptococcal Meningitis (CM) Treatment: We call for the registration and supply of affordable, quality-assured flucytosine and liposomal amphotericin B for roll-out in affected countries.**

Liposomal Amphotericin B: The liposomal formulation of amphotericin B (L-AMB) has been shown to have comparable efficacy to conventional amphotericin B for cryptococcal meningitis (CM) but causes significantly

less nephrotoxicity⁵, (which is associated with increased mortality⁶), and yet it is not recommended as the preferred first-line treatment of CM because of its high price.

Flucytosine: WHO has given a strong recommendation that the most effective antifungal treatment for cryptococcal meningitis should contain flucytosine.⁷ However, affordable, quality-assured sources remain unregistered and unavailable anywhere on the African continent.

- **Prevention of Tuberculosis & OIs: We call on the manufacturer to make the cotrimoxazole-isoniazid-Pyridoxine fixed-dose combination (FDC) widely available at less than the cost of its individual components. We call on other generic manufacturers to develop and supply this product, ensuring a sustainable and competitive market.**

A cotrimoxazole-isoniazid-B6 FDC is now available, which could reduce pill burden and improve adherence to medicines used for prevention of some opportunistic infections. The FDC is unregistered in most countries.

Signatories: Organisations



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(Endnotes)

- 1 Anderegg N, Kirk O, on behalf of leDEA - Global Adults and COHERE. Immunodeficiency at the start of combination antiretroviral therapy in low-, middle- and high-income countries. 21st International Workshop on HIV and Hepatitis Observational Databases. Lisbon, 30 March - 1 April 2017. Abstract 12.
- 2 Fact sheet - Latest statistics on the status of the AIDS epidemic. <http://www.unaids.org/en/resources/fact-sheet>
- 3 DR Boulware. DR Boulware. Rajasingham R, Smith RM, Park BJ, Jarvis JN, Govender NP, Chiller TM, Denning DW, Loyse A, Boulware DR. Global burden of disease of HIV-associated cryptococcal meningitis: An updated analysis. *Lancet Infect Dis.* 2017; 17: *In Press*. doi:10.1016/S1473-3099(17)30243-8 DR Boulware. Burden of Cryptococcosis in 2014. Oral Abstract presented at: 9th International Conference on Cryptococcus and Cryptococcosis; 2014 May; Amsterdam.
- 4 Brennan, A. T., Long, L., Useem, J., Garrison, L. & Fox, M. P. Mortality in the First 3 Months on Antiretroviral Therapy Among HIV-Positive Adults in Low- and Middle-income Countries: A Meta-analysis. *J. Acquir. Immune Defic. Syndr.* 73, 1–10 (2016).
- 5 Guidelines for the Prevention and Treatment of Opportunistic Infections in HIV-Infected Adults and Adolescents. August 2016. <https://aidsinfo.nih.gov/guidelines/html/4/adult-and-adolescent-oi-prevention-and-treatment-guidelines/333/cryptococcosis>
- 6 Bicanic T, Bottomley C, Loyse A et al. Toxicity of Amphotericin B Deoxycholate-Based Induction Therapy in Patients with HIV-Associated Cryptococcal Meningitis. *Antimicrob Agents Chemother.* 2015 Dec;59(12):7224-31. doi: 10.1128/AAC.01698-15. Epub 2015 Sep 8.
- 7 World Health Organisation. Rapid Advice - Diagnosis, Prevention and Management of Cryptococcal Disease in HIV -infected Adults, Adolescents and Children. December 2011