Community Guide to Advanced HIV Disease (AHD) Commodities

This guide was created for the people who are closest to the AHD problem and its solution: nurses, community health workers, clinic staff, civil society, and community-based organisations.

It brings together all the essential tools to screen, test, treat, and prevent AHD, the most common and serious infections affecting people with AHD.

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CD4 Testing Guide (Check Immune Strength in PLHIV)

CD4 is a measure of a person's immunity. **The higher the CD4 cell count, the stronger their protection**

Common Symptoms of Weakened Immunity:

Recurrent or persistent fever,

Weight loss

Persistent cough or diarrhoea

Oral thrush (white patches in mouth)

Night sweats

Fatigue and weakness

Skin rashes or lesions

Enlarged lymph nodes

Recurrent bacterial infection

In some cases, the person may be asymptomatic until it is too late.

Therefore, an accurate marker that signals a problem becomes useful.

WHY DO A CD4 TEST?

The CD4 test shows how strong or weak a person's immune system is. It measures the number of CD4 (or helper T cells).

When the CD4 cell count is below 200, the person is at risk of serious infections such as TB, cryptococcal meningitis, bacterial sepsis and certain cancers

This is the signal to activate the **Screen** → **Treat** → **Optimise** → **Prevent** steps in AHD management

The following describes available tests to help screen or test for AHD and its associated conditions or infections to enable initiation of life-saving interventions early: And available therapeutic options to support prevention and treatment

1. AHD Diagnosis

Situation	When to Use	Test Name	What it Does	Where it's Used	How Long it Takes	What it Looks Like
For all those newly diagnosed with HIV or re-entering care	Always at diagnosis or return to care	**VISITECT CD4**	Rapid test to check if CD4 is above or below 200	Clinic or outreach site	Rapid Test- Same Day	Plastic cassette with test strip
	When a machine-based count is needed	**PIMA**	Portable machine gives CD4 count	Clinic or lab	Lab-Based Test- Typically same day or 1-2 days	Small machine with test cartridge
	Where lab capacity exists	**CyFlow Counter**	Lab-based test gives CD4 and %CD4	District or referral lab	Lab Based Test- Often 2–7 days later, depending on sample transport and system delays	Bench-top machine + venous blood
	May still be in use where available	**BD FACSPresto** (discontinued)	CD4 + haemoglobin in one test	Formerly at clinics	Rapid Test- Same Day	Tabletop instrument
	Centralized lab settings	**AQUIOS CL**	Advanced lab platform for CD4	Central lab	Lab Based Test- Often 2–7 days later, depending on sample transport and system delays	Large machine

CD4 testing helps determine if someone is at high risk for advanced HIV disease (AHD).

CD4 <200 means a person should get LAM test, CrAg screening, and preventive treatment.

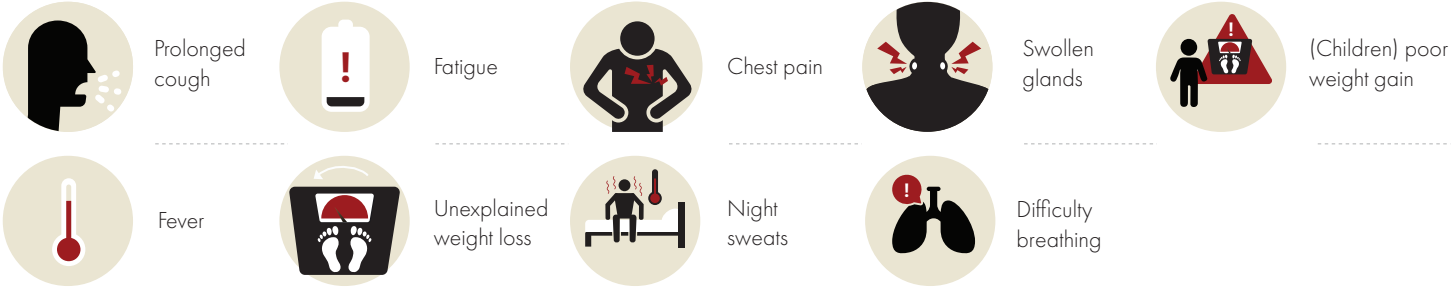
If rapid tests are unavailable, refer for lab-based tests and don't delay care.

NOTE TO HEALTH WORKERS

If the CD4 result is not yet available, but the patient is very sick, treat as if the CD4 is low and start TB LAM and CrAg screening immediately. Always explain to patients why CD4 testing matters and when to return for results.

2. TB Tests (Find TB, especially in People Living with HIV)

Symptoms to watch for (before testing for TB):



Situation	When to Use	Test Name	What it Does	Where it's Used	How Long it Takes	What it Looks Like
CD4 <200 (or not known, but very sick)	Test for TB using urine	**TB LAM**	Detects TB in urine	Clinic or bedside	Rapid Test- Same Day	Small strip test (like a pregnancy test)
TB symptoms (cough, fever, weight loss, night sweats)	Test sputum	**GeneXpert Ultra**	Detects TB & RIF resistance	Clinic or lab with a machine	Lab Based Test- Typically same day or 1-2 days	Cartridge inserted into GeneXpert machine
CD4 <200 + TB symptoms	Do both tests	**TB LAM + GeneXpert**	Urine and sputum testing together	Clinic + lab	• Rapid Test- Same Day • Lab Based Test- Typically same day or 1-2 days	Strip test + Cartridge/ machine

NOTE: If LAM is positive, start TB treatment immediately, even while waiting for GeneXpert results. Always follow national TB guidelines.

3. CrAg Testing Guide (for detecting cryptococcal meningitis risk)

What to watch out for:


Headache


neck stiffness


confusion


fever


sensitivity to light


vomiting

Situation	When to Use	Test Name	What it Does	Where it's Used	How Long it Takes	What it Looks Like
CD4 <200 (especially <100)	Screen for cryptococcal infection	**CrAg LFA (IMMY)**	Detects cryptococcal antigen in blood or CSF	Clinic or lab	Rapid Test- Same Day	Small fingerstick or serum strip test
Symptoms of meningitis • headache, • neck stiffness, • confusion, • fever	Urgent CrAg testing needed	**CrAg LFA (IMMY) or CryptoPS (Biosynex)**	Same as above	Clinic or near point-of-care	Rapid Test- Same Day	Strip test using blood, serum, or CSF

NOTE: If CrAg test is positive, refer urgently for lumbar puncture and begin pre-emptive or full

4. Histoplasmosis Testing Guide (Detect Serious Fungal Infections in PLHIV)

Symptoms of Suspected Histoplasmosis in PLHIV
(especially in people not improving on TB treatment):


Persistent fever


cough (dry or productive)


weight loss


fatigue and weakness


night sweats

Red Flags for Severe Disease:

- Enlarged liver or spleen,
- Enlarged lymph nodes,
- Mouth ulcers,
- Skin lesions (may look like rash or pimples),
- Breathing difficulties or chest pain,
- Signs of sepsis or worsening condition despite treatment,
- Poor response to tb treatment after 2–3 weeks.

Situation	When to Use	Action	Test Name	What it Does	Where it's Used	How Long it Takes	What it Looks Like
PLHIV with CD4 <200 and not responding to TB treatment	• Fever, • cough, • weight loss, fatigue, • no improvement after TB meds	Test for Histoplasmosis	**Clarus Histoplasma EIA**	Detects Histoplasma antigen (lab-based test)	Central or referral lab	1–2 days (lab processing)	ELISA plate and lab reagents
Same as above, if rapid test is available	Same symptoms	Test at clinic or nearby lab	**MiraVista Histoplasma LFA**	Rapid lateral flow test for Histoplasma	Clinic or near-POC lab	Same day (under ideal conditions)	ELISA plate and lab reagents

TIP FOR HEALTH WORKERS & CHWS: If someone with HIV and CD4 <200 has TB-like symptoms but does not improve with TB treatment, suspect Histoplasmosis and refer for testing.

5. HIV & Fungal Treatment Guide

Situation	Symptoms or Context	Medicine/ Tool	What it Does	Where it's Used	How Long it Takes	What it Looks Like
All people living with HIV	HIV diagnosis (all ages, including children ≥3kg)	**Dolutegravir (DTG)**	Lifelong antiretroviral therapy (ART)	Clinic. For those in DSD models, ART refills can also be collected in community settings through adherence clubs or community/ family ART refill groups provided you are eligibile.	Daily, lifelong	Adult pills and dispersible tablets for children
CD4 <100 or diagnosed fungal infection	• Oral thrush, • meningitis, • skin or systemic fungal signs	**Fluconazole**	Treats or prevents fungal infections like thrush and crypto-coccal disease	Clinic or hospital	Daily (varies by phase and condition)	200 mg tablets, oral suspension, IV option
Confirmed cryptococcal meningitis	• Confusion, • headache, • neck stiffness, • positive CrAg + LP	**Amphotericin B (L-AmB)**	First-line treatment for meningitis (induction phase)	Hospital only	1–2 weeks and is part of a combination treatment	IV vial (needs careful dilution and monitoring)
Confirmed cryptococcal meningitis	Same symptoms or alongside Amphotericin B	**Flucytosine (5FC)**	Combined with Amphotericin B to treat cryptococcal meningitis	Hospital	Up to 2 weeks (induction phase)	IV vial (needs careful dilution and monitoring)
Suspected or confirmed Histoplasmosis	• Persistent fever, • cough, • non-responder to TB treatment , • fungal signs	**Itraconazole**	Treats fungal infections like Histoplasmosis	Clinic or hospital	Initial phase 2–6 weeks. Thereafter maintenance dose for up to 12 months (or as prescribed)	100 mg capsules

REMINDERS FOR HEALTH WORKERS & CHWS:

- Amphotericin B and Flucytosine require close monitoring (IV fluids, electrolytes, labs).
- If Flucytosine is unavailable, fluconazole can be used for consolidation/maintenance.
- Always follow national guidelines for correct dosing and duration.
- Look out for side effects like nausea, liver toxicity, or anemia, especially when combining treatments.

6. Prevention Medicines for PLHIV

Prevention medicines help stop these illnesses before they start, keeping patients healthy and reducing the need for hospitalisation or emergency care.

Situation	Why It's Needed	Medicine	What it Does	Where It's Found	How Often	What It Looks Like
PLHIV, especially CD4 <350	Prevents • pneumonia, • bacterial infections, • malaria	**Cotrimoxazole**	Broad protection antibiotic against	Clinic	Daily	480/960 mg tablets, syrup, paediatric tablets
PLHIV without active TB (age ≥ 0 yrs)	Prevent TB before it starts	**TB Preventive**	Kills TB bacteria before they cause disease	Clinic	Weekly for 12 weeks (3HP)	INH 300 mg + RPT 300 mg tablets; child-friendly dispersible available
PLHIV without active TB (age ≥13 yrs)	Prevent TB before it starts	**TB Preventive Treatment (1HP)**	Kills TB bacteria before they cause disease	Clinic	Daily for 1 month (1HP)	INH 300 mg + RPT 600 mg tablets
Anyone taking INH	Prevents side effects like • numbness or • nerve pain	**Pyridoxine (Vitamin B6)**	Protects nerves while on INH	Clinic	Daily (during INH use)	25–50 mg tablets or syrup
High-risk PLHIV (CD4 <200)	Prevents fungal infections like cryptococcosis	**Fluconazole prophylaxis**	Stops fungal infections from starting	Clinic	Daily or ongoing	Same tablets/syrup as Fluconazole treatment

TIPS FOR HEALTH WORKERS & CHWS:

- Ask: Is this patient eligible for preventive meds?
- Stock Check: Are 3HP, Cotrimoxazole, B6, and Fluconazole available today?
- Remind patients that prevention = protection. These meds stop illness before it starts!

7. Lab Investigations (Check for Serious Infections in Very Sick Patients)

Situation	Symptoms or Reason to Test	Test Name	What It Does	Where It's Used	How Long Does It Take	What It Looks Like
PLHIV with very high fever or not responding to treatment	• Persistent fever (>38.5°C), • low blood pressure, • rapid breathing, severe illness	**Blood Culture / Lab Investigations**	Detects serious bloodstream infections (bacteria or fungi)	Central hospital lab	2–5 days (lab culture and analysis)	Blood sample in special bottles sent to the lab

IMPORTANT FOR HEALTH WORKERS & CHWS:

- These tests are ordered by clinicians when a patient is very sick and other tests are negative or inconclusive.
- Results take longer but can guide life-saving treatment.
- If a patient is getting worse and no test has been done, advocate for referral or urgent blood work.

IMPORTANT REMINDER

The guidance in this document reflects best-case scenarios, but we know the reality on the ground can be different.

Delays may happen due to:

- Sample transport issues
- Staff shortages or lack of trained personnel
- Stockouts or broken equipment
- Lab backlogs

When tests take too long or aren't available, it is not just a technical issue; it's a health risk.

What can you do?

- Use scorecards, community monitoring, or WhatsApp groups to raise concerns.
- Work with clinic managers to follow up on test results or stock gaps.
- Help patients understand what to ask for and why it matters.

Your voice matters. Community feedback can lead to better access, faster care, and stronger systems. Together, we can make sure that no one is left behind when it comes to the care and management AHD and associated infections