Advanced HIV Disease Update: Zimbabwe

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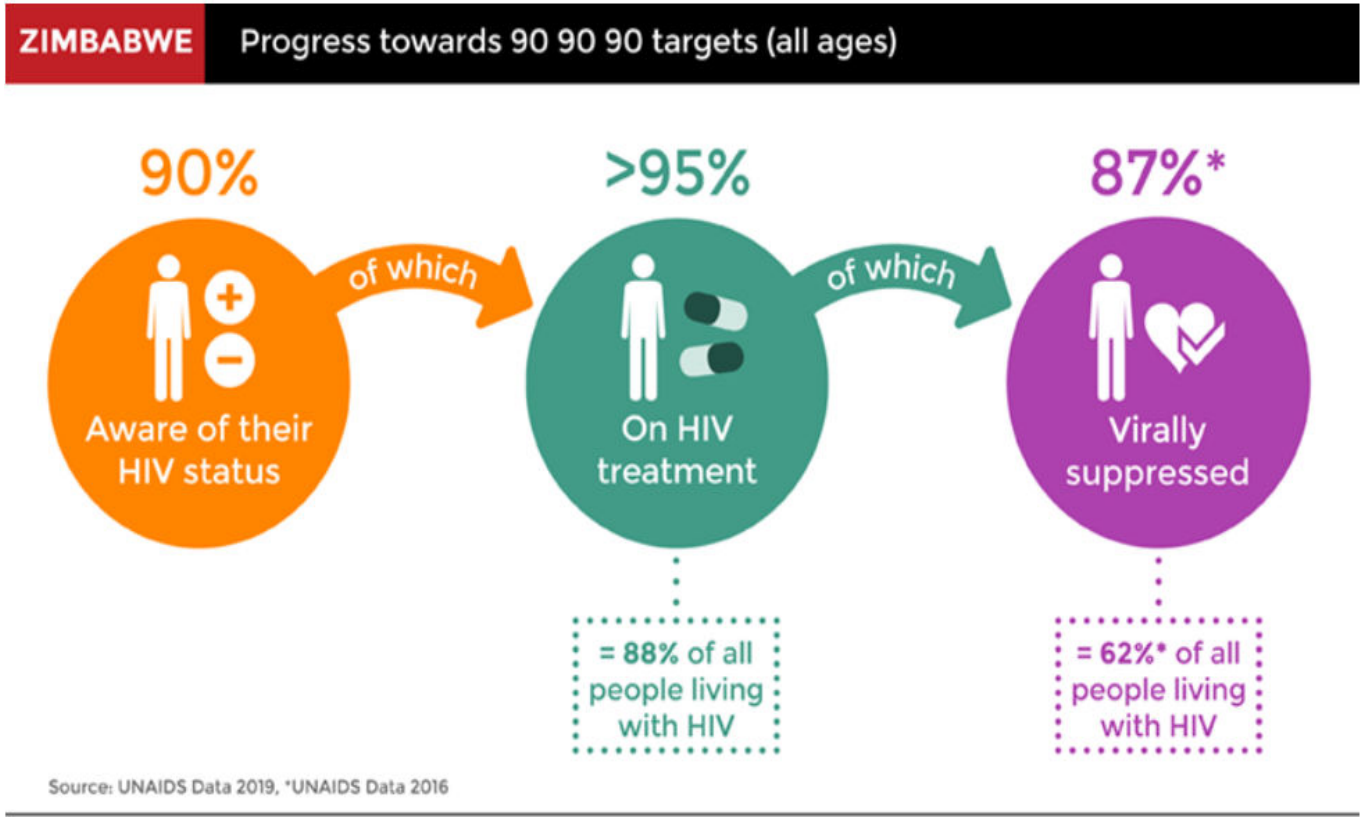
HIV LEARNING NETWORK
The CQUIN Project for Differentiated Service Delivery

HIV in Zimbabwe

Zimbabwe is heavily burdened by HIV/AIDS & TB

- 1,4M PLHIV (2019 estimates)
  - 1,3m adults
  - 84,000 children
- HIV Prevalence: 13.7% (15-49 age group)
  - Female 16.7%
  - Male 10.5%
- HIV Incidence: 0.48% in 2016 *(ZIMPHIA, 2016)*
  - down from 1.42% in 2011, 0.98% in 2013
- Progress on 90 90 90
  - 90; 95; 87 (UNAIDS, 2019)
- TB/HIV co-infectivity rate of 62% [*Global TB Report, 2019]*

Progress on UNAIDS 90-90-90, 2019 HIV Estimates, 2010-19, All ages



Source: https://www.avert.org/infographics/hiv-and-aids-zimbabwe. Accessed on 14 April 2020

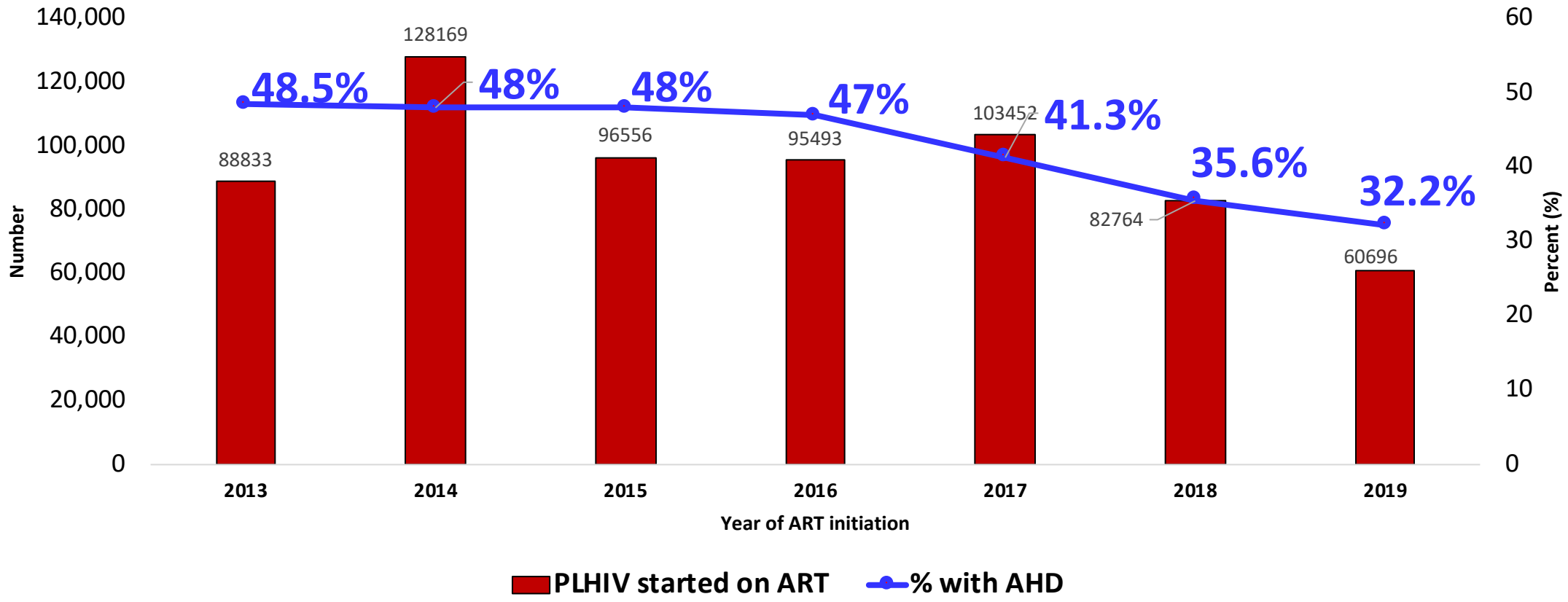
AHD in Zimbabwe (1)

ZIMPHIA population-based survey (2015-2016):

- Median CD4 count = 347 cells/μL
- 68% of HIV+ adults had CD4 < 500 cells/μL
- Of PLHIV who were unaware of their HIV status
  - 53% had CD4 < 350 cells/μL
  - 22% had CD4 < 200 cells/μL

AHD in Zimbabwe (2)

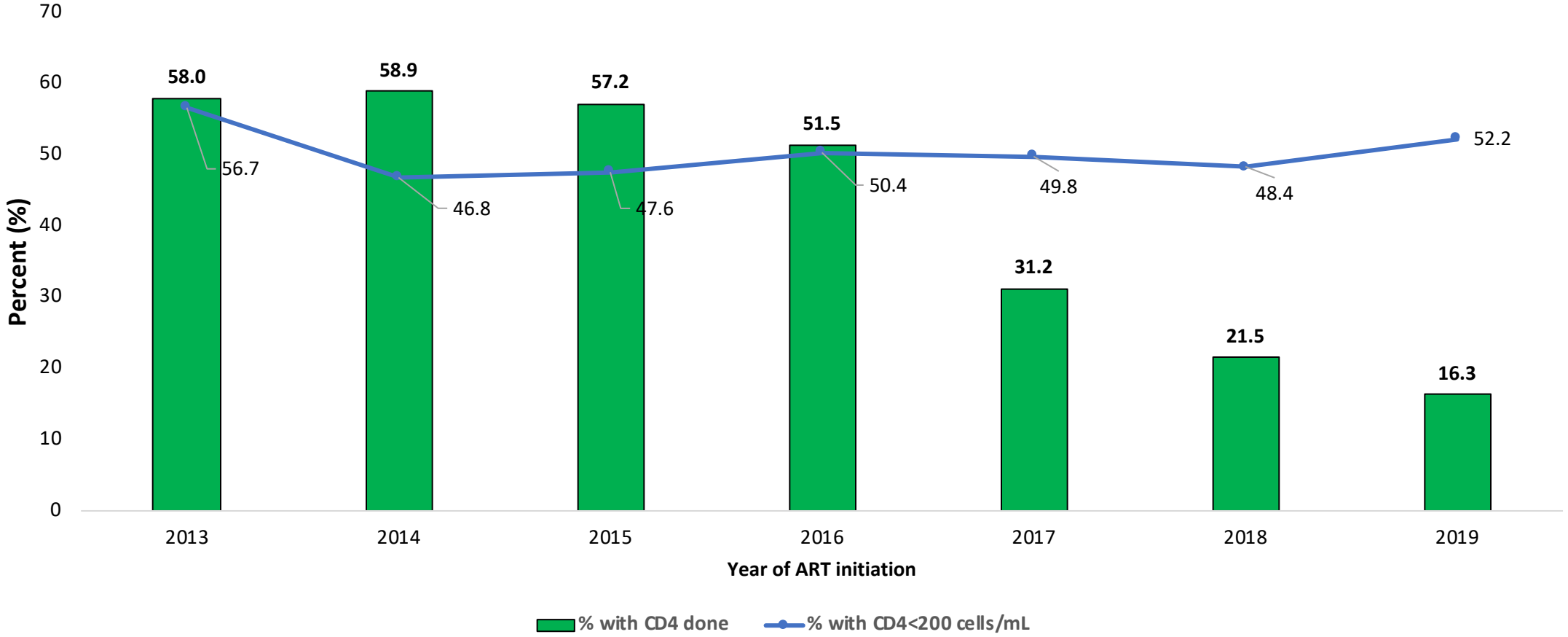
AHD among PLHIV initiating ART at 482 Health Facilities using ePMS in Zimbabwe, 2013- 2019



- **Declining trend in proportion of PLHIV initiating ART presenting with AHD from 2013 to 2019**
- **In 2019, about a third of PLHIV initiating ART had AHD based on both CD4 criteria (CD4 < 200) and WHO staging (WHO Stage 3 and 4)**
- **95% of PLHIV had a recorded WHO clinical stage at initiation**

AHD in Zimbabwe (3)

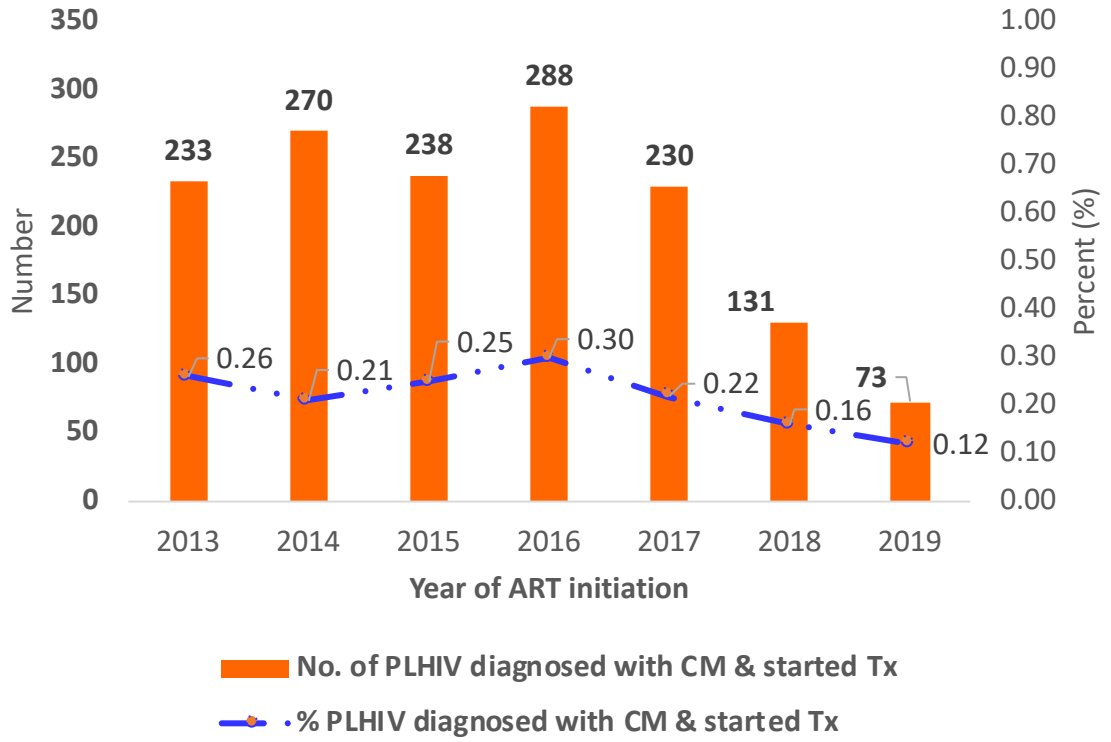
CD4 coverage vs % with CD4 <200 among PLHIV initiating ART at 482 Health Facilities using ePMS in Zimbabwe, 2013- 2019



- Declining proportion of documented CD4 testing among PLHIV at ART initiation from 58% in 2013 to 16% in 2019
- Minimal change in in % with CD4 < 200 in same timeframe
- Compare w/ZIMPHIA data in which 17% of PLHIV from ZIMPHIA had CD4 < 200 (Balachandra S, PLoS ONE 2019)
- This suggests that CD4 testing is targeted to patients presenting sick under routine programme settings

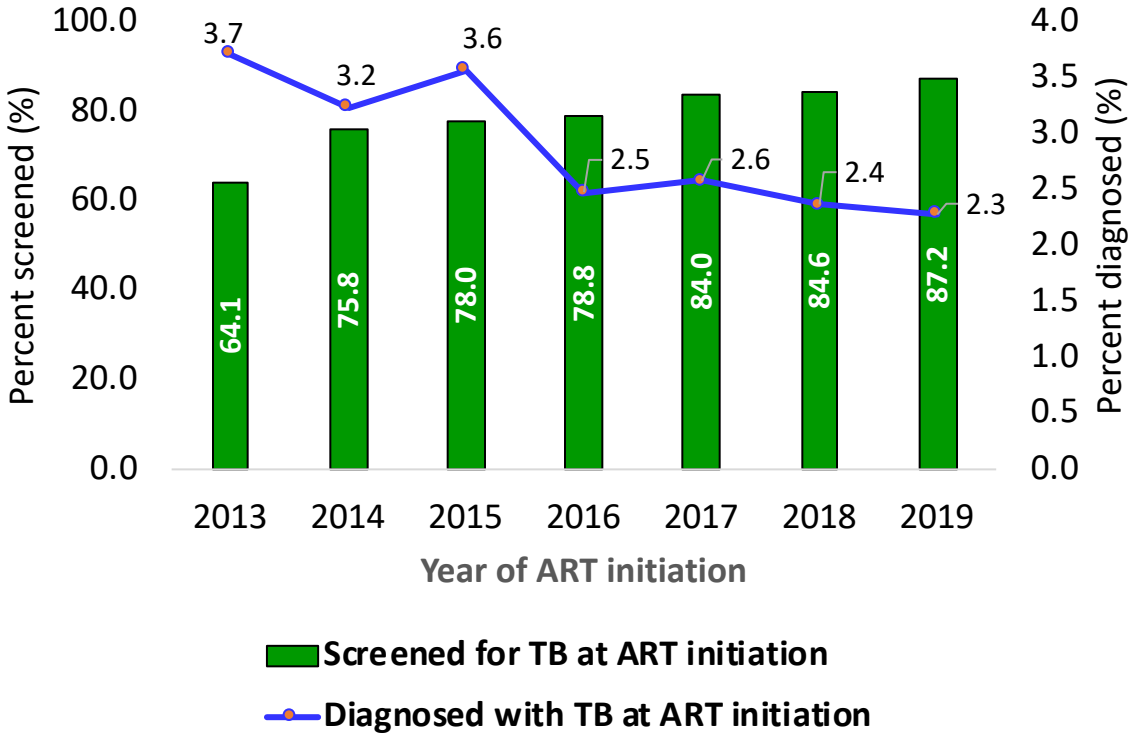
AHD in Zimbabwe (4)

PLHIV diagnosed with Cryptococcal Meningitis at ART initiation & started on treatment, 2013 – 2019, N=655,963 (ePMS)



Over 50% reduction in CM prevalence among PLHIV at ART initiation from 2,6/1000 in 2013 to 1.2/1000 in 2019

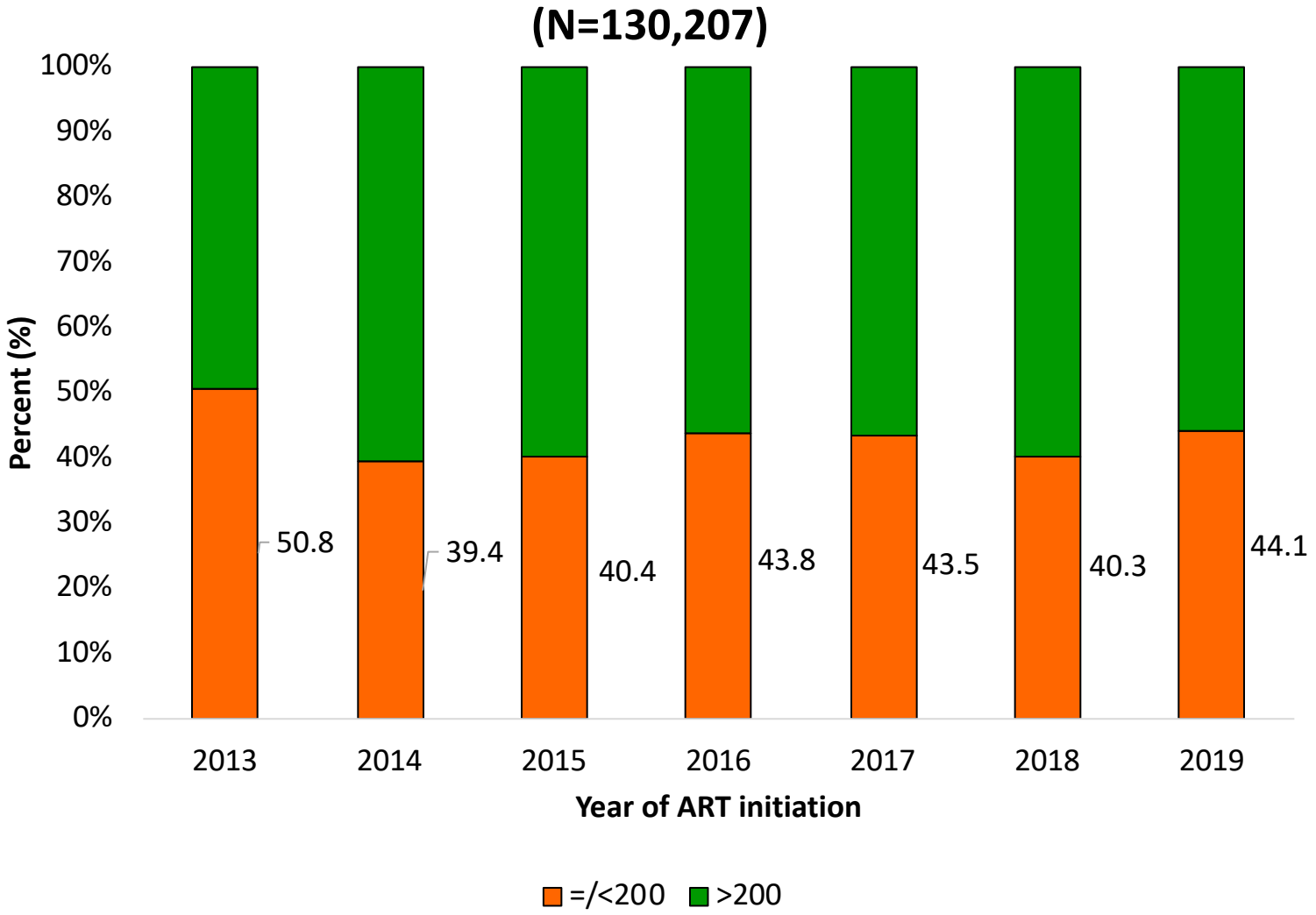
% PLHIV newly enrolled on ART screened for TB and diagnosed with TB at ART initiation, 2013-2019, N=655,963 (ePMS)



A declining trend in % of PLHIV diagnosed with TB at ART initiation despite increasing numbers screened for TB using the 4-symptom TB check list

% PLHIV with immune suppression at ART initiation among those with WHO stage 1 & 2 (2013-2019)

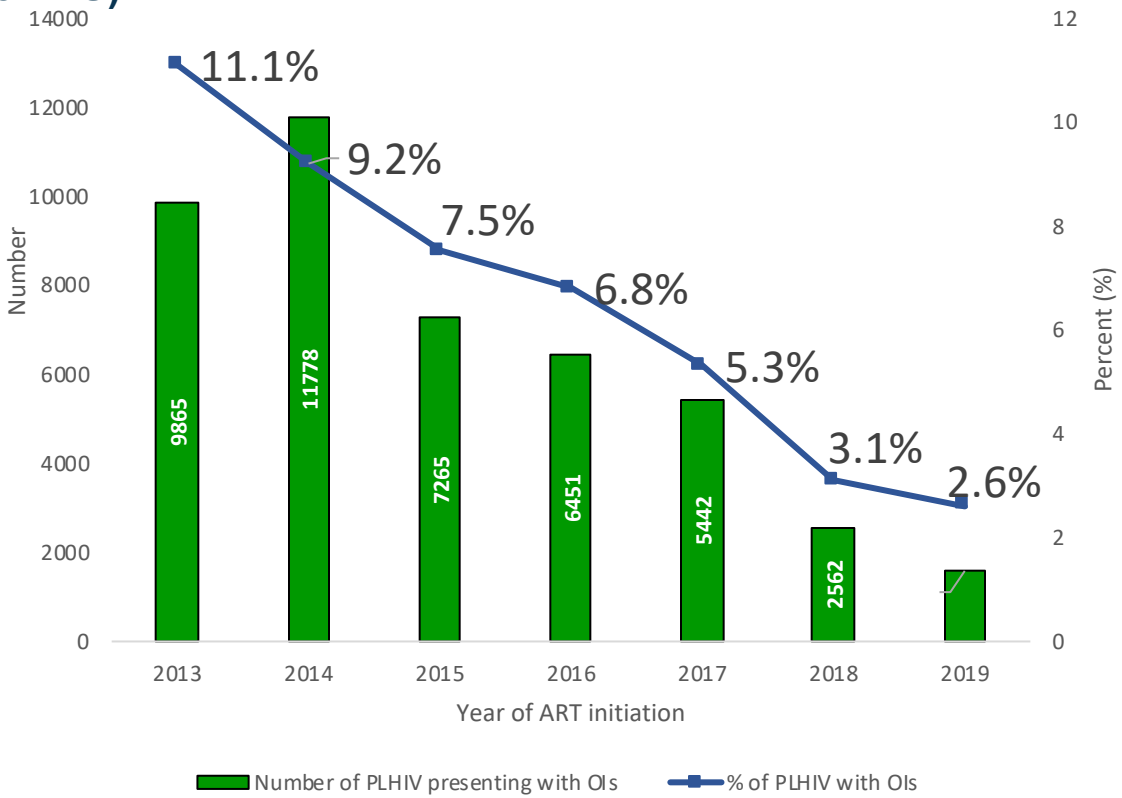
- Among the 130,207 PLHIV with WHO stage I & II and with a CD4 tests done, **39.4%** to **50.8%** were **immune suppressed** over the period 2013 to 2019 (***ePMS***)
- In line with REALITY trial findings, in which 50% of PLHIV classified as WHO stage 1 and 2 had advanced HIV Disease (Siika A, 2018)
- CD4 testing services remain a critical tool for the identification of patients with advanced HIV disease with elevated mortality risk



NB: Children <10 yrs were excluded from this analysis

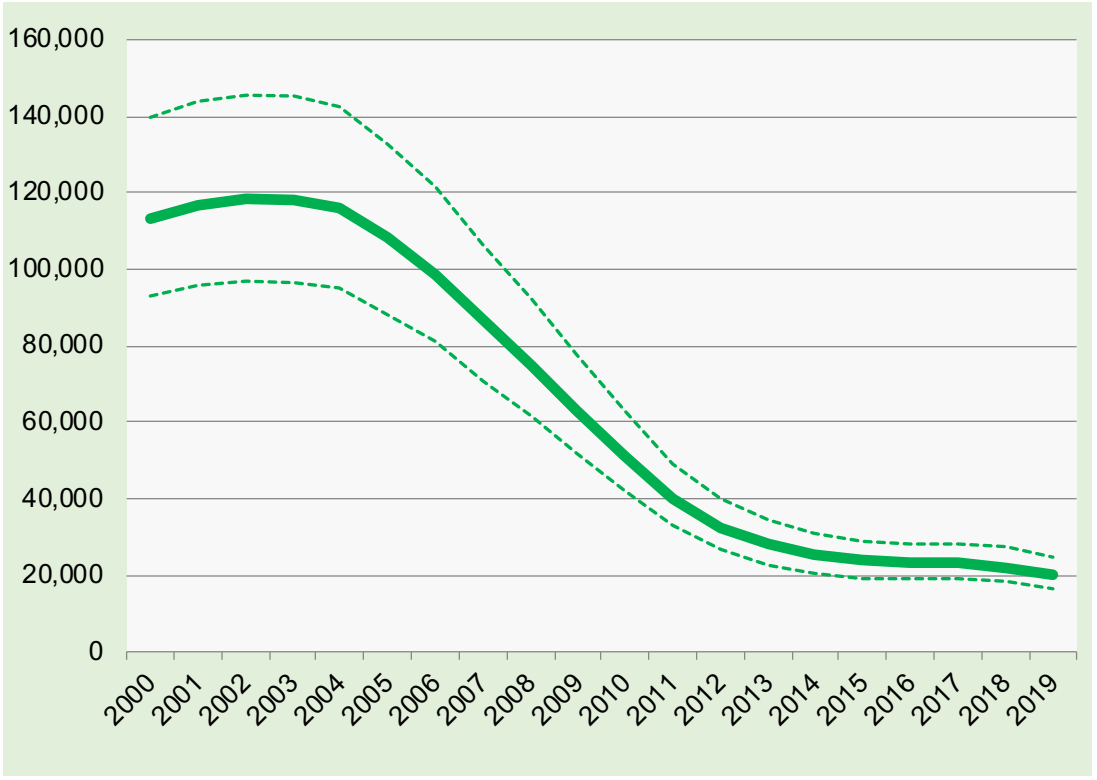
AHD in Zimbabwe (6)

OIs among PLHIV initiating ART, 2013- 2019, N=482sites (ePMS)



- ***Fewer PLHIV are presenting with Opportunistic Infections at ART initiation, both in absolute terms and as proportions of new clients (2019 ePMS)***
- ***Most common OIs were TB, Herpes Zoster, Recurrent URTIs, Oropharyngeal Candidiasis & recurrent pneumonia***

AIDS-related deaths, 2000- 2019 (2019 HIV Estimates)



- ***Declining AIDS-related deaths overtime***
- ***Estimate 20,000 AIDS-related deaths in 2019***
- ***126.72/100,000 population (2019 HIV Estimates)***

AHD Coordination and Leadership

AHD is in the ART Coordinator's portfolio

The ministry is working with the CDC Foundation (Mycotics Division) and EGPAF to support advanced HIV disease (AHD) service delivery in five central hospitals focusing on:

- CrAg screening
- TB LAM testing
- Quantification of Cryptococcal M. medicines

Plans underway to constitute a TWG for AHD

- This would also include organizations representing HIV Recipients of Care

AHD Policies and Guidelines

Baseline investigation

Essential:

Repeat HIV testing on the day of ART initiation on a second sample and, ideally, by a different HCW.

It is preferable in most instances to perform the following baseline tests/measurements:

- Full blood count (especially if zidovudine will be used)
- Serum creatinine test (if tenofovir will be used)
- Baseline CD4. NB: A baseline CD4 test is recommended to determine the degree of immune suppression of a patient to inform differentiated ART initiation for the patient
- Pregnancy test
- Alanine transaminase test (ALT)
- Mantoux test (useful in children)
- GeneXpert test or chest X-ray (to exclude TB)
- Blood pressure measurement.

If possible, perform the following tests also prior to commencing ART:

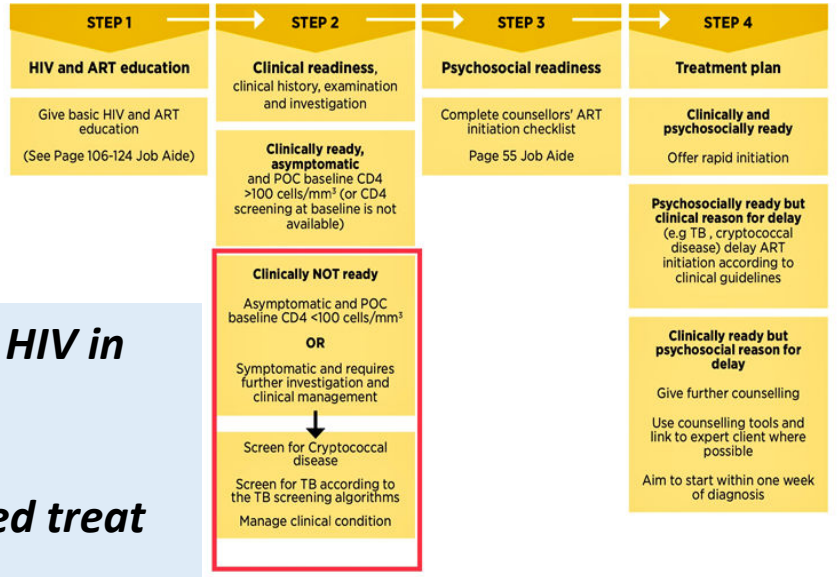
- Syphilis serology test
- Hepatitis B and C virus screening.

Patients with CD4 cell count <100

Patients with low CD4 below 100 should be fast-tracked for treatment initiation. They should be screened for symptomatic TB and cryptococcal disease (see section 9.3). They should receive cotrimoxazole and isoniazid (INH) prophylaxis like all other patients and should be closely monitored for 3 months as this is their highest risk period for bacterial infections and TB or cryptococcal IRIS. Health workers should educate them and their families to report immediately to a health facility if they are unwell whilst their CD4 cell count is< 100 copies.

See the WHO clinical staging system (Appen

Figure 6: The four steps of differentiated ART initiation



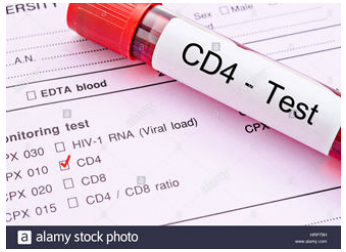
- ***2016 Guidelines for Antiretroviral Therapy for the Prevention and Treatment of HIV in Zimbabwe, and Operational and Service Delivery Manual (OSDM).***
- ***Currently working to issue an Addendum with new developments***
  - ***CD4 testing of treatment defaulters of greater than 3months, and suspected treat failure***
  - ***Use of Flucytosine, where available***

Laboratory Services

Availability of laboratory testing services by level of service delivery based on the OSDM

	CD4	Xpert MTB/Rif	CRAG (Blood/CSF	LF LAM	Viral Load	Resistance testing
Primay level	As POC	✗	✗	✗	✗	✗
Secondary (District Hospitals)	✓	✓	✓	✓	✗	✗
Tertiary (Provincial Hospitals	✓	✓	✓	✓	✓	✗
Quarternary (Central Hospitals)	✓	✓	✓	✓	✓	✗

- *382 POC CD4 machines were also available in selected high- volume primary care facilities, which have since become obsolete*
- *Currently there is a national stock-out of CD4 testing reagents due to lack of prioritization of CD4 testing services and greater attention to viral load services*



Conventional CD4 platforms

Platform	Number
FACS Calibur	12
FACS Count	59
Partech	57
FACS Presto	25

**Plans to replace 11 FACS Calibur and 15 FACS Count with FACS Presto.*

Monitoring & Evaluation

Sources of Data for AHD	Data Collected	Limitations/Challenges	Recommendations	Timeline
District Health Information System 2 (DHIS 2)	Baseline CD4 Count and WHO Stage	Not reporting data on PLHIV HIV who initiate ART with a CD4 count of <200 cell/mm^3	Update DHIS 2 to align with 2020 WHO SI Guidelines to report late ART initiation (PLHIV who initiate ART with a CD4 count of <200 cell/mm^3)	2020
		Not reporting CD4 count among PLHIV • who interrupted ART for > 3 months is returning to care • suspected of or confirmed with ART failure	• Modify paper- based M&E tools to captures this data • Update Patient Level electronic Systems (electronic Patient Monitoring System (ePMS) and electronic Health Record (eHR)) to monitor AHD in line with MOHCC Guidance on diagnosis and management of AHD • Align Defaulter Tracking Package with Guidance on diagnosis and management of AHD	2020
		Not reporting Routine cryptococcal antigen (CrAg) screening volume	Update DHIS 2, ePMS and eHR to enable monitoring incidence of cryptococcal meningitis in line with Guidance on diagnosis and management of AHD	2020
	PLHV in care • diagnosed with CM and commenced on Fluconazole • developed AEs • stopped treatment due to severe AEs	Not reporting TB-LAM testing volume	Update DHIS 2, ePMS and eHR to enable monitoring TB testing among PLHIV in Care • in line with 2020 SI Guidelines on TB testing among those symptom-screened positive • and support MOHCC Guidance on diagnosis and management of AHD	2020
electronic Patient Monitoring System (ePMS)	CD4 Count and WHO Stage	ePMS in 38% (624 high volume facilities) of all health facilities covering over 1M patients on ART (Approx. 90% of patients on ART) (ePMS, 2019)	Expand facility coverage of patient level electronic systems (ePMS/eHR) to 60% (2021), 70% (2022), 80% (2023), 85% (2024) and 90% (2025)	2021-2025 in line ZNSP IV, HIV joint Strategy and GF PF

Challenges

Supply chain challenges

- Low uptake of CD4 testing at initiation
- Obsolete CD4 POC machines with overreliance on centralized testing
- Stock- outs of CD4 testing reagents
- Sub-optimal sample transportation system for laboratory samples

Resources gaps

- Availability of medicines like Cotrimoxazole, Flucytosine
- HR capacity to provide quality AHD services

M&E gaps

- Electronic systems only cover a third of health facilities, with majority relying on paper-based systems
- Gaps in data points to adequately record and report AHD

Priorities for 2020 – 2021

Strengthen supply chain management systems for medicines and diagnostics

- Procurement of TB LAM (under TB grant);
- Procure CD4 diagnostics

Improve HCW capacity to provide quality AHD services

- Updating AHD in Blended Learning platform
- Support and supervision, and
- Clinical mentorship programs

Improve M &E for AHD

- Expansion of patient- level electronic system to additional health facilities
- Updating M and E systems to include essential data points for AHD

Acknowledgements

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