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Cyclical HIV Care Cascade

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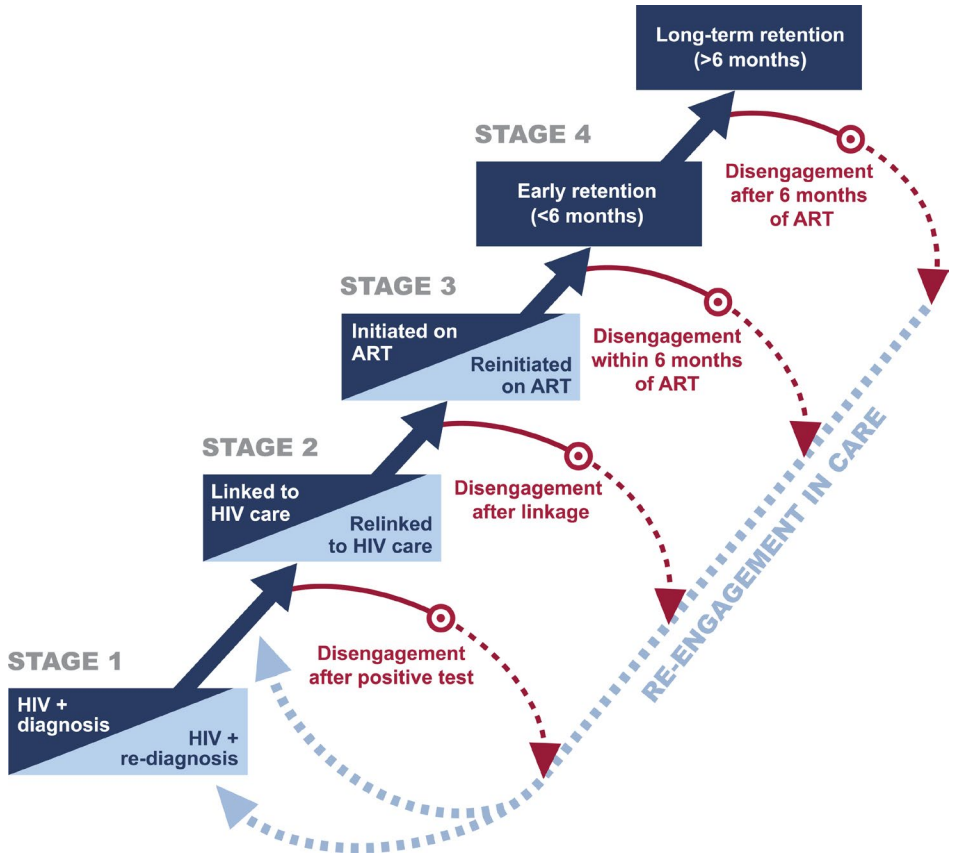
Cyclical treatment cascade overview

- Once persons living with HIV are diagnosed and started on treatment, they may disengage and re-engage on treatment
- Recipients of care can dis-engage at any stage of the cascade
    - Immediately after linkage
    - Within 6 months of starting treatment
    - After 6 months of being on treatment
- Staying in care is a cyclical and not linear process
- Health Care providers should facilitate re-engagement of recipients of care into care

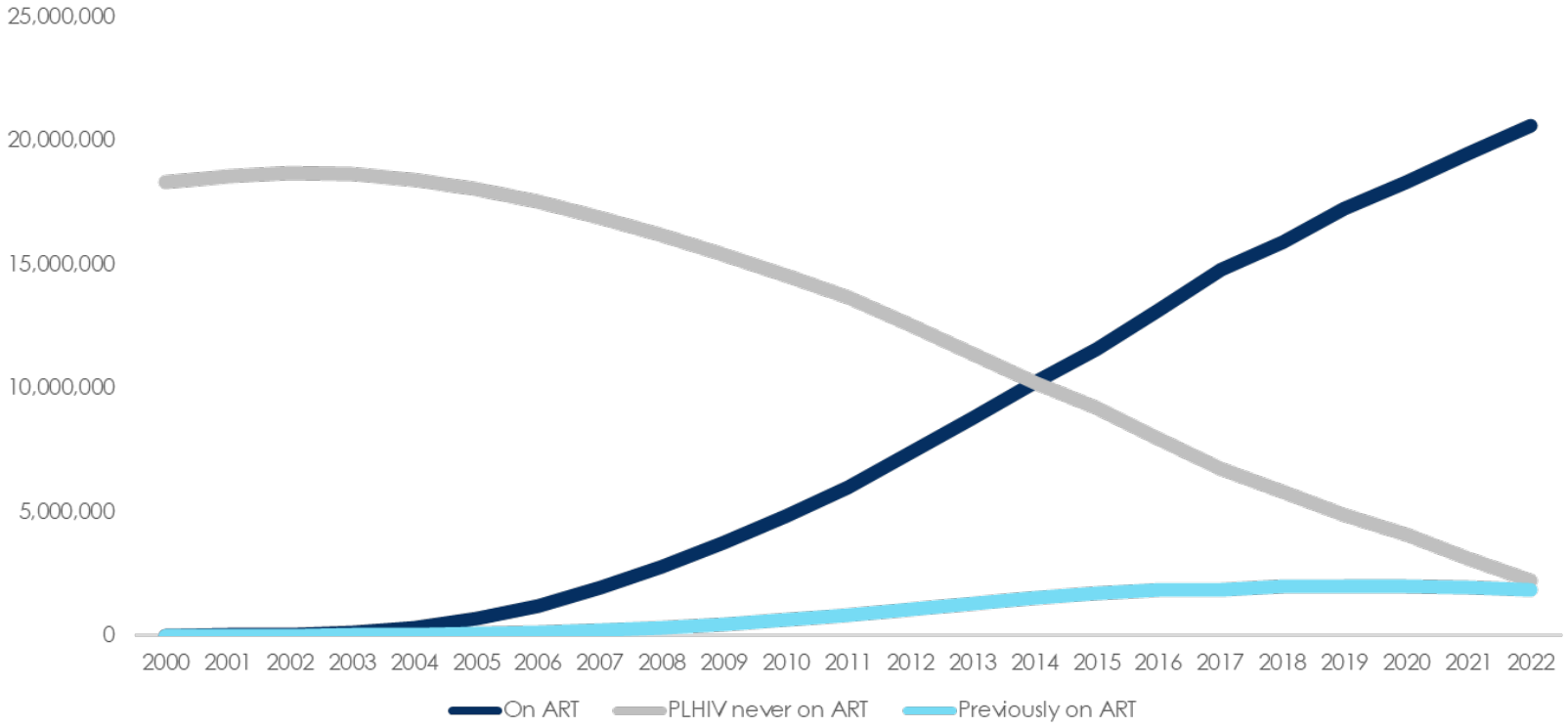


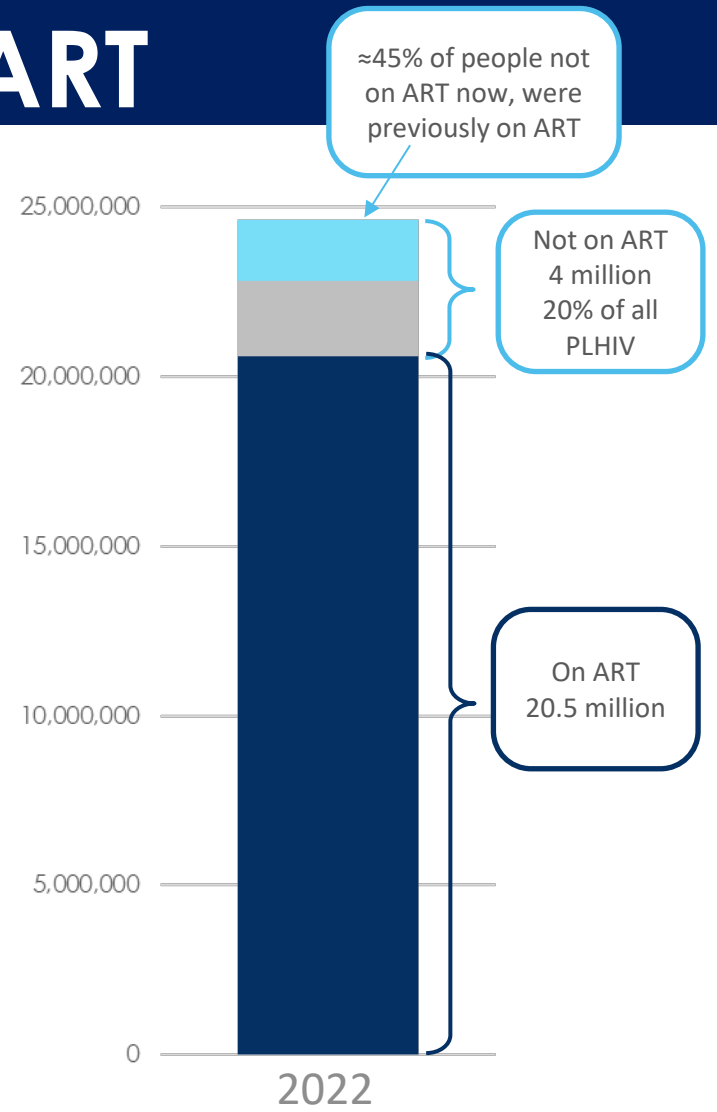
Ehrenkranz P et al. (2021) The revolving door of HIV care: Revising the service delivery cascade to achieve the UNAIDS 95-95-95 goals. PLoS Med 18(5): e1003651.

Definition of key terms- WHO re-engagement brief

- "**Disengagement** refers to individuals who were diagnosed with HIV, initiated ART and subsequently interrupted treatment. Disengagement is distinct from missing a visit and being lost to follow-up"
- "**Re-engagement**…[is] the return to care of those that have previously disengaged"

Many people who are not currently on ART have previously been on ART

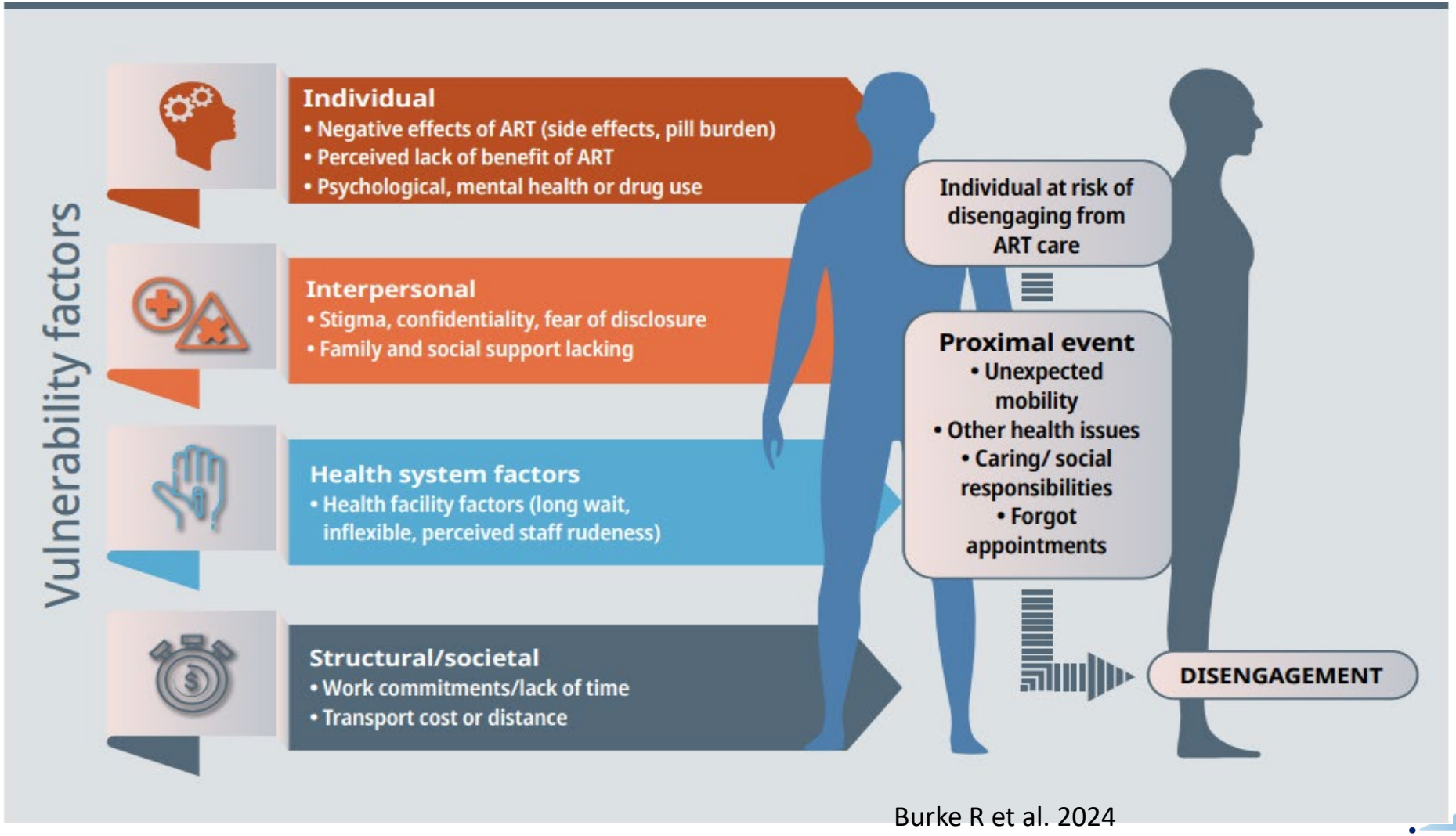




Rethinking the definition of case finding – New and Returns

Visualizations adapted by Michelle Williams-Sherlock, John Aberle Grasse, from Spectrum data provided by John Stover
Caveats/Assumptions: Modeled estimates, IIT rates are assumed and vary by country, some countries may be using estimates that don't match well with their program data, IIT rates may be over or underestimated.
Countries included in this analysis: Botswana, Cameroon, Cote d'Ivoire, DRC, Eswatini, Ethiopia, Haiti, India, Kenya, Lesotho, Malawi, Mozambique, Namibia, Nigeria, Rwanda, South Africa, Tanzania, Uganda, Zambia, Zimbabwe

Reasons for disengagement



Burke R et al. 2024
https://doi.org/10.1002/jia2.26230

Consequences of disengaging from treatment

- Disengaging from HIV treatment services poses several risks to people's well-being, including
  - Viral rebound
  - Antiretroviral drug resistance and treatment failure
  - Progression to advanced HIV disease and death
  - Onward transmission

CD4 count can decrease substantially with treatment interruptions

- In a study published in 2021 of PLHIV on INSTI containing regimens who stopped treatment
  - At week 2, the median CD4 decline was -86 cells/mm3
  - At week 4, the median decline in CD4 was – 136 cells/mm3
  - Median time to VL rebound >1000 copies/ml was 22 days.

Clinical Infectious Diseases

MAJOR ARTICLE

IDSA Infectious Diseases Society of America | hivma hiv medicine association | OXFORD

Time to Viral Rebound After Interruption of Modern Antiretroviral Therapies

Jonathan Z. Li,[1] Evgenia Aga,[2] Ronald J. Bosch,[2] Mark Pilkinton,[3] Eugène Kroon,[4] Lynsay MacLaren,[5] Michael Keefer,[6] Lawrence Fox,[7] Liz Barr,[8] Edward Acosta,[9] Jintanat Ananworanich,[4,10] Robert Coombs,[11] John W. Mellors,[12] Alan L. Landay,[13] Bernard Macatangay,[12] Steven Deeks,[14] Rajesh T. Gandhi,[15] and Davey M. Smith[16]; and the AIDS Clinical Trials Group A5345 Study Team

CID 2022:74 (1 March)

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Weighted percent of AHD (CD4<200) for adults 15+ years with HIV by treatment status from 8 PHIA (Round 2) countries*

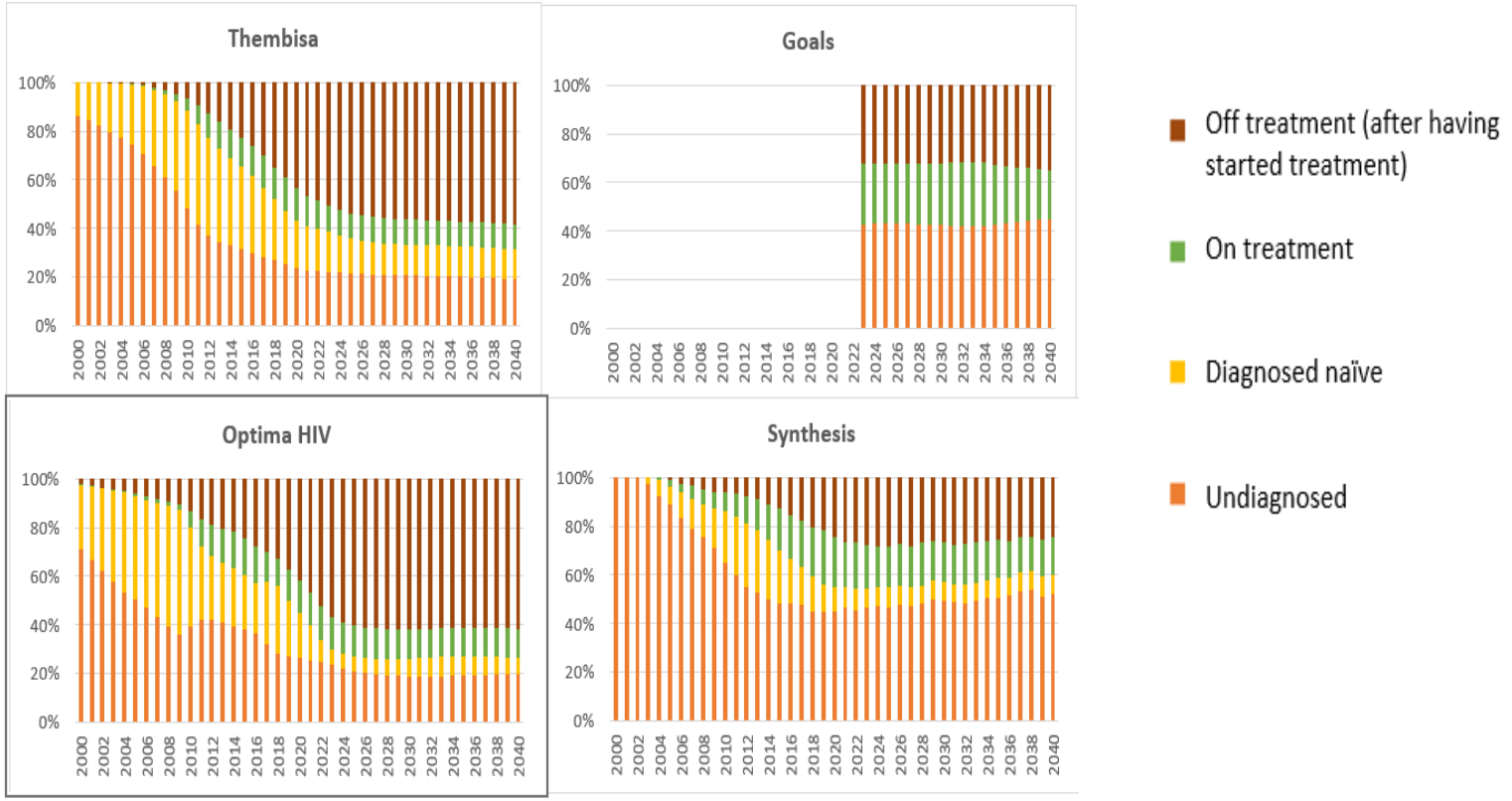
Category	Range %	
	Low	High
Currently on treatment	1.7	6.3
Treatment naïve	9.6	21.9
Treatment interruption	10.6	30.8
Viral load suppressed on treatment	1.6	4.4
Viral load unsuppressed on treatment	14.7	29.1

*BAISV 2021, INSIDA 2021, LePHIA 2020, MPHIA 2020-2021, SHIMS3 2021, UPHIA 2020-2021, ZimPHIA 2020, ZamPHIA 2021

A substantial number of new infections are a result of treatment interruption

- Modeling studies from South African data show that a significant proportion of patients not on ART have been on treatment before and are a contributing source of new infections
- Transmission from those who had interrupted treatment ranged from 27.6 to 58.9% in 2024

Figure 3c: Treatment status of source partner in South Africa



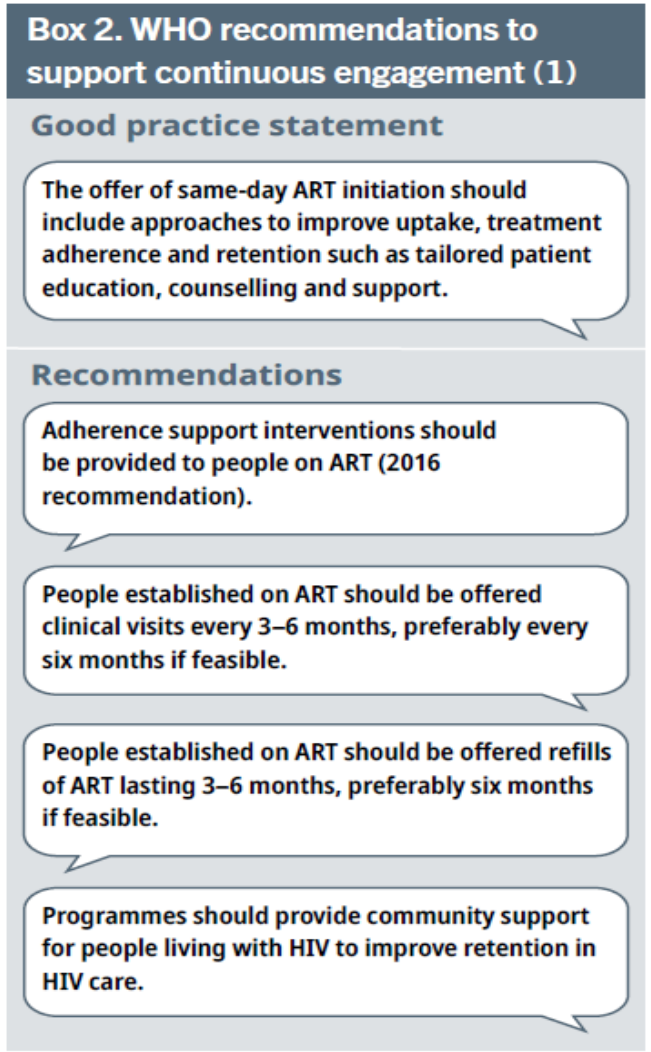
Number of new infections in 2024: EMOD 164,252 ; Goals 95,513 ; Optima HIV 101,852 ; HIV Synthesis 138,872

Bansi-Matharu L, 2024

WHO Recommendations to support continuous engagement

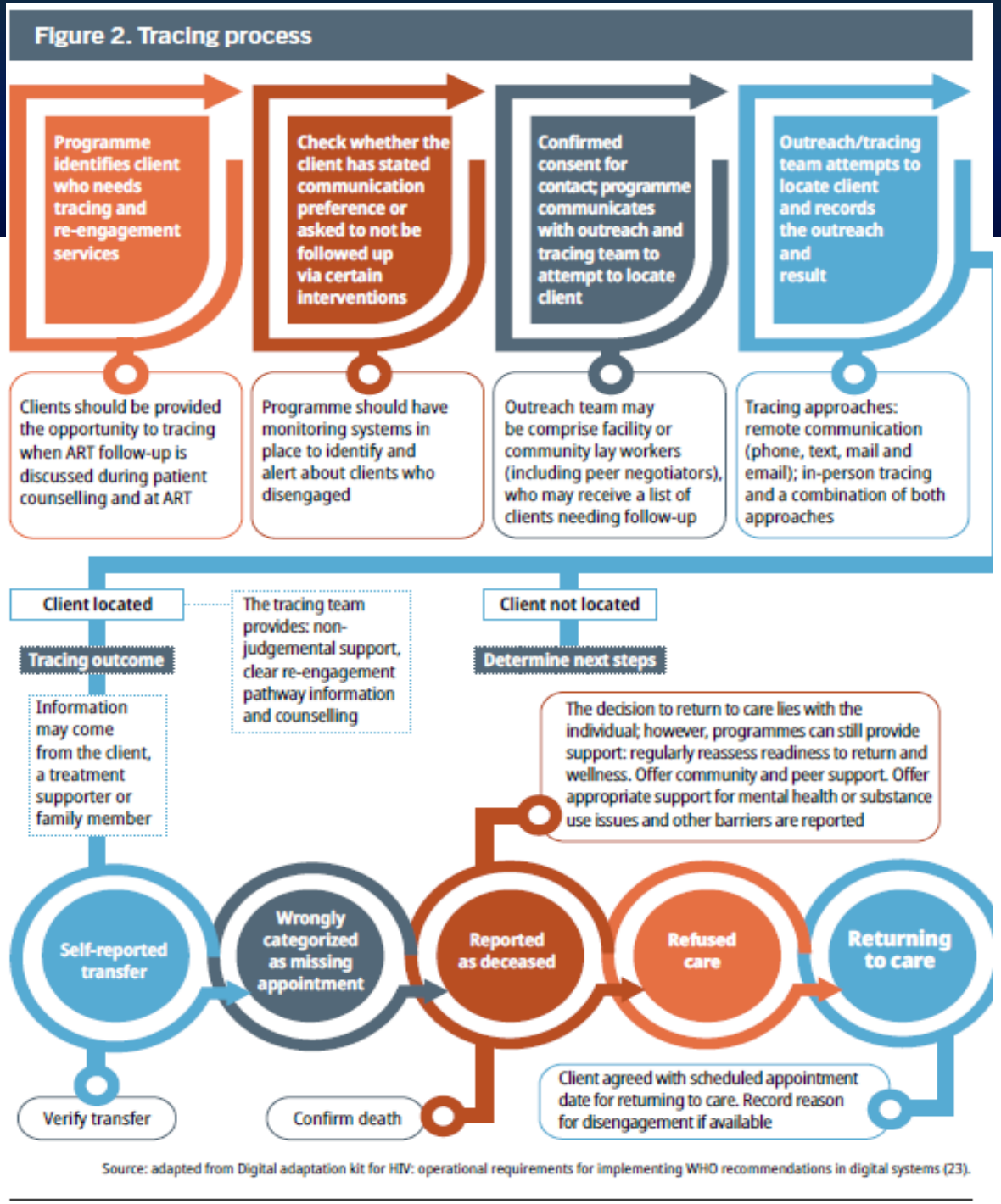
WHO recommends:

- Same day ART initiation
- Clinic visits 3-6 months with 6 months preferred
- 3-6 months ART refills
- Treatment literacy and adherence support at facility and community-level



WHO Supporting Re-engagement in HIV Treatment Service Policy Brief: 2024

Tracing process



Source: adapted from Digital adaptation kit for HIV: operational requirements for implementing WHO recommendations in digital systems (23).

- WHO recommends implementing tracing interventions to identify individuals who have disengaged from care and provide them with support for re-engagement
- If resources are limited, consider prioritizing populations most at risk for morbidity and onward transmission

WHO Supporting Re-engagement in HIV Treatment Service Policy Brief: 2024

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Guiding Principles for Differentiated Re-engagement

- Clinical assessment and rapid ART reinitiation
- Psychosocial assessment and adherence
- Support needs
- Addressing treatment interruption
- Specific population engagement needs

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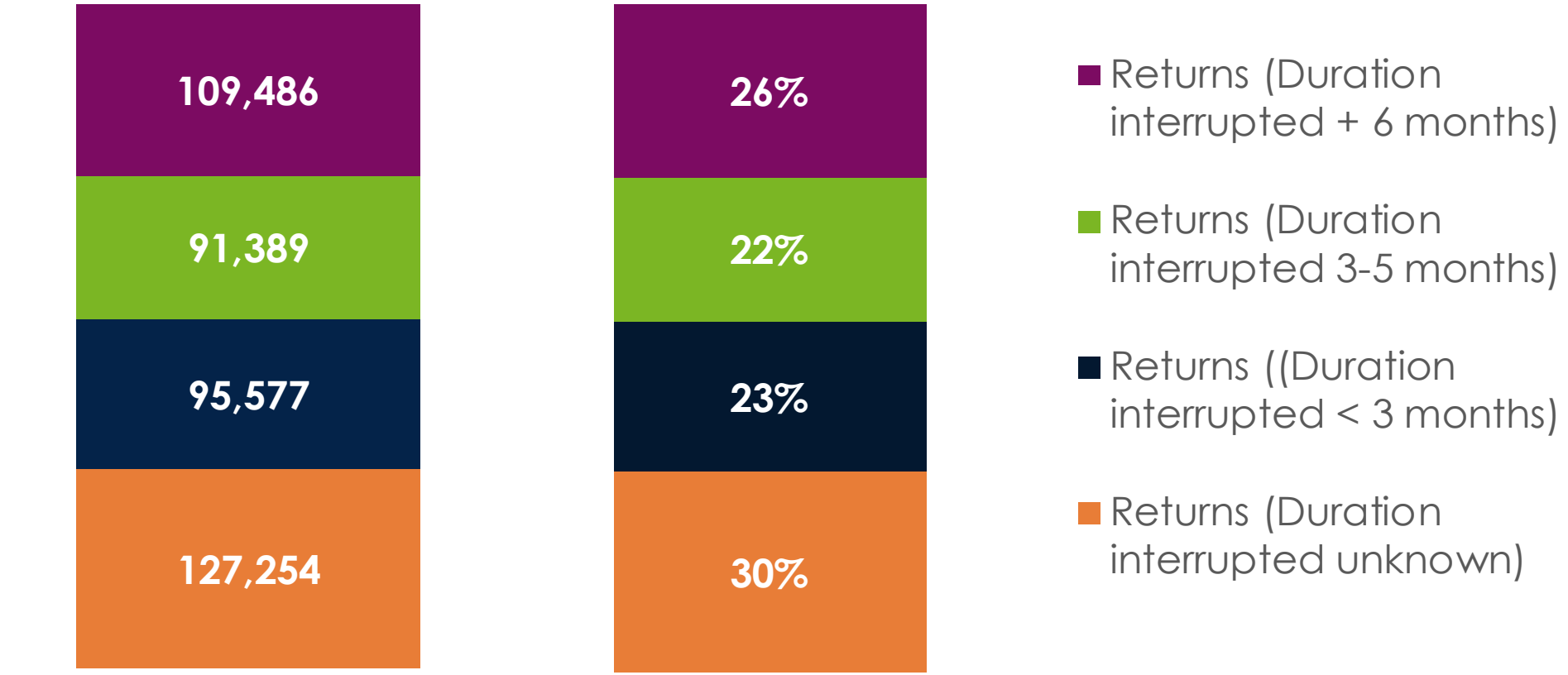
Percent Returns to ART by Interruption Duration

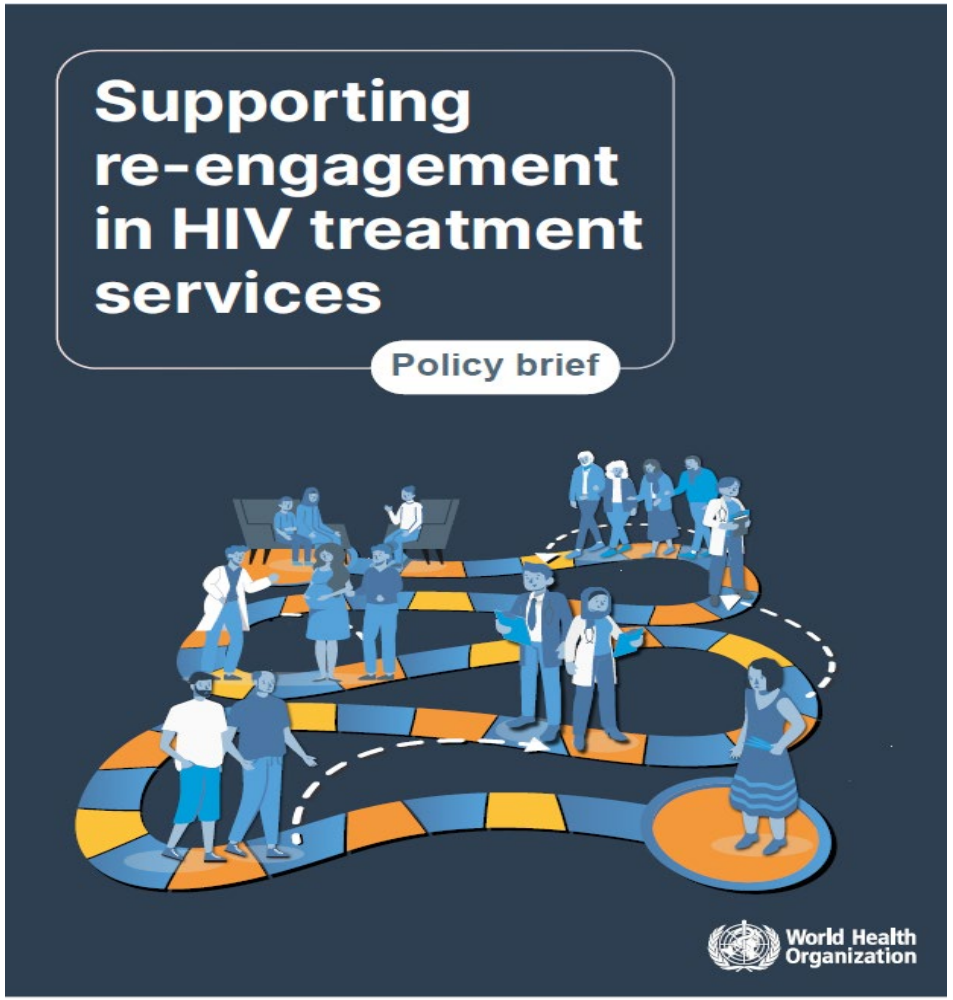
Number and percent returns to ART by duration interrupted



HIV testing may be used for re-engagement into care

- HIV re-testing may be a way of re-engaging for;
  - those fearing reprimand or punishment for treatment interruption
  - or re-engaging silently without disclosing their status
- WHO does support retesting for people
  - who choose to re-engage through HIV testing services
  - who are struggling to accept their status and need more support to accept their status despite having previously received ART and
  - who return to care at a facility and request ART continuation with no documentation or other means to confirm previous diagnosis

Key points on supporting re-engagement in HIV services



- People who have been diagnosed with HIV may disengage from care after starting antiretroviral therapy (ART) and may do so more than once.
- Individuals with interrupted HIV care and treatment may re-engage to care with advanced HIV disease and a range of clinical, psychosocial and service delivery needs.
- WHO recommends tracing people who have disengaged from care and providing support for re-engagement back in care, including adherence support and differentiated service delivery for HIV treatment to reduce the risk of future disengagement.
- Health-care providers must refrain from punitive actions and ensure a welcoming, non-stigmatizing environment and equitable access to services.
- Programmes should engage communities at different levels to ensure effective re-engagement strategies tailored to clients' needs.
- When differentiated service delivery pathways are designed at re-engagement, factors such as the clinical profile, the diverse needs and reasons for disengagement and specific population needs should be considered; person-centred solutions should be explored.
- How engagement in care and treatment is supported and measured urgently needs to be improved, including close monitoring of treatment adherence and viral suppression and identifying and responding to inconsistent patterns of retention in care.
- Sustained engagement in HIV care and treatment is critical to achieving sustained undetectable viral load and optimal clinical and public health outcomes.

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Thank You!