

The End of AIDS: Hope or Hype?

Updates on the HIV Epidemic

Elizabeth Radin, PhD, MPP
Technical Director, PHIA Project

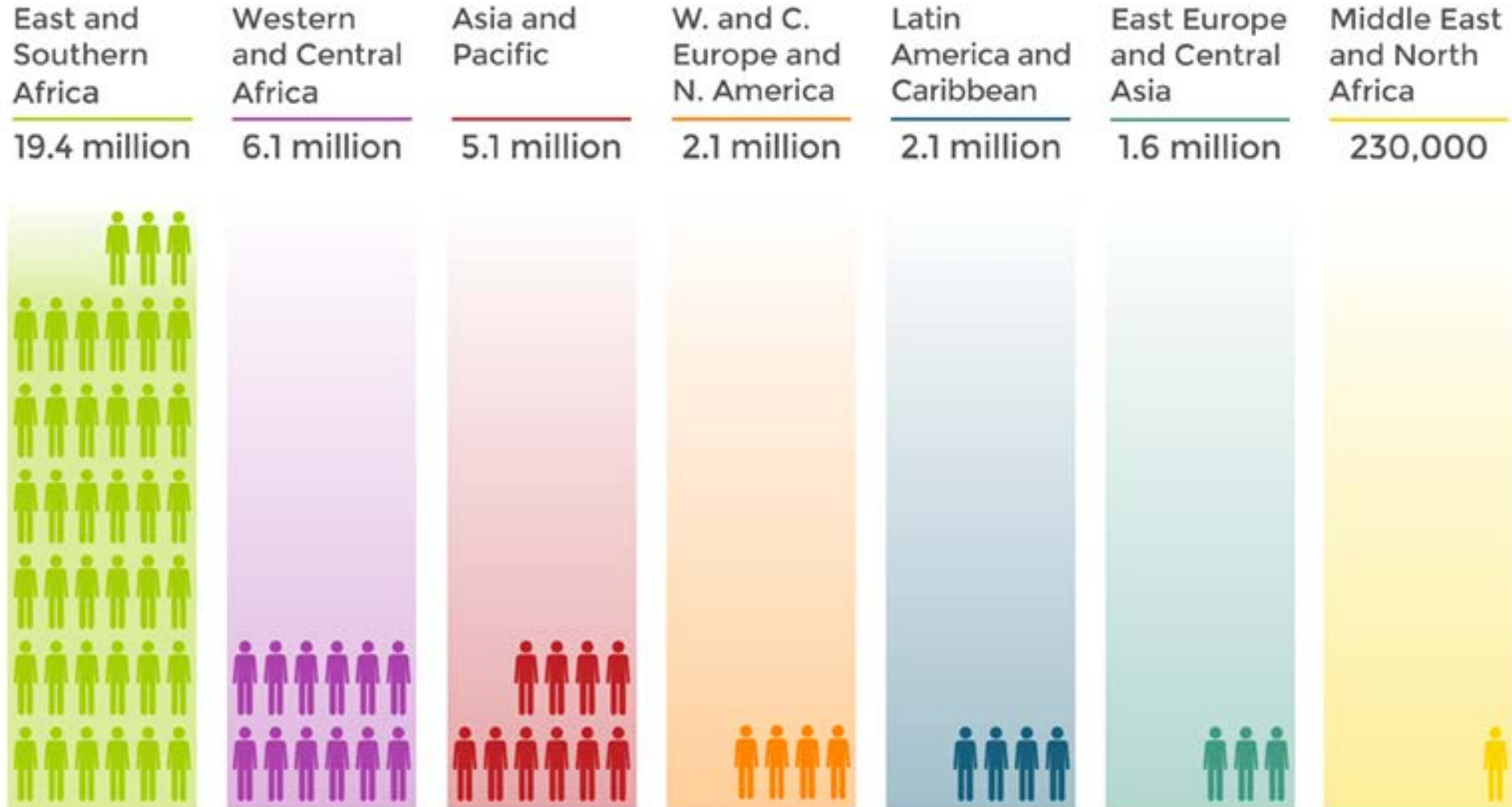


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Columbia University
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Number of People Living with HIV in 2016



Effective HIV Treatment: A Brief History of ART

1987: AZT is approved by the FDA, improves survival at 24 weeks, but not 48

1993: AZT is shown to reduce mother to child transmission of HIV (PMTCT)

1996: ARV triple therapy (ART) is shown to sustainably reduce HIV-related morbidity and mortality

2010: A combination of 2 ARVs (TDF/FTC) is shown to be effective as pre-exposure prophylaxis (PrEP)

2011: ART is found to reduce HIV transmission among serodiscordant heterosexual couples by 96%



Effective HIV Prevention: Approaches and Tools

Decrease Risk of Transmission

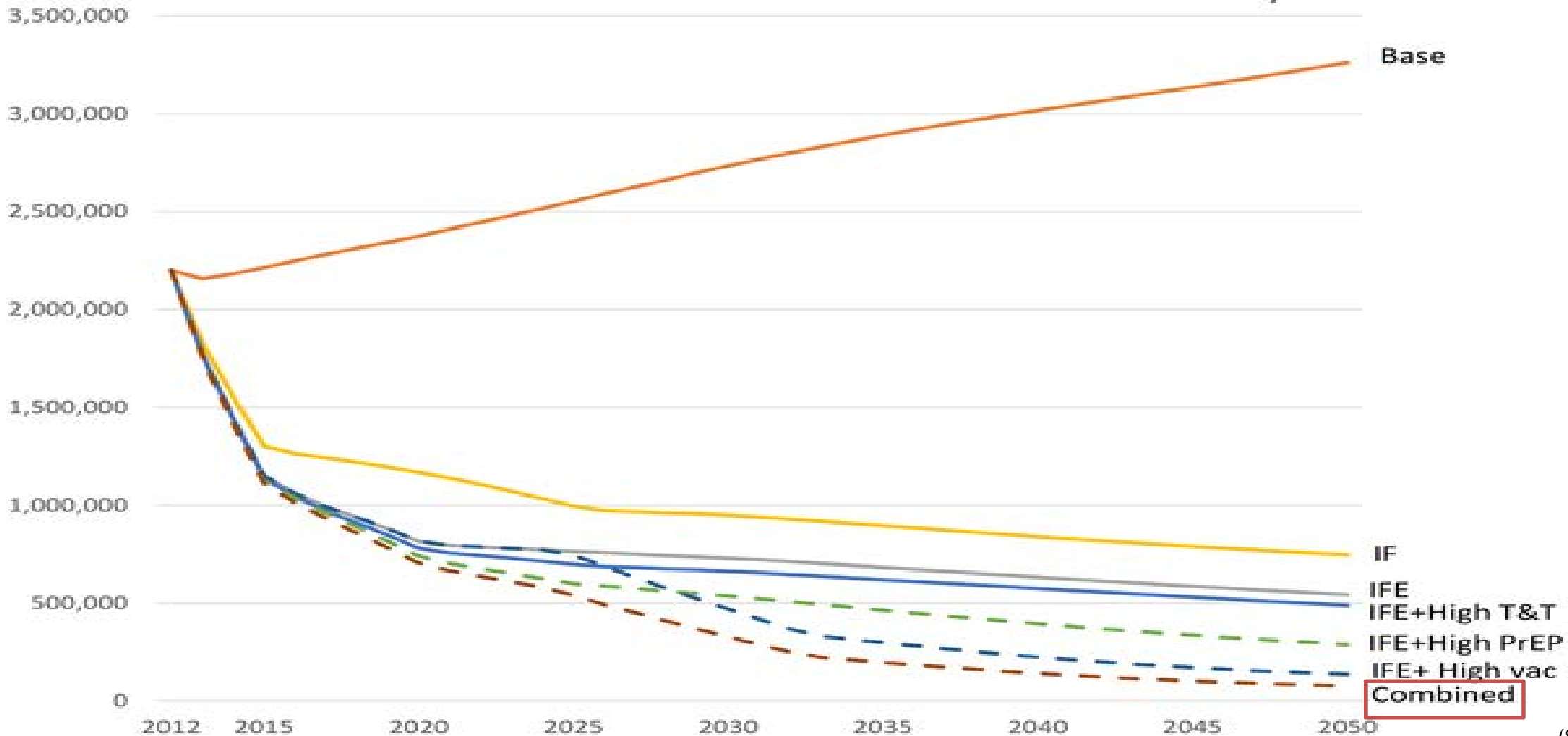
- **Barrier protection**
- **Screening of blood and blood products**
- **Harm reduction for PWID**
- **Antiretroviral Therapy**
 - **PMTCT**
 - **Horizontal transmission**

Decrease Risk of Acquisition

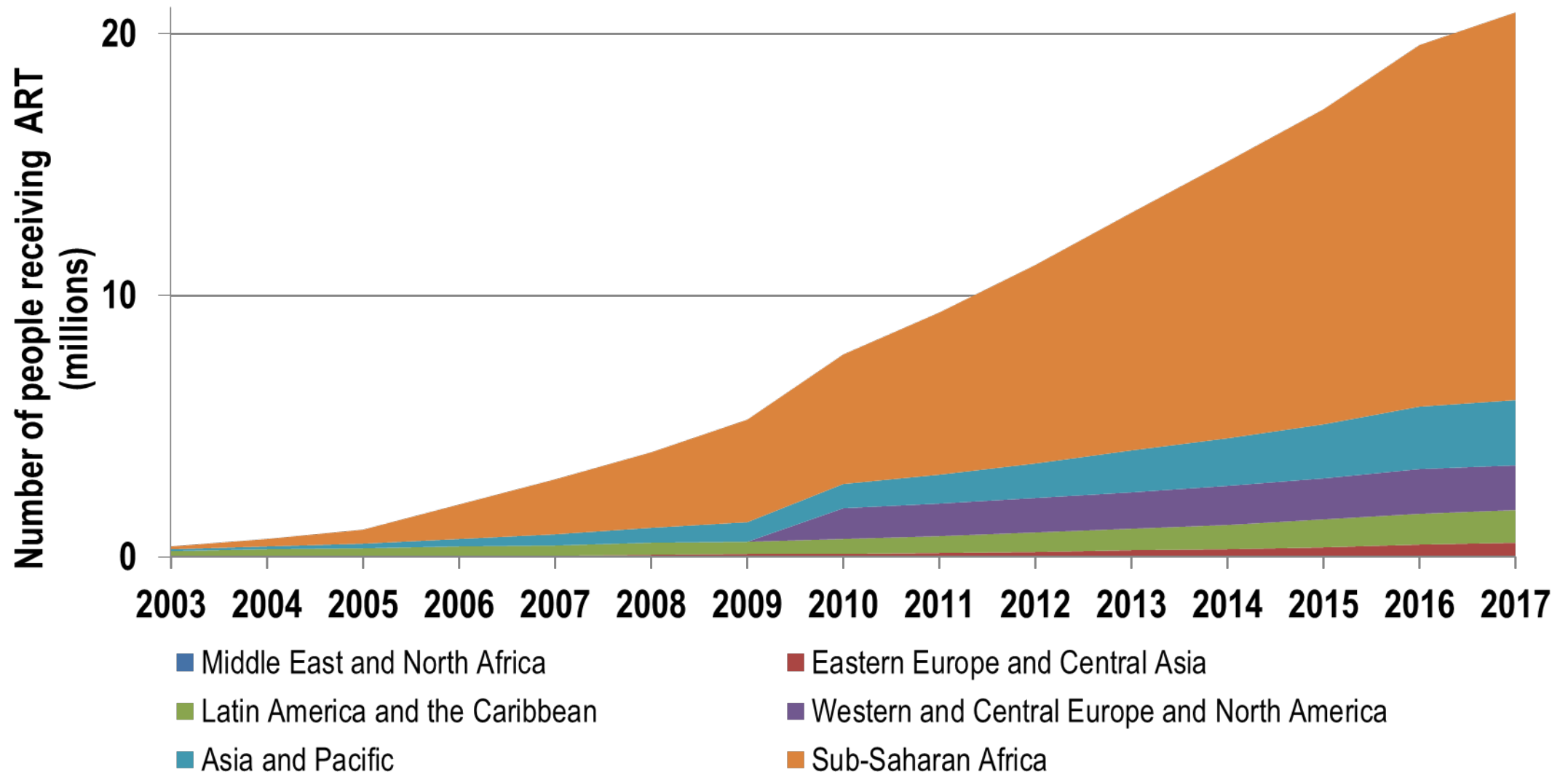
- **Barrier protection**
- **Voluntary medical male circumcision**
- **Pre-Exposure Prophylaxis (PrEP)**
- **Post-Exposure Prophylaxis (PEP)**

Contribution of Combination Prevention

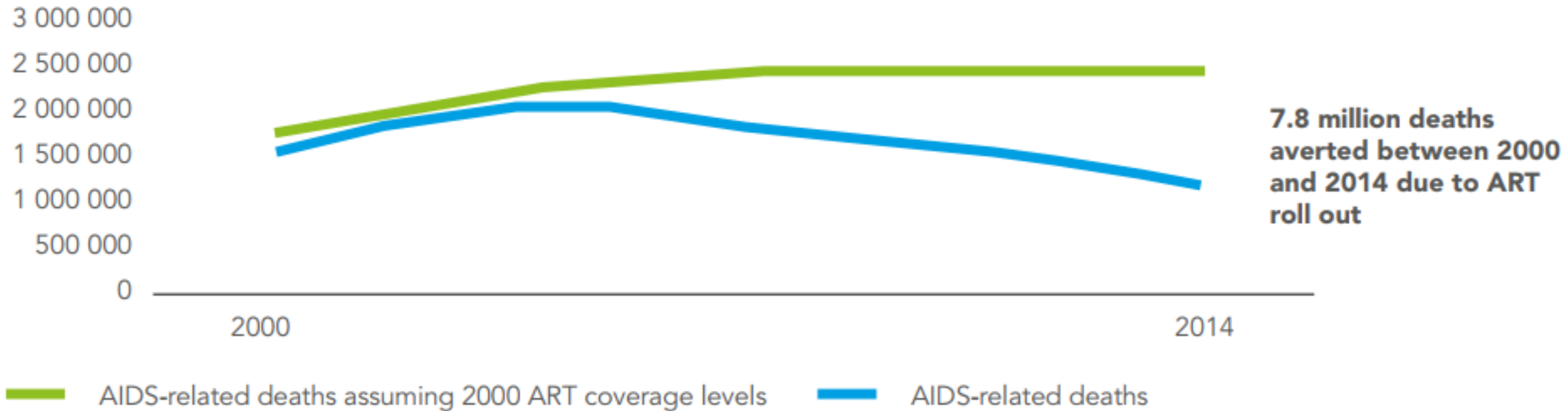
New Infections in Low and Middle Income Countries by Scenario



Global Scale-up of Antiretroviral Therapy

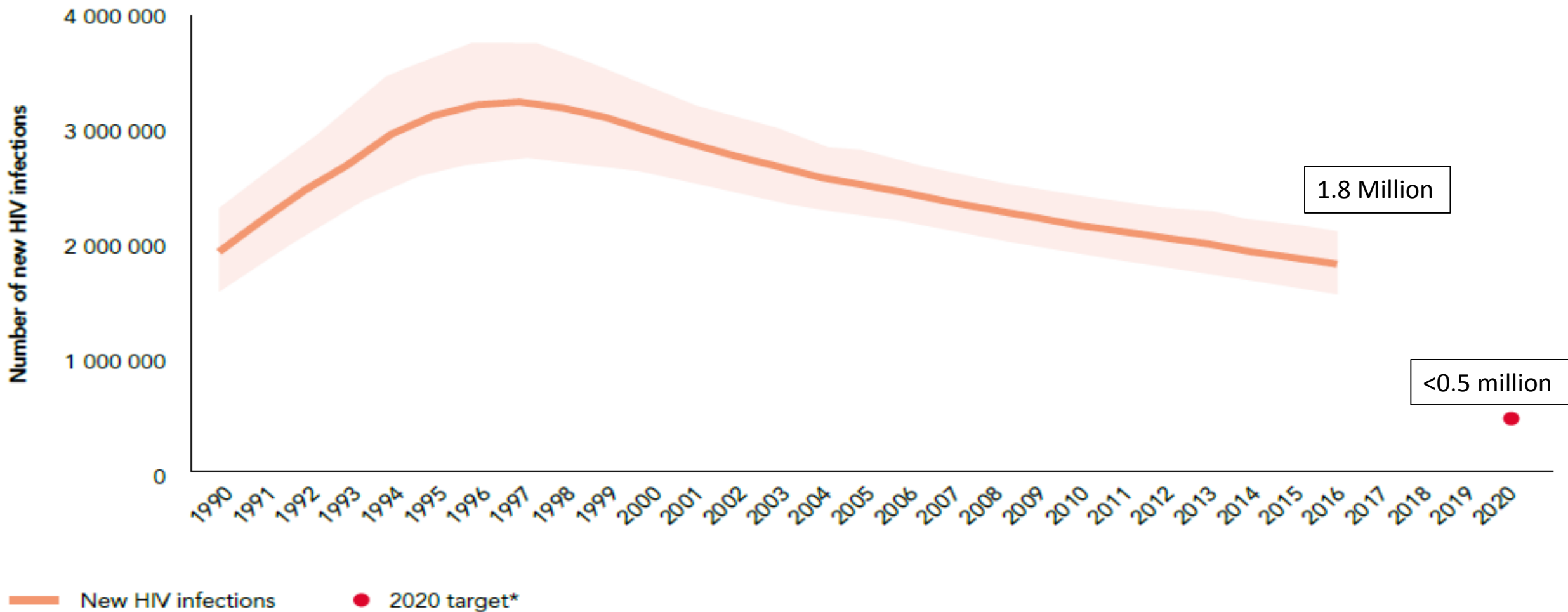


Reduction in AIDS-related Deaths 2000-2014



Source: UNAIDS, How AIDS changed everything — MDG6: 15 years, 15 lessons of hope from the AIDS response, Geneva 2015.

Reductions in New HIV Infections Globally



90-90-90 Global Targets for Epidemic Control

90%

**of all PLWH will
know their HIV
status**

90%

**90% of all PLWH
who know their
status will receive
sustained
antiretroviral
therapy**

90%

**of all PLWH
receiving
antiretroviral
therapy will have
durable
suppression**

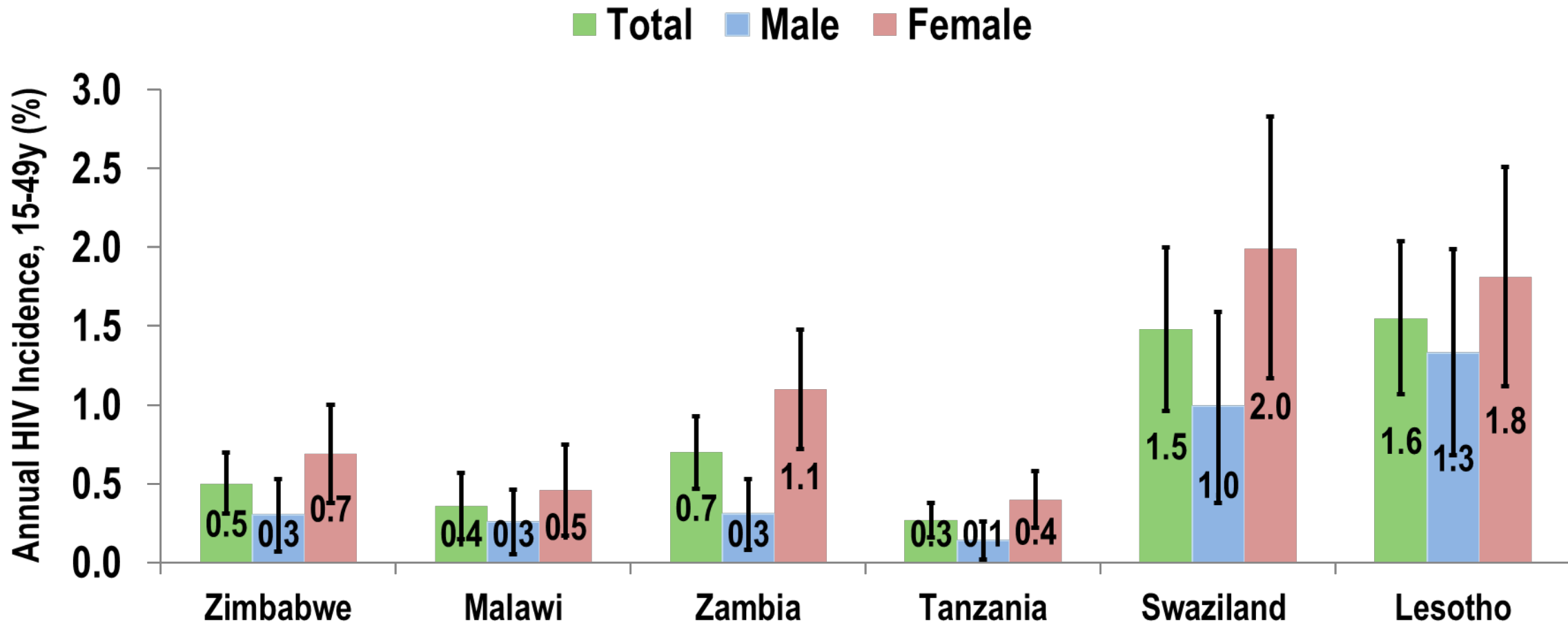
Population-based HIV Impact Assessment (PHIA) Project

Goal: Conduct 14 nationally representative, HIV-focused, household surveys, to assess the status of the HIV epidemic

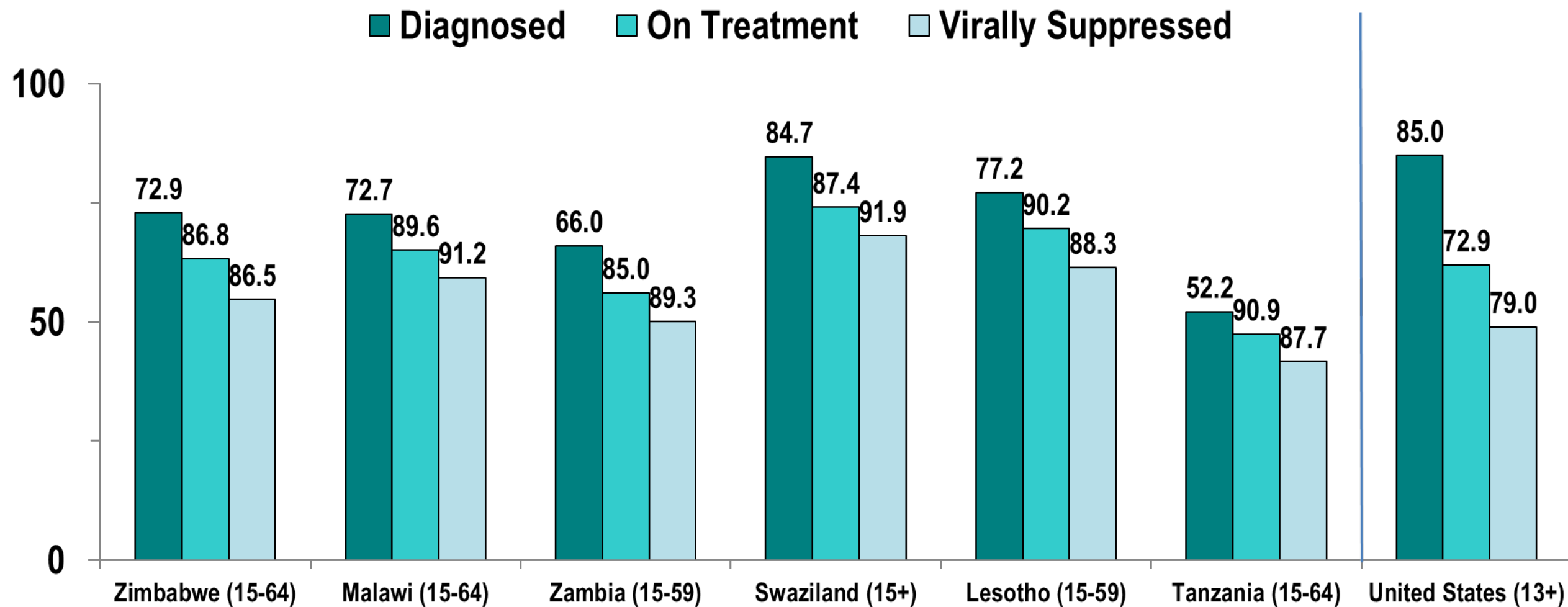
- 1^o objectives: National HIV incidence and prevalence of viral load suppression
- 2^o objectives: Adult and pediatric HIV prevalence, drug resistance, detectable ARVs CD4 distribution, among others



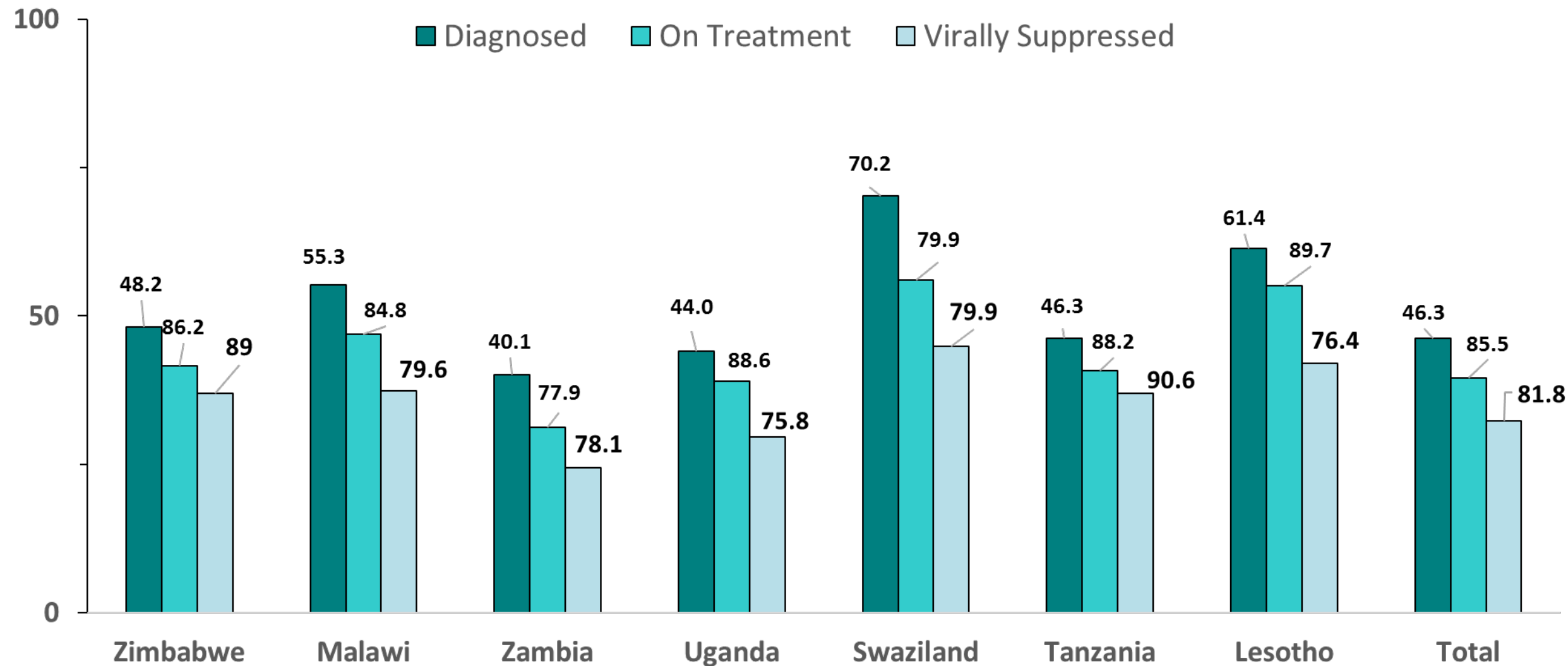
National HIV Incidence (15–49 years)



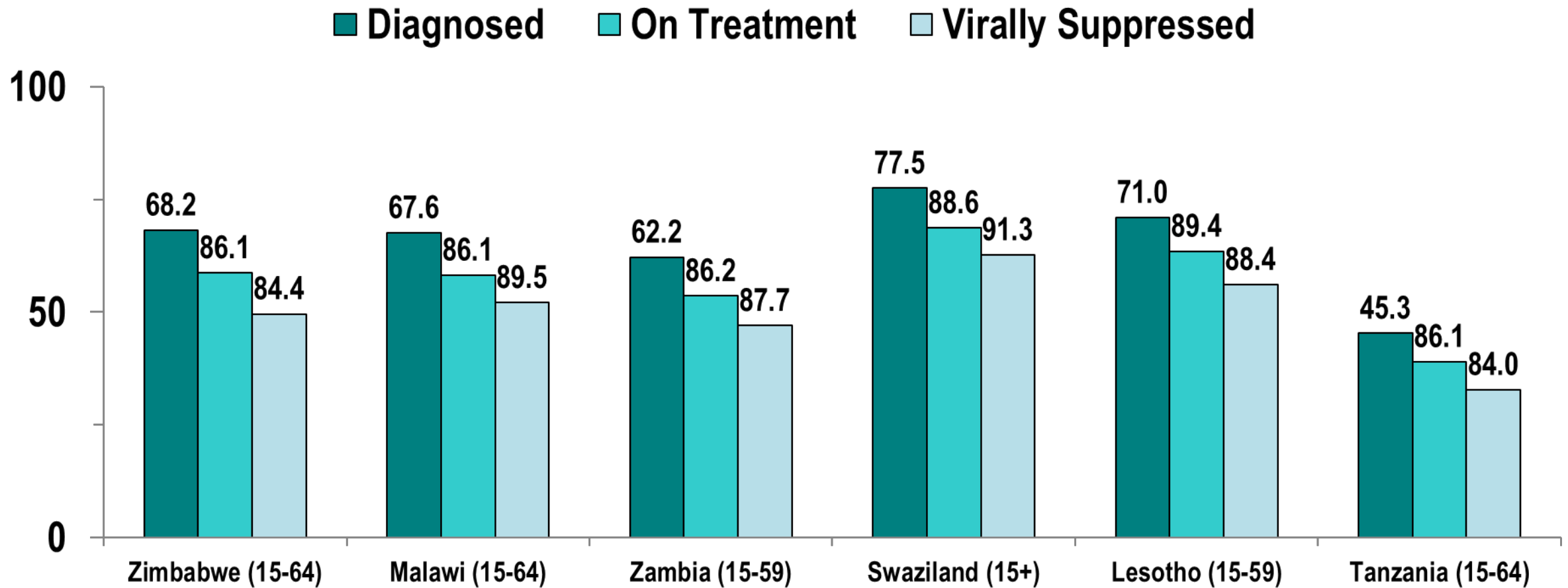
Progress Toward 90-90-90 Among Adults



Progress towards 90-90-90 among Adolescent Girls and Young Women (15–24y)



Progress Toward 90-90-90 among Adult Men



End of AIDS: Hope or Hype?

Progress is Remarkable

- ART dramatically reduces morbidity, mortality AND transmission.
- Access to ART has vastly improved with over 20M PLHIV on treatment worldwide.
- Several of the highest burden countries in the world are on track to achieve the 90-90-90 targets and control the epidemic by 2020.
- Combined with primary and secondary prevention, HIV incidence stabilizing or declining in key high burden countries.
- To achieve epidemic control, coverage of effective treatment and prevention must be further expanded, particularly among men and young people.

Thank You

