

# The Financial Implications of Reaching Global Treatment and Prevention Goals

Clinton Health Access Initiative (CHAI)  
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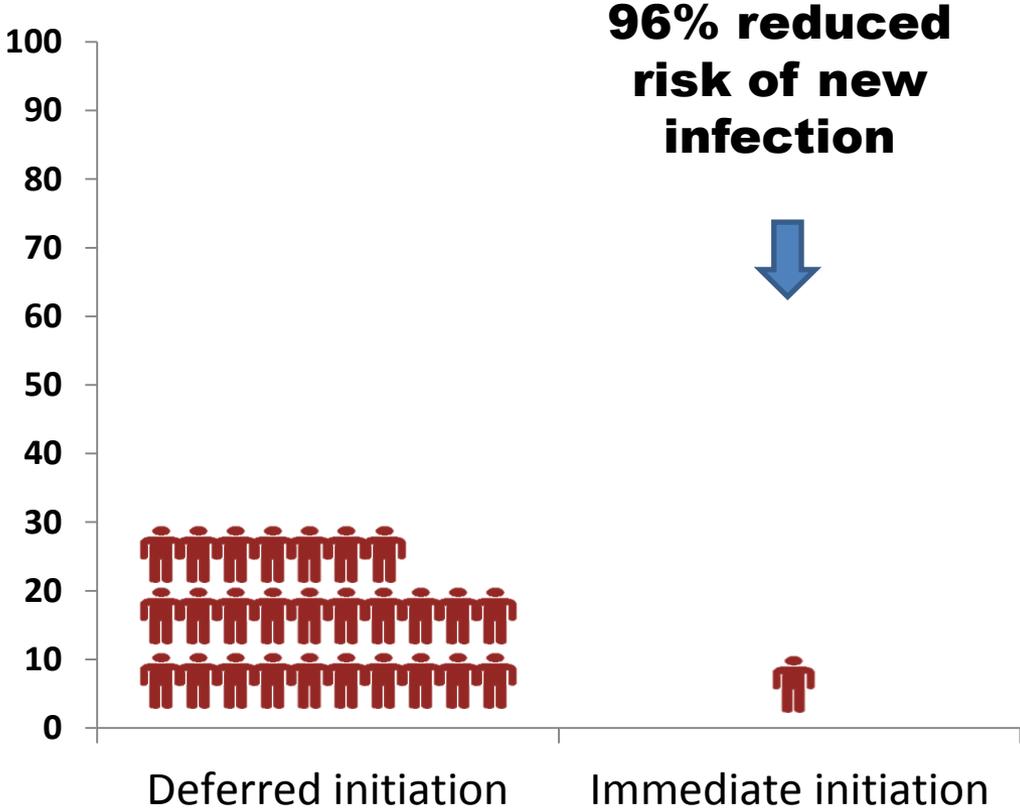
# As we near global consensus toward 'test and offer' it is time to tackle remaining questions on the cost and priorities for HIV programming

- ~~1. How strong is the rationale to scale up ART more aggressively?~~
2. Can we afford to put more people on treatment?
3. What should our priorities be going forward?

# We already knew that ART can massively reduce the risk of new infections

## HPTN 052 study

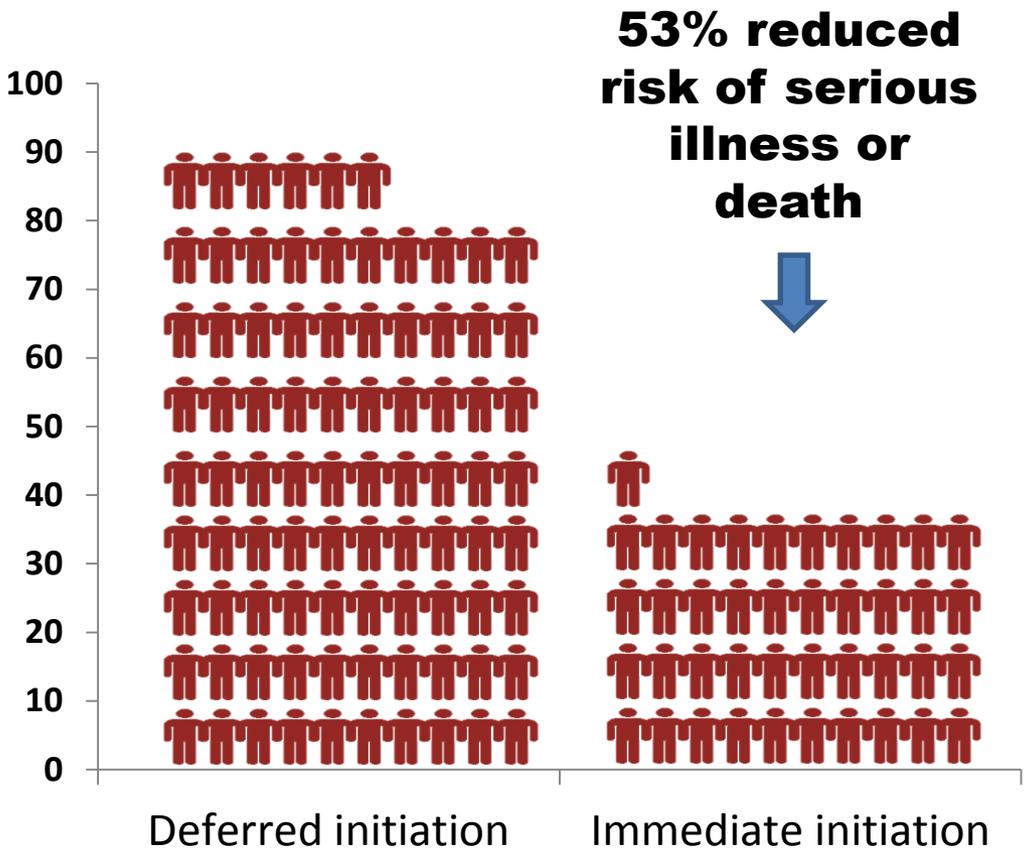
New infections amongst sero-discordant couples



# Now we have **strong evidence** that early initiation significantly improves patient outcomes

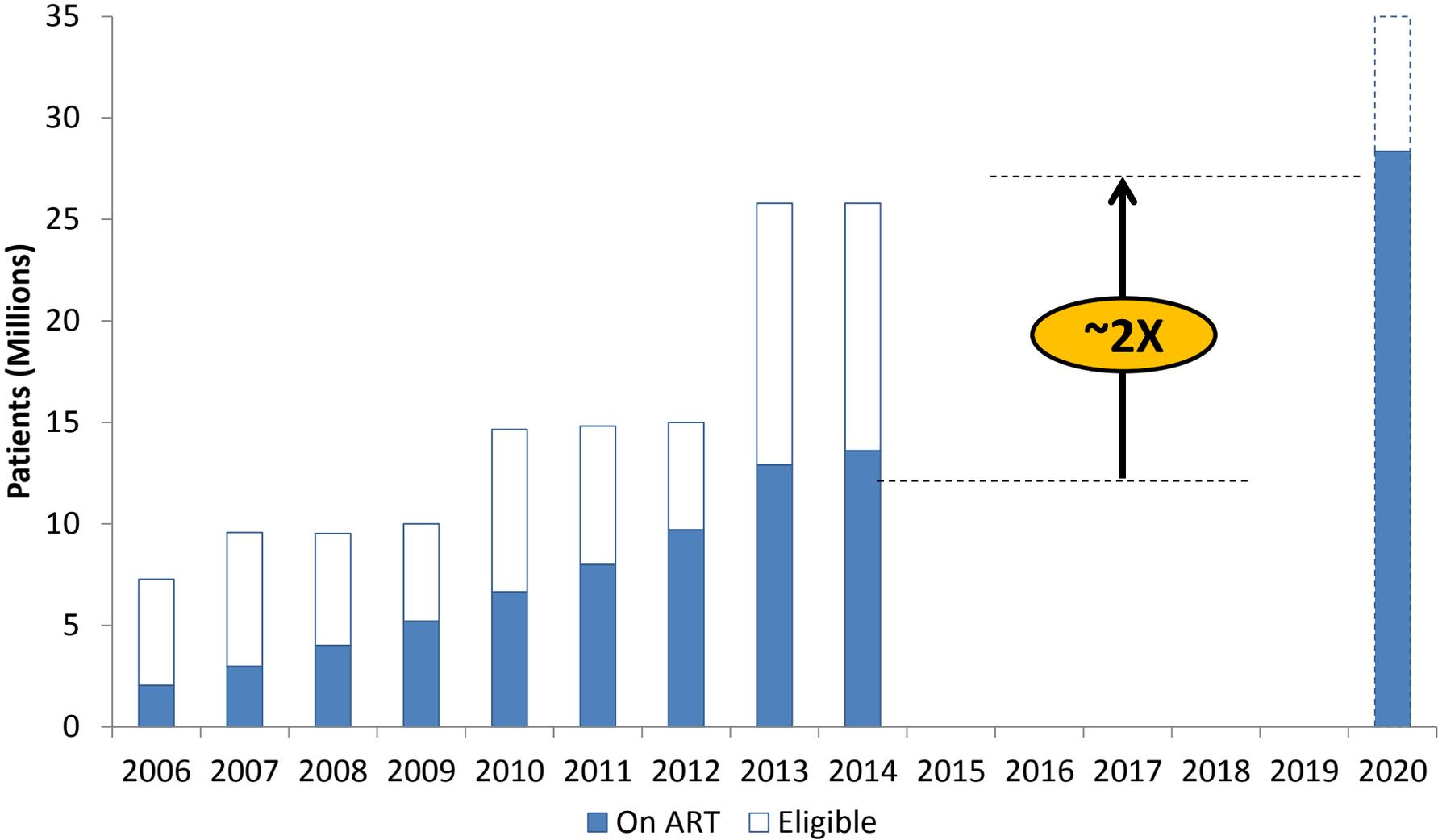
## START trial

Instances of AIDS, serious non-AIDS events or death



To get these benefits, we would need to scale up ART significantly. At first glance, this appears to be prohibitively costly

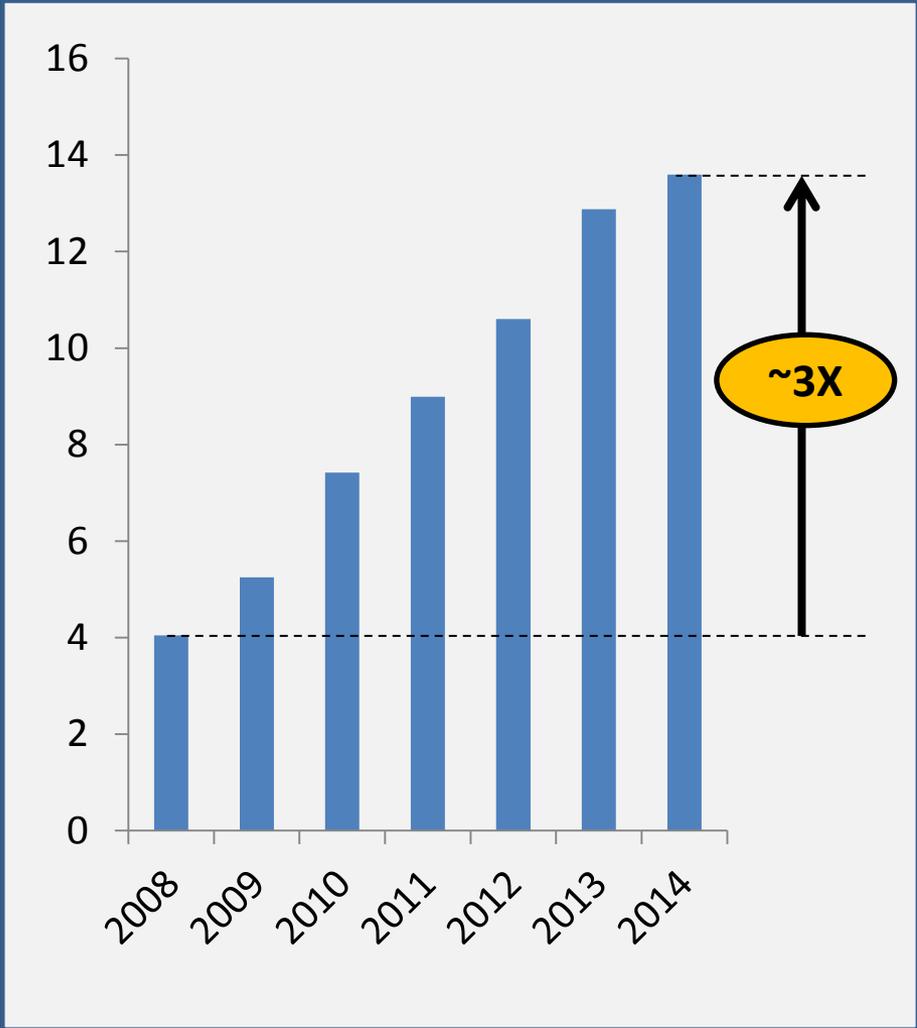
### People eligible for, and on, ART



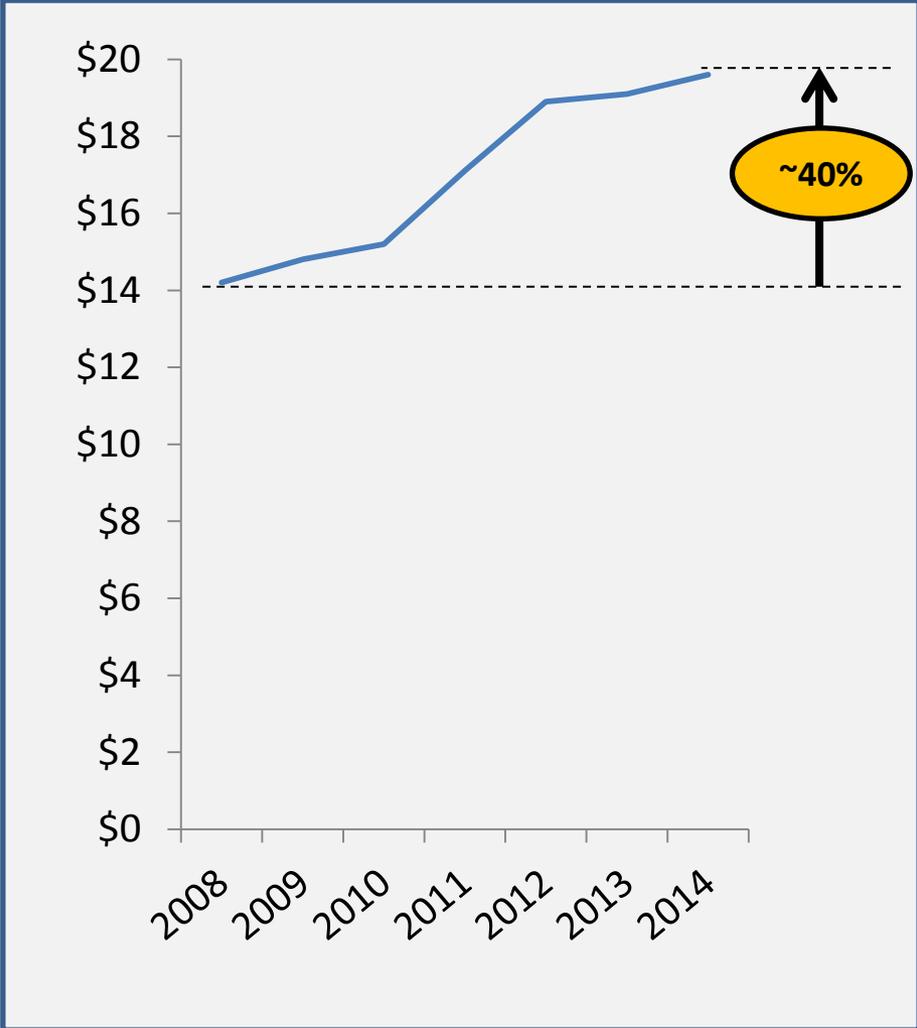
Source: UNAIDS, Global AIDS Report 2006-2013.; WHO UNICEF and UNAIDS, Global Update on HIV Treatment 2013.

However, over the past 6 years, we have tripled the number of patients on ART while funding levels increased by only 40%

Patients on ART, millions



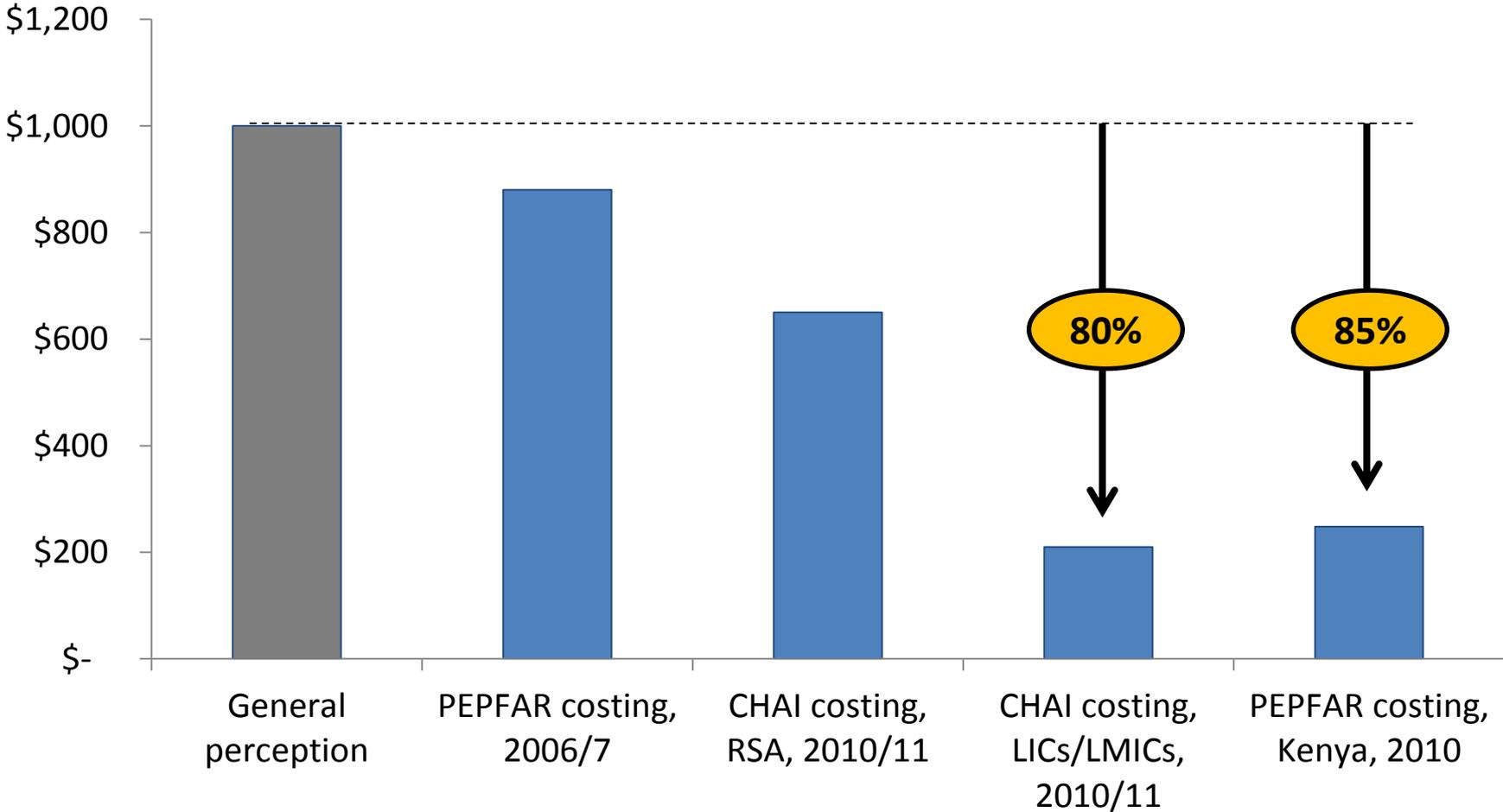
HIV funding levels\*, \$ billions



\* Resources available for HIV programs in low and middle income countries. UNAIDS, Global AIDS Gap Reports, 2012 & 2013.

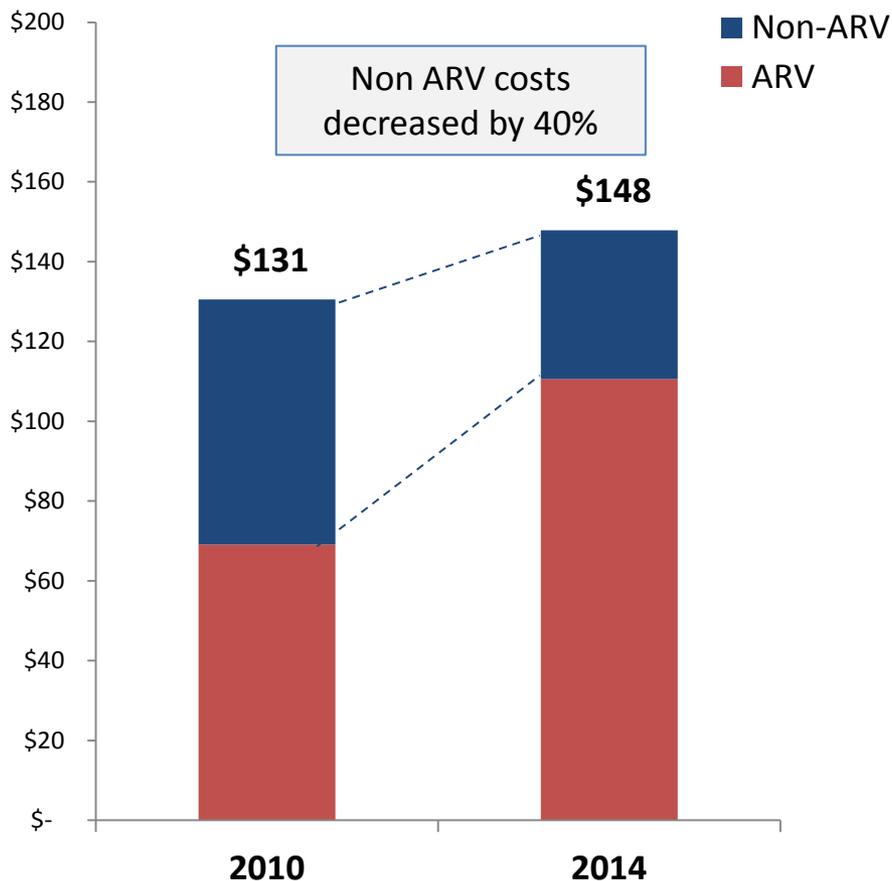
This was possible because the marginal costs of adding a patient to treatment were far lower than what many people thought

### Cost estimates of Treatment Per ART Patient-Year (USD)



# Low cost models of ART service delivery are continuing to get more efficient, which are driving down overall costs, particularly in LICs/LMICs

## Malawi: Total ART Cost PPPY



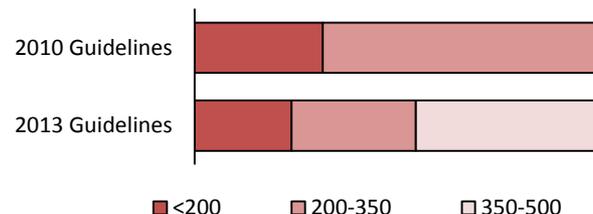
- In a recent CHAI analysis, facility-level ART costs remained similar between 2010 and 2014, with **increases only driven by switch from D4T to TDF.**
- Facilities nearly **doubled patient loads between 2010 and 2014**, but task-shifting and MMS enabled facilities to maintain similar staffing levels.
- During the same time period, nationwide **retention has increased.**

...and we expect those costs to keep going down – particularly in low and lower-middle income countries – as a result of three key factors

## 1 Changing patient mix

- Higher eligibility criteria means more healthy patients, requiring less intensive care

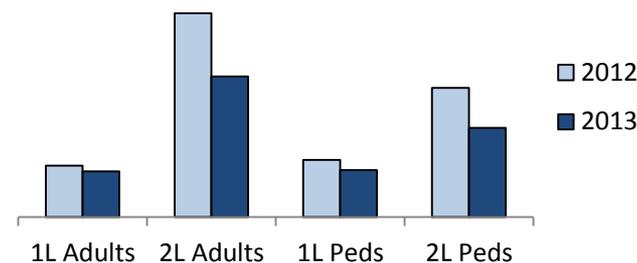
Projected Patient Mix, 2020



## 2 Falling commodities costs

- ARV, CD4 and VL costs are continuing to come down, though more slowly than in the past

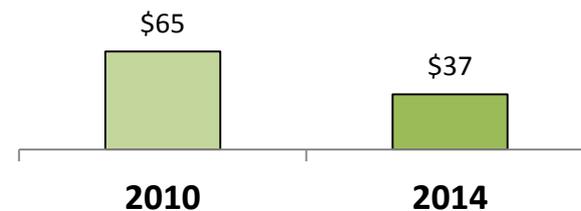
Avg. market price for ARVs\*



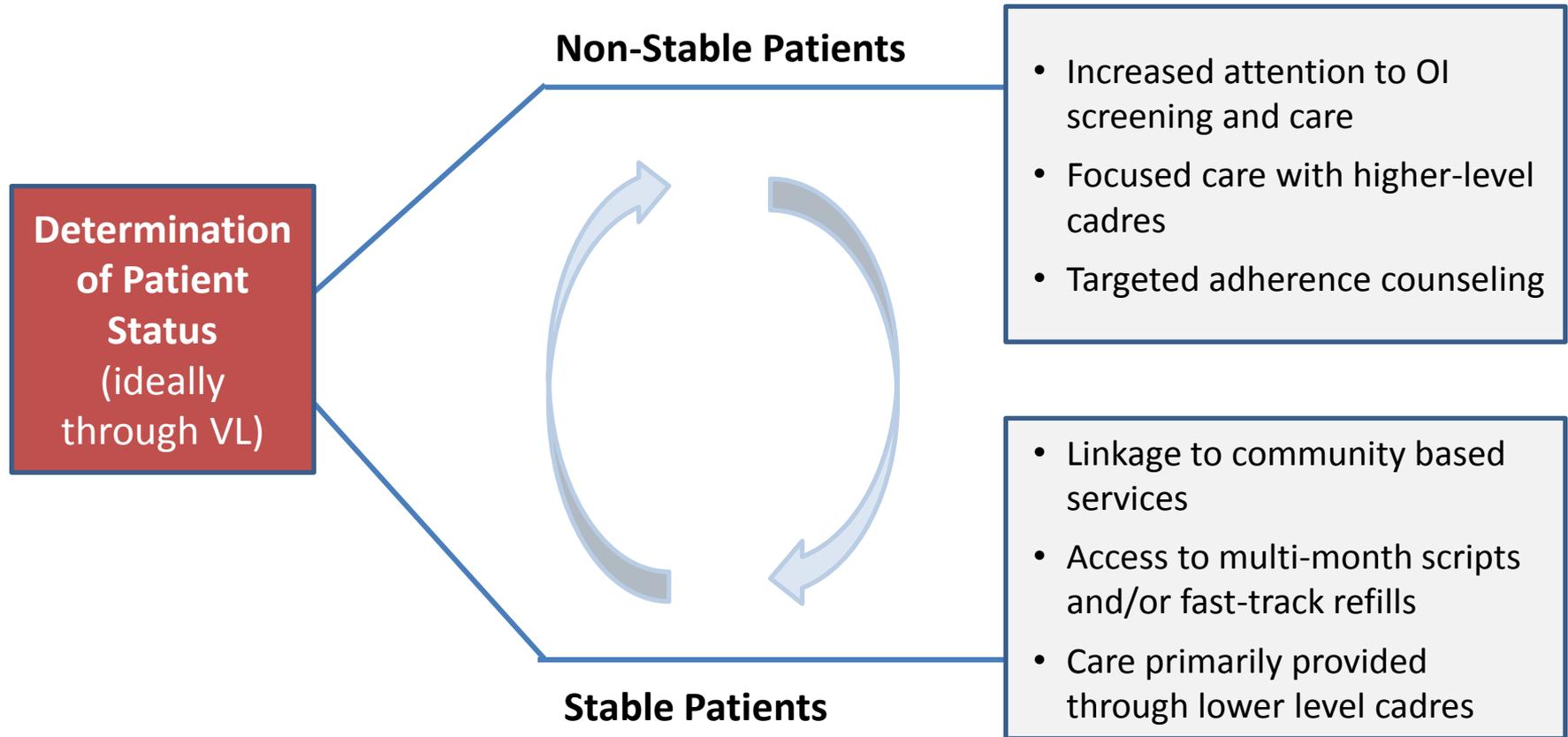
## 3 Economies of scale/Simplified models of care

- Fixed costs spread over more patients
- Continuing trends towards differentiated care models for stable patients through task shifting, fewer facility visits etc.

Average Non-ARV costs sample of 5 Malawi facilities



## Differentiated models of service delivery have the potential to drive efficiency gains and maximize resources

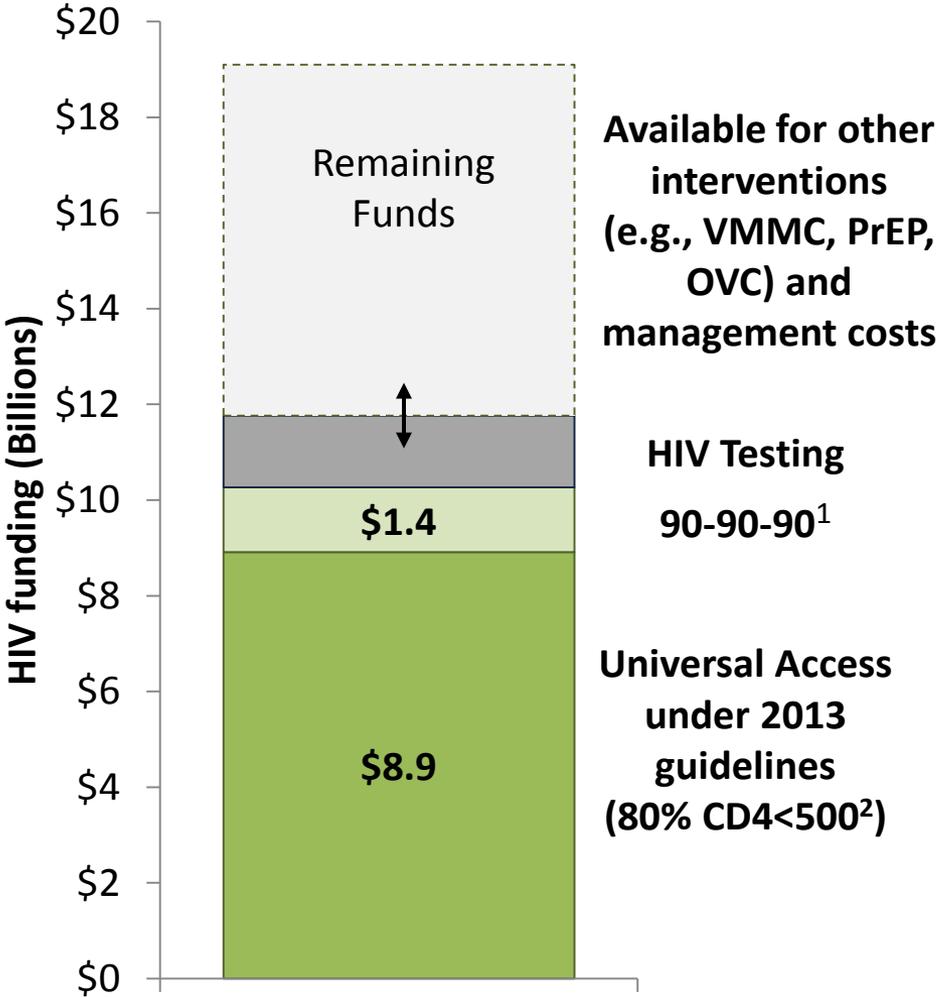


### Examples of Differentiated Care Models

**Multi-Month Prescriptions** (Malawi, Zambia, Swaziland); **Fast-Track Refills** (Malawi); **Community ART Distribution Groups (MSF)** (Mozambique, Swaziland), etc.

# At current costs, CHAI estimates suggest universal access is affordable, with facility-level ART costs requiring 45-55% of available HIV funding

Estimated facility-level ART costs relative to available HIV funding (billion USD)

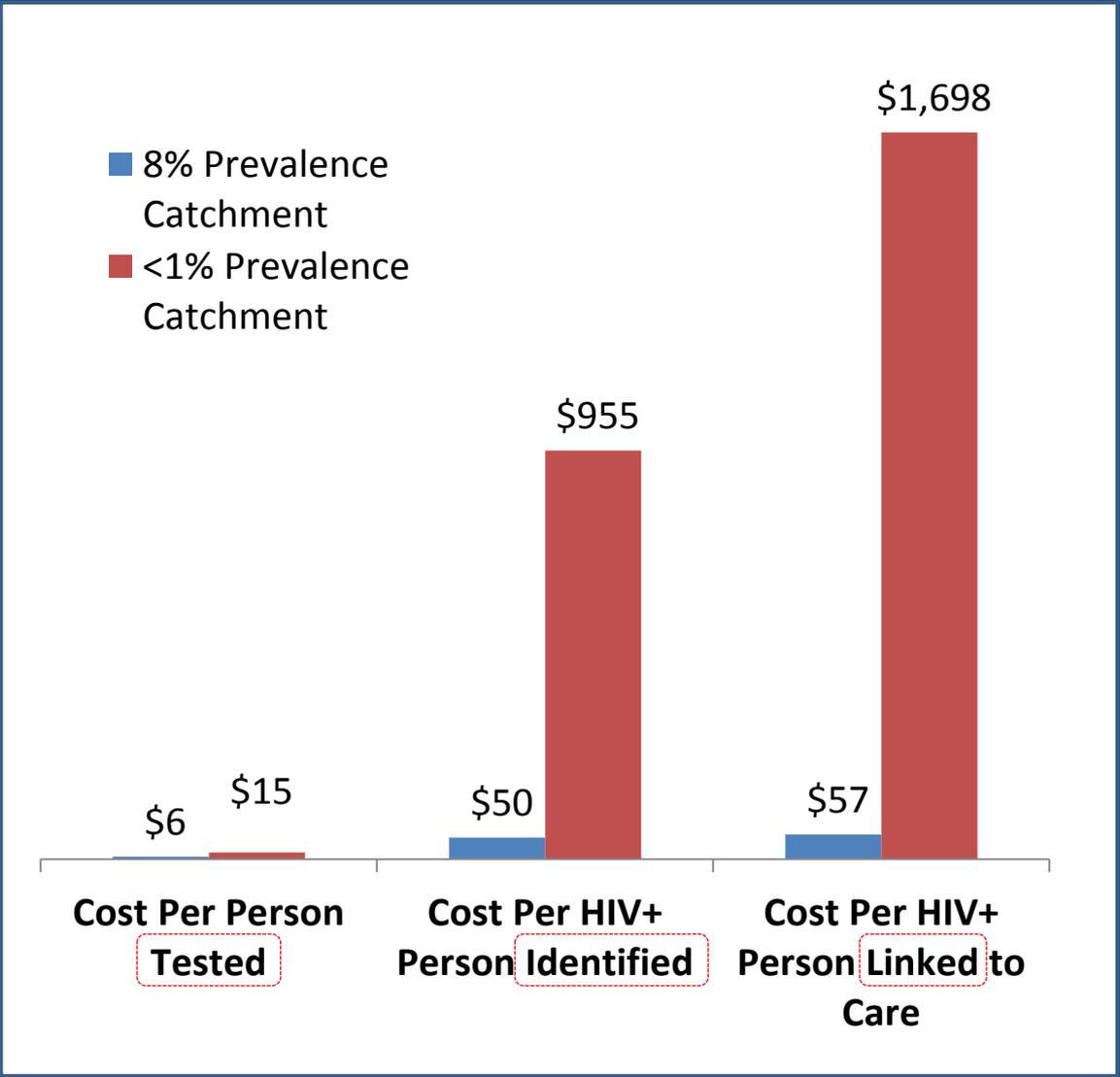


- The funding required to maintain people on treatment does not appear prohibitive: universal access under 2013 guidelines would require ~46% of available HIV funding
- Moving to the more aggressive goal of 90-90-90 only adds 1.4B more, reaching ~53% of HIV funding
- Annual testing costs will vary significantly depending on level of targeting and timeline to reach targets

1. Defined as 81% PLHIV  
2. Also includes implementation of Option B+ and treatment for serodiscordant couples.

# Outside of ART, we also have to be smart about how we invest in identifying new patients through HIV testing

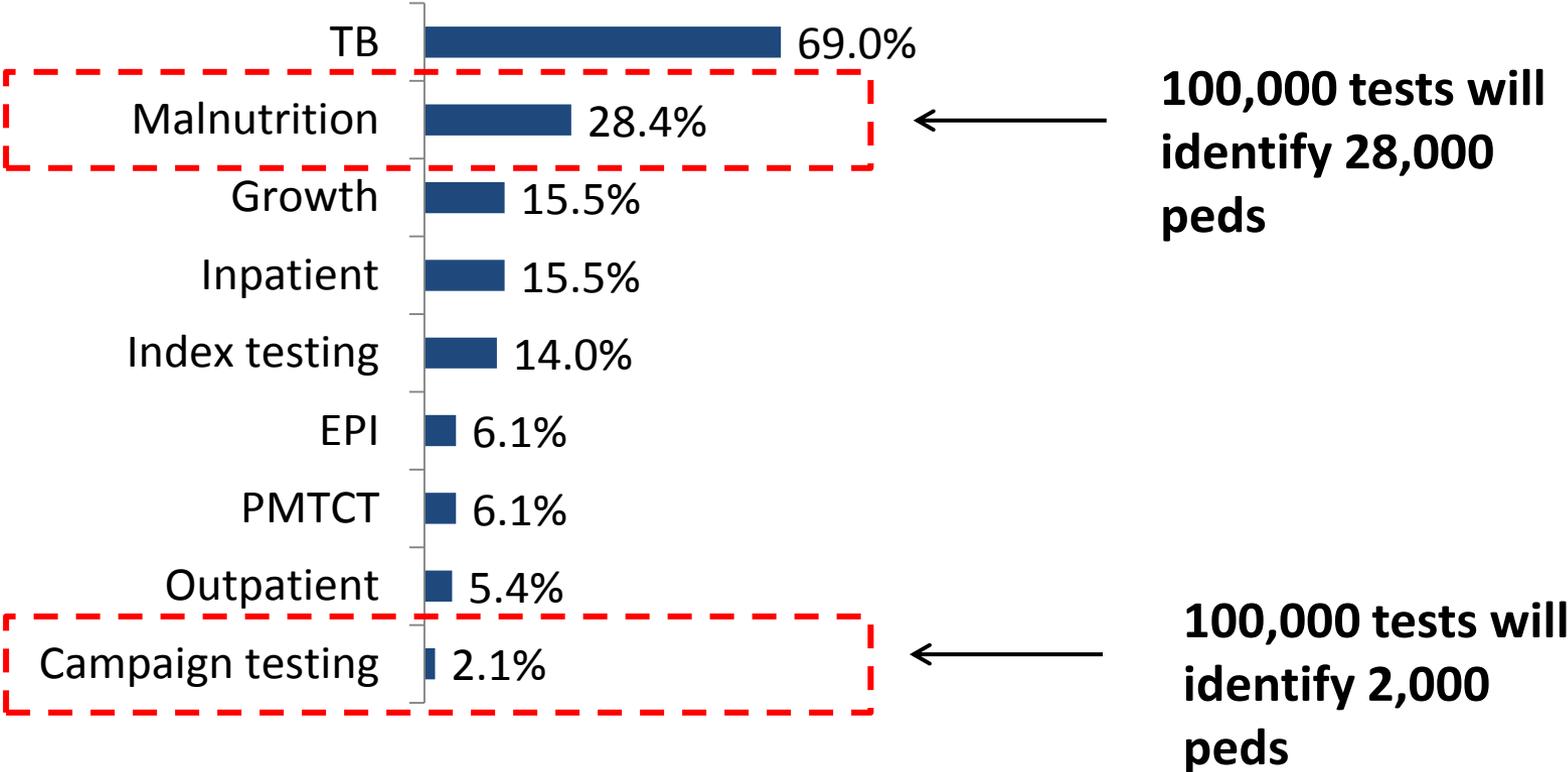
### The cost of home-based testing in different geographies



- Costs per person added to ART are hugely impacted by both yield and the strength of linkage systems
- Reaching the first and second '90s' will require countries to carefully target testing to carefully optimize coverage and cost
- Other interventions, such as VMMC, PrEP, and condoms also need to be carefully targeted

# Minimizing the HTC resource needs to reach 90-90-90 will require countries to move from 'test everyone' to prioritized strategies

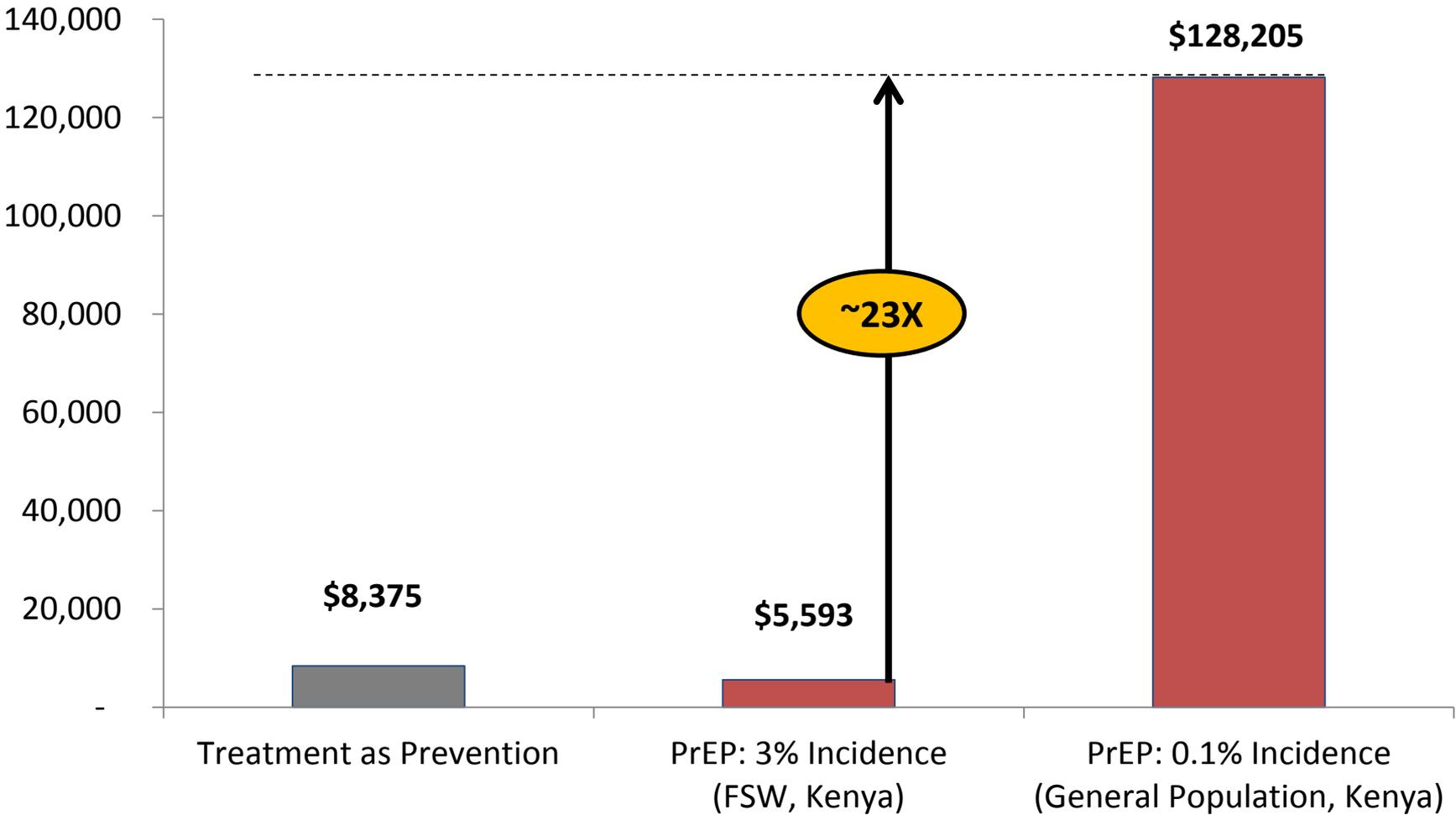
## Zimbabwe: Estimated pediatric (0-14 years) yields by entry point



**Even the funding were available, few countries have the human resources to reach 90-90-90 without prioritization**

# Targeting is also critical for prevention interventions including VMMC and PrEP; costs could become prohibitive if not rolled out strategically

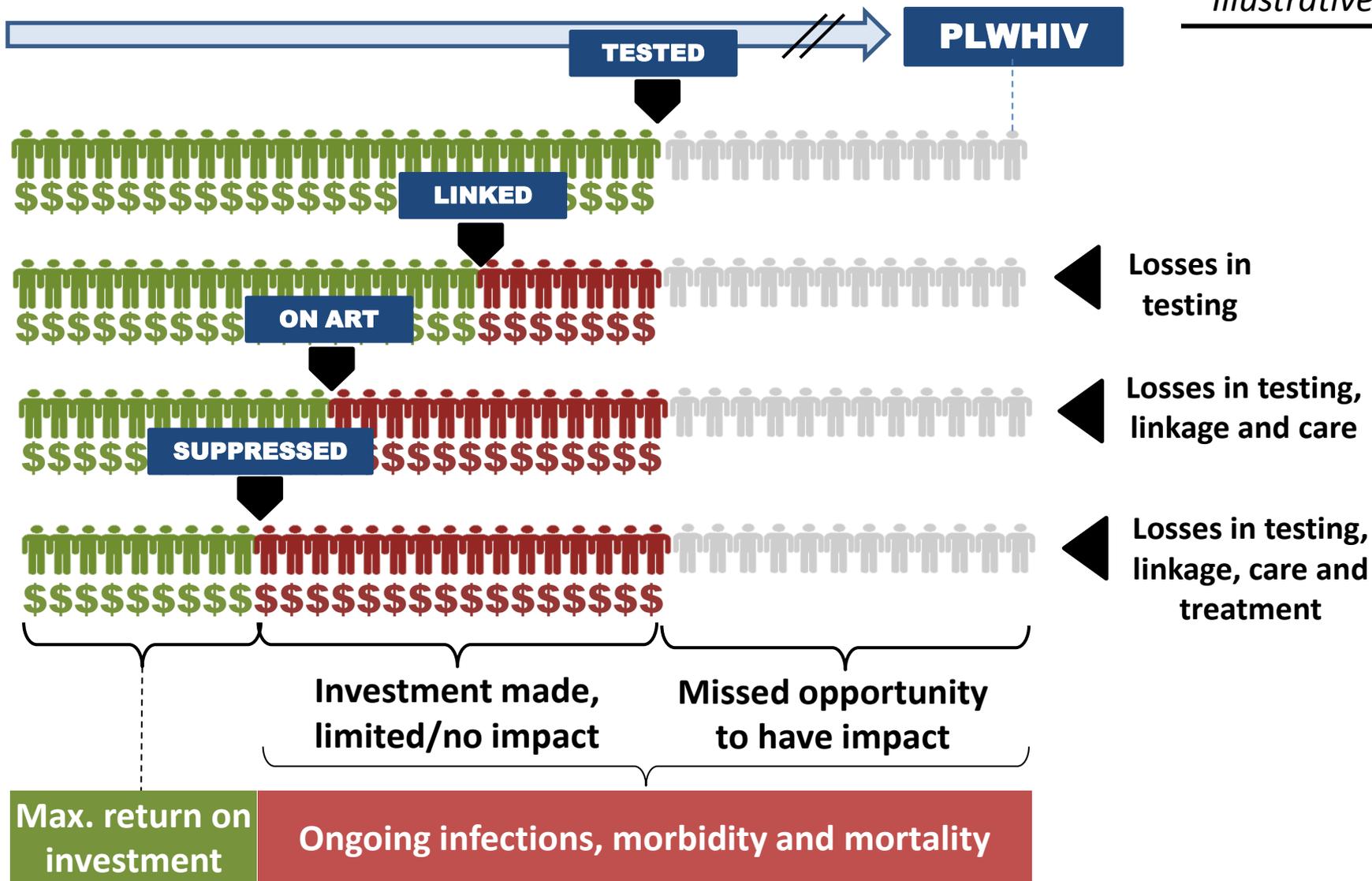
## PrEP Example: Cost Per Infection Averted



NOTE: These calculations assume 100% adherence to PrEP among client population

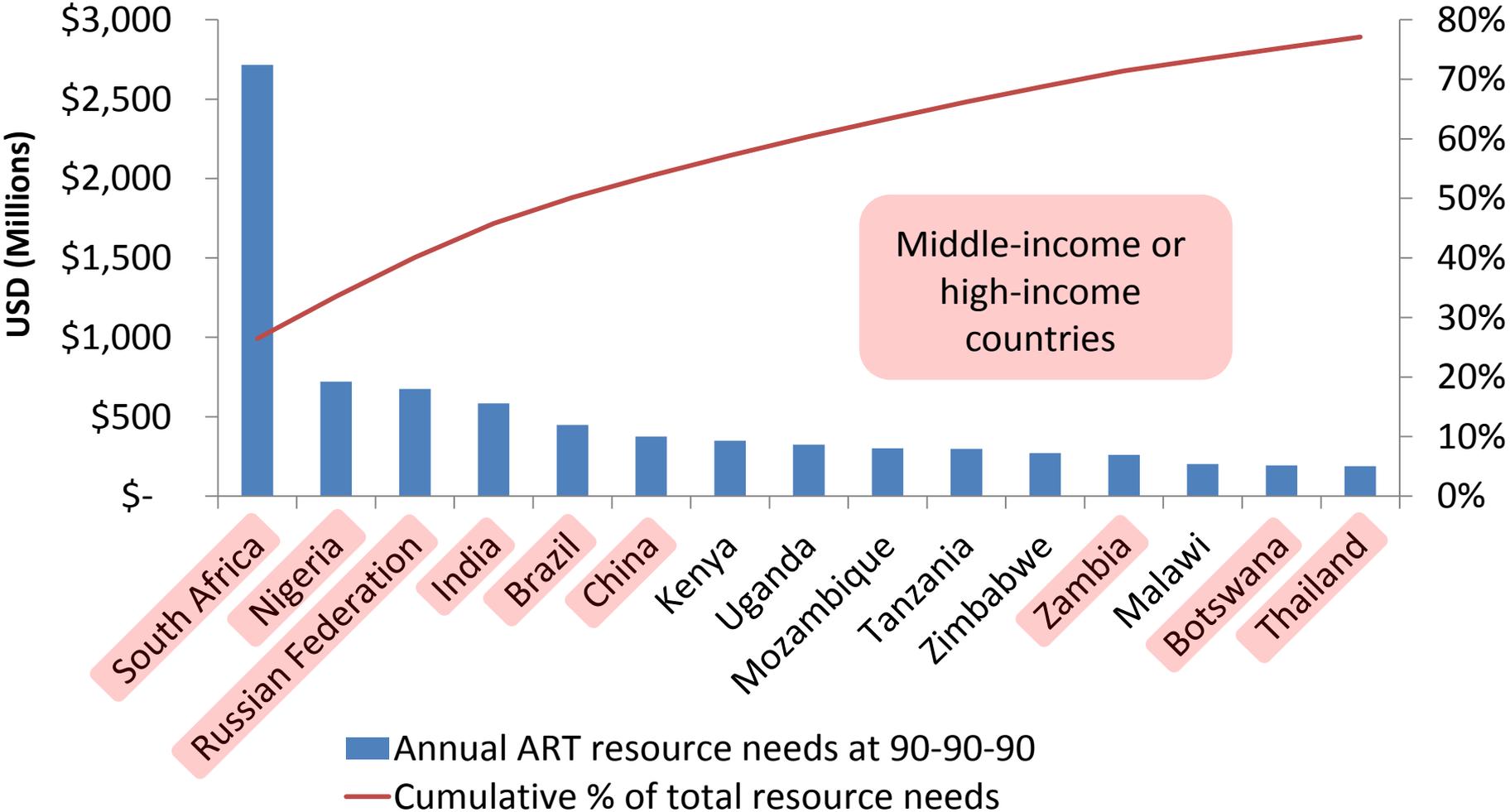
Once patients are identified, we need to make sure we get the most of ART investments; we currently lose a lot of gains through poor retention

*Illustrative*



MICs/HICs—which have more capacity to commit domestic resources to their response—account for 77% of total resource needs at 90-90-90

**ART Annual Resource Needs and Percent of Global Resource Needs**



## We have clear answers to our key questions:

1. The rationale for scaling up ART is clear, and the evidence is there for both prevention and curative benefits
2. We can afford to maintain as many as 100% of PLHIV on treatment given available resources and low facility-level costs
3. The priorities going forward need to be:
  - a. Further efficiency gains within ART spending through implementation/scale up of differentiated care for stable patients
  - b. Targeted and efficient spending outside of treatment – in particular for testing and biomedical prevention that will need to prioritize high yield strategies and populations
  - c. Improved retention along the cascade, so we don't waste the hard-won gains

Thank you!