

AVMI as a Catalyst for HIV Vaccine Advocacy in Africa

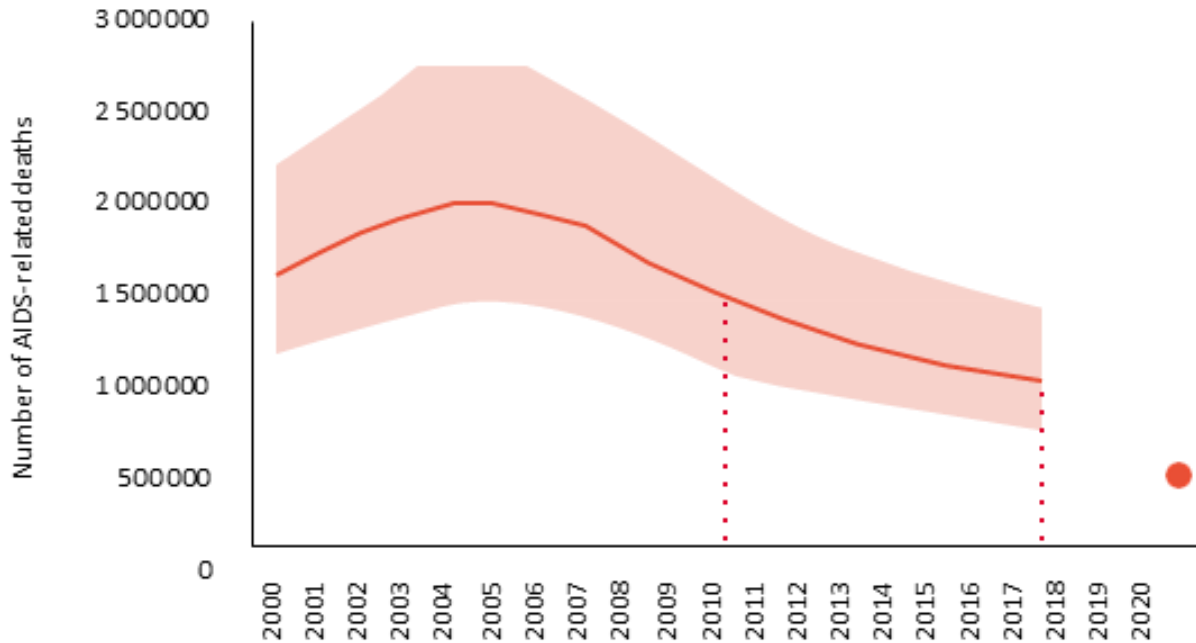
Chidi Victor Nweneka, MBBS, PhD

Annual General Meeting of the African Vaccine Manufacturing Initiative,
Freetown, Sierra Leone, September 24 & 25, 2018

The Place of Vaccines in HIV Control

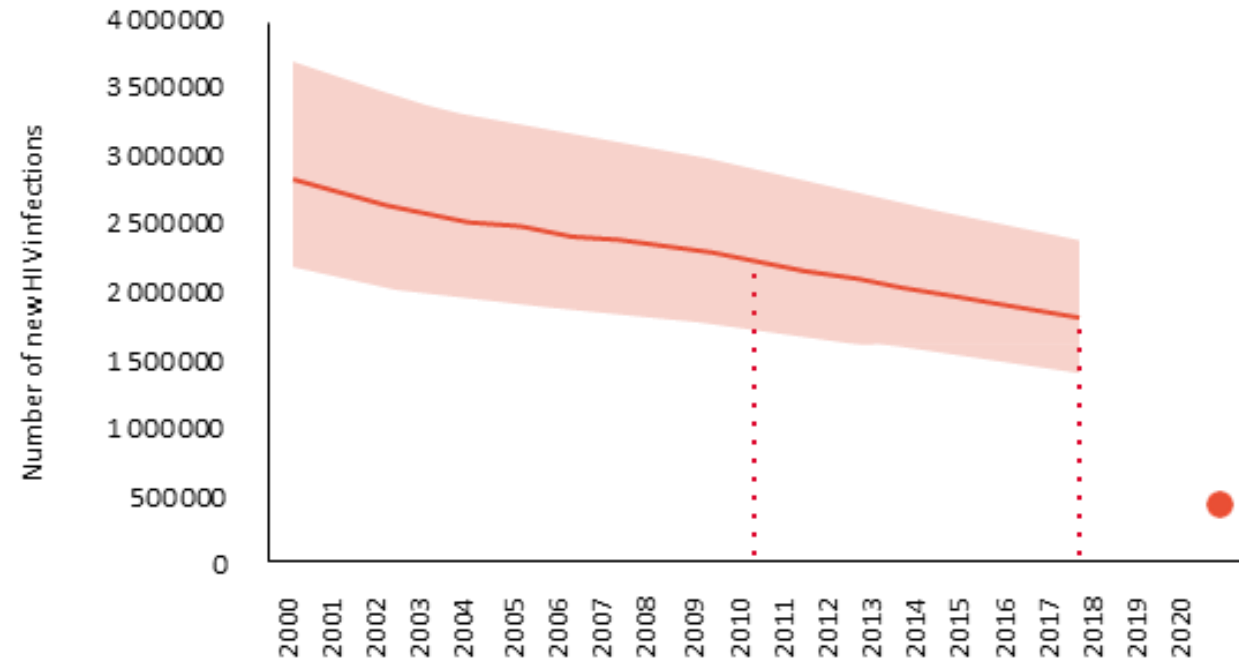
Progress has been made in HIV and AIDS control ...

AIDS-RELATED DEATHS



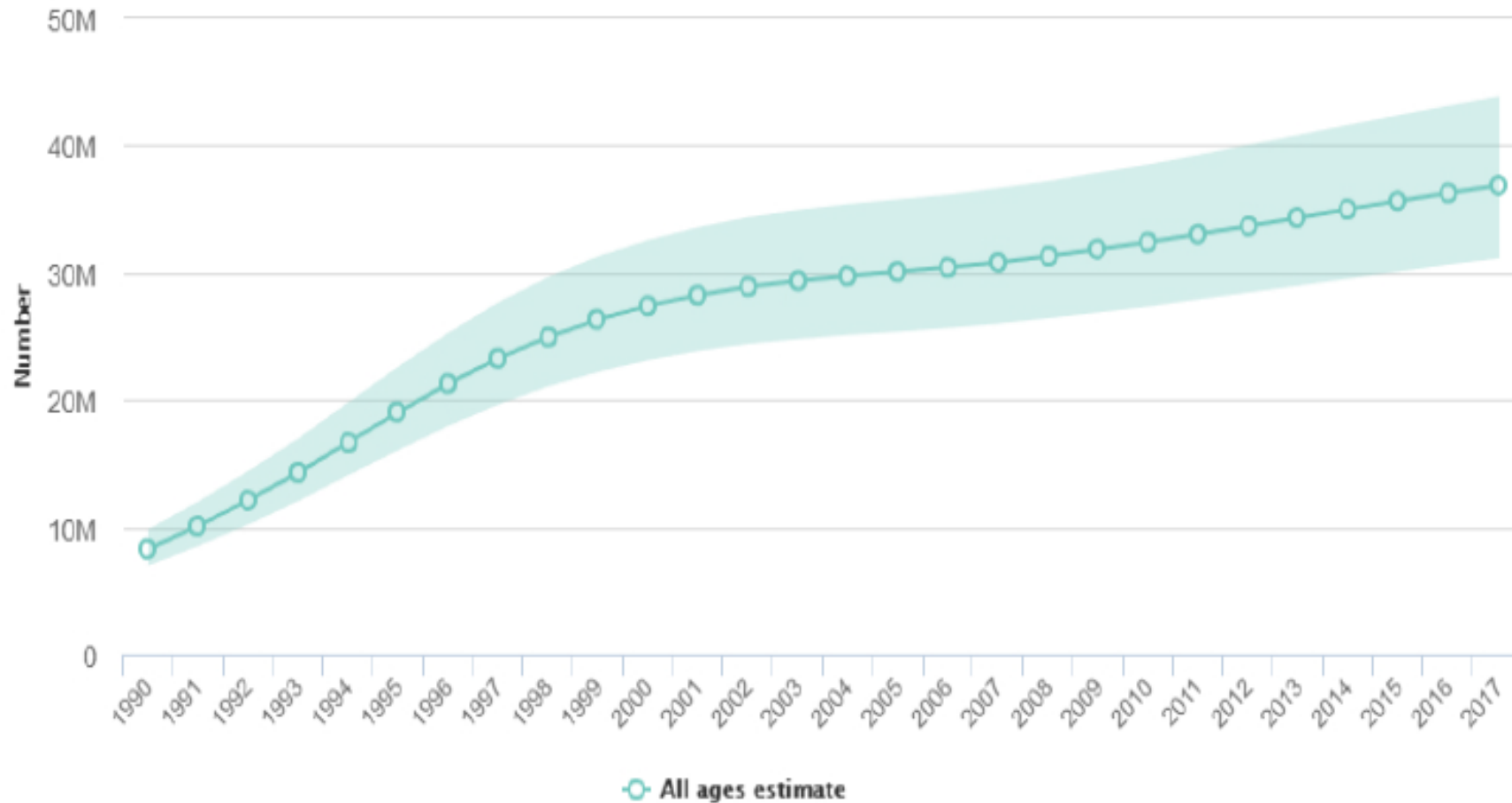
34% decline in AIDS-related deaths between 2010 and 2017 globally

NEW HIV INFECTIONS



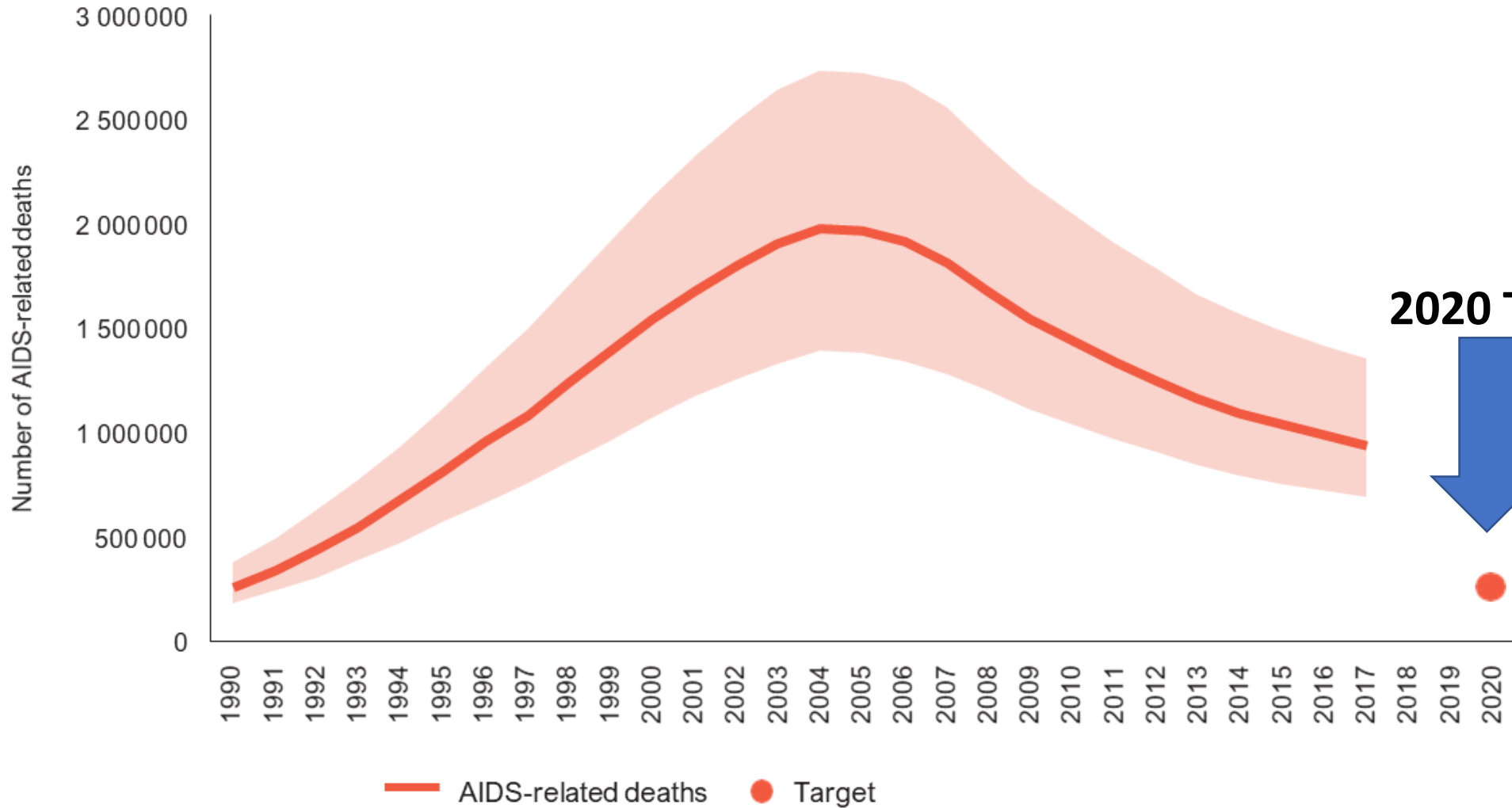
18% decline in new HIV infections between 2010 and 2017, globally

But ... HIV still a major public health threat



- **Number of PLHIVs continue to increase;**
- **Over 70 million people have so far been infected by HIV since the epidemic started**
- **Unlikely to reach 2020 targets from current progress**

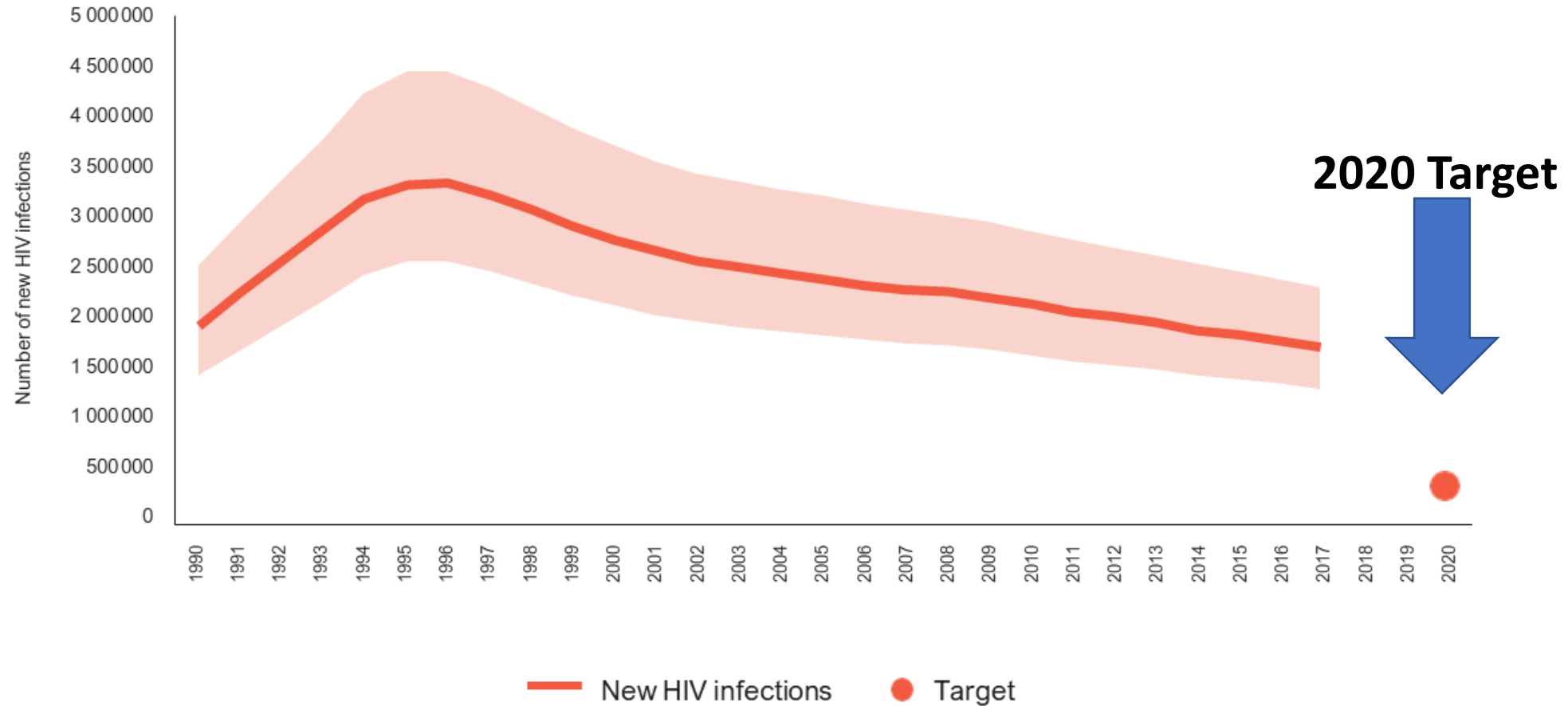
Unlikely to reach 2020 targets from current progress



2020 Target

- **Despite increase in ART uptake**

Unlikely to reach 2020 targets from current progress



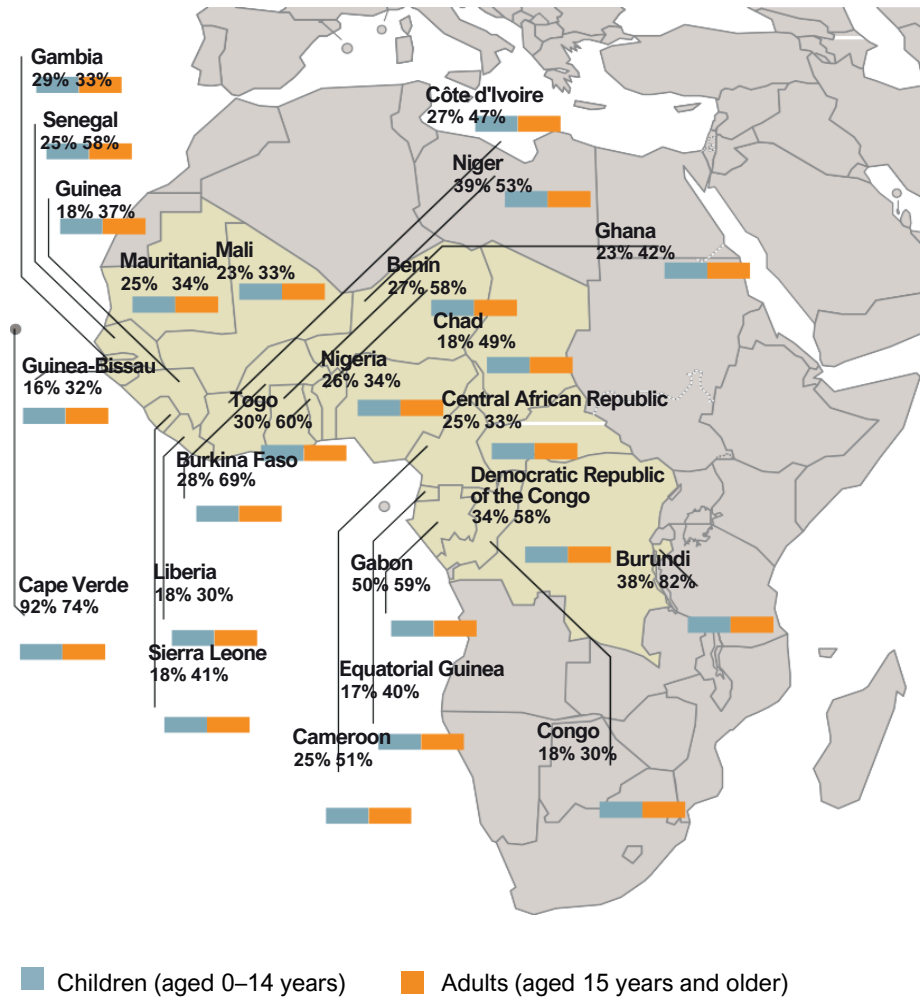
Slow progress on prevention

Limitations of the various HIV prevention methods

- Difficulties in maintaining behaviour change
- Policy issues
- Poverty
- Ignorance
- Inefficient public health systems
- Declining funding for HIV programmes
- High cost of treatment for HIV
- For every one individual commenced on ART, another 2-3 acquire HIV infection

Antiretroviral therapy coverage among children (aged 0–14 years) and adults (aged 15 years and older), western and central Africa, 2017

- In West and Central Africa Region ART coverage is unacceptably low



Source: UNAIDS 2018 estimates.

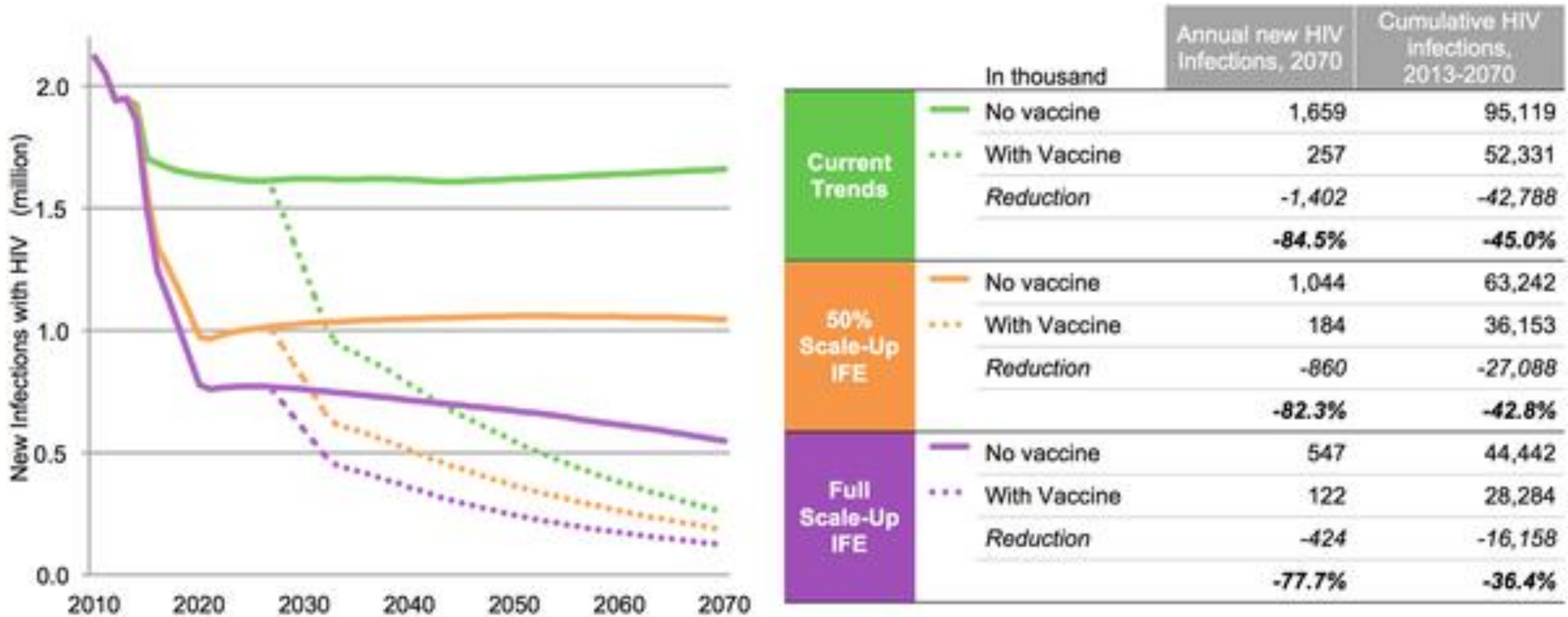
Why an HIV Vaccine is needed ...

- Since the Epidemic started
 - Over 70 million people have been infected with HIV
 - Over 35 million have died from AIDS-related causes
- Current prevention measures still inadequate to stop new infections – 5000 new HIV infections still occur daily
- There is still no cure for HIV infection
- There is still no universal access to ARVs
- The rate of new HIV infections still outstrips the rate at which PLHIVs are being placed on treatment

Why an HIV Vaccine is needed ...

- In many countries, it is unlikely that the 2020 targets will be achieved, thus placing the goal of ending AIDS by 2030 at risk
- Even if we end AIDS by 2030, HIV will still be around, and the risk of periodic flare ups of the epidemic will remain

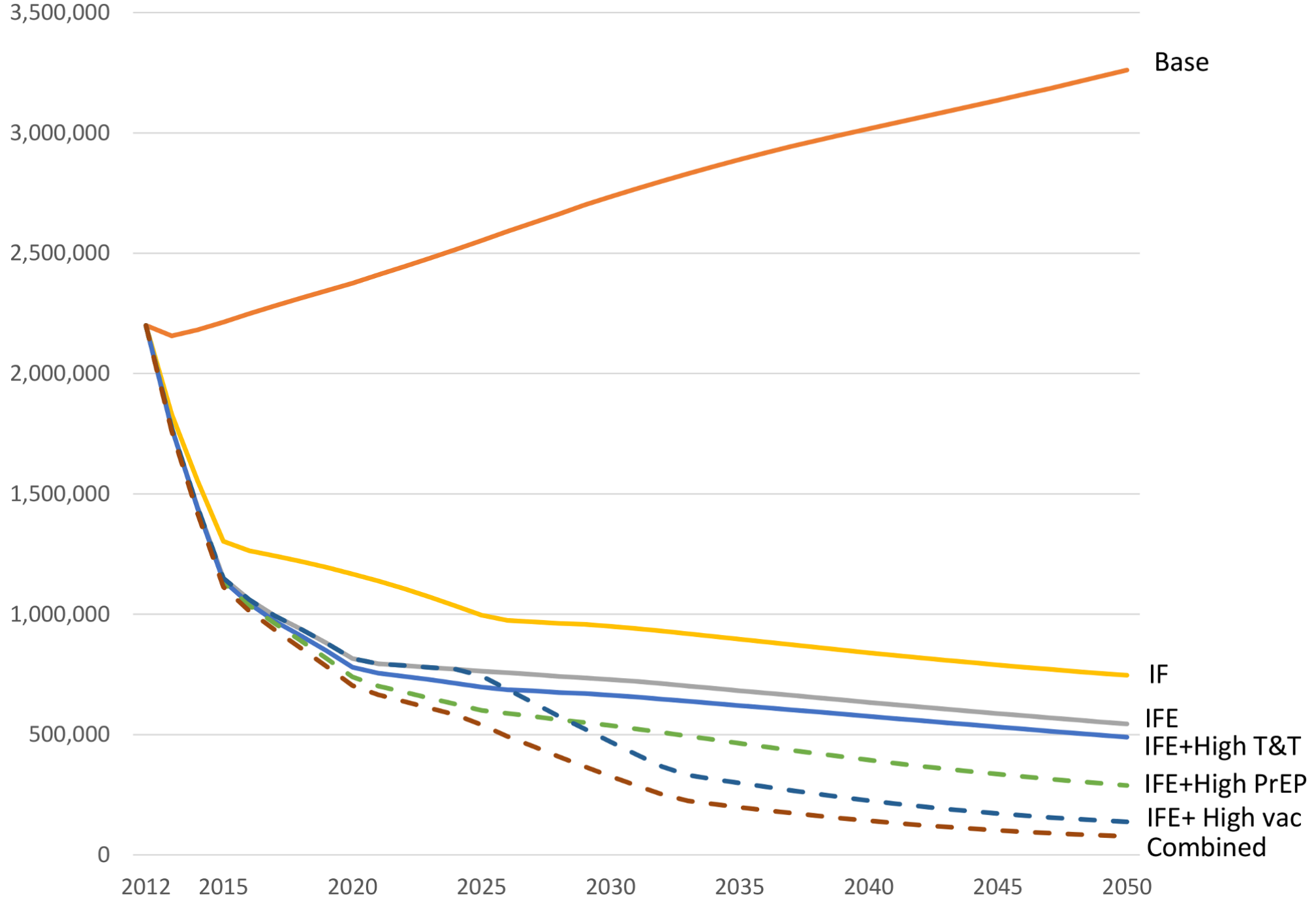
Reduction of new annual HIV infections with and without an AIDS vaccine under different IFE scale-up scenarios between 2010 and 2070.



Harmon TM, Fisher KA, McGlynn MG, Stover J, Warren MJ, et al. (2016) Exploring the Potential Health Impact and Cost-Effectiveness of AIDS Vaccine within a Comprehensive HIV/AIDS Response in Low- and Middle-Income Countries. PLOS ONE 11(1): e0146387.
<https://doi.org/10.1371/journal.pone.0146387>
<https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0146387>

* IFE = Investment Framework Enhanced = adoption of 2015 investment framework targets + test & treat

New Infections in Low and Middle Income Countries by Scenario



Stover, J. et. al.
doi:10.1371/journal.pone.0111956.g002

Status of HIV Vaccine Research

Phase	Closed to follow-up	Completed	Ongoing	Terminated	Withdrawn	Scheduled
I	3	200	30	3	1	
I/II	1	17	5			
Ib		8	1	1		
II	1	10	4	1	1	1
IIa		3				
IIb			3	3	1	
III		3	1 (HVTN 702)			

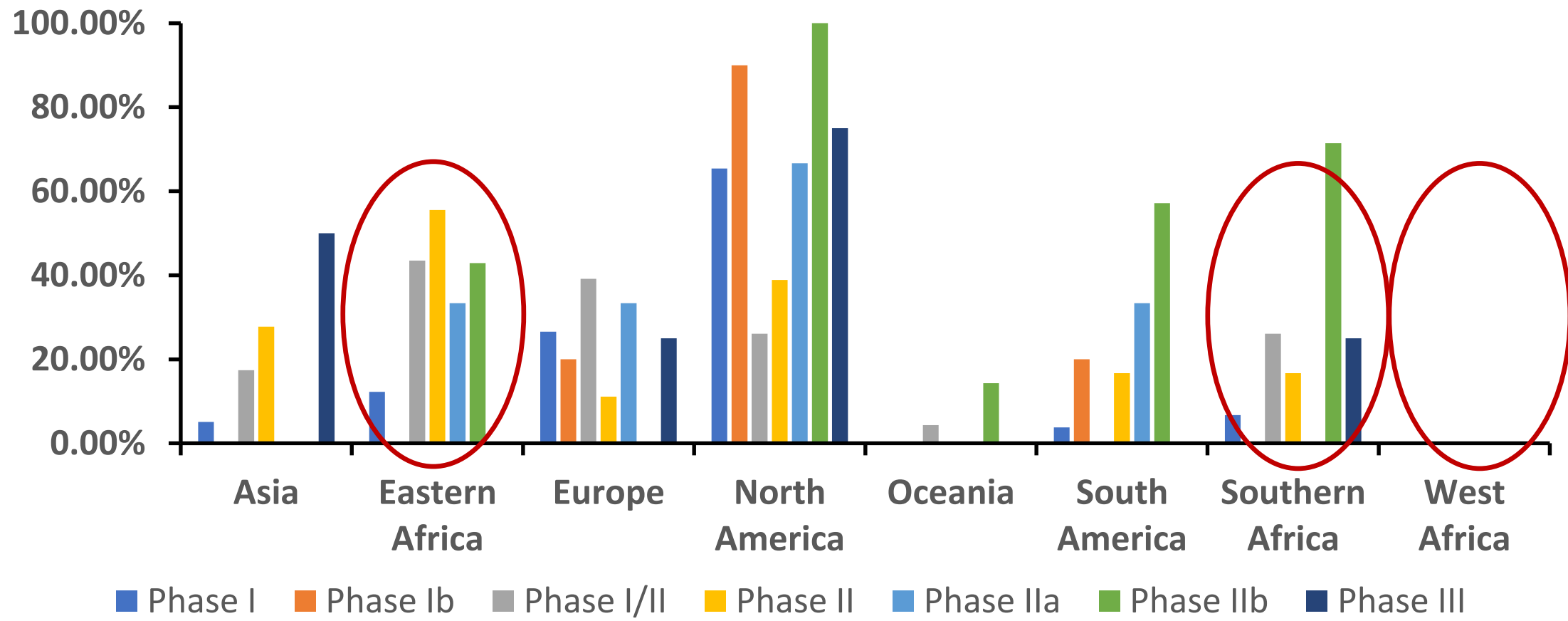
Total number of HIV vaccine trials (completed and ongoing: 302)

Need for Continued Advocacy for HIV Vaccine

Africa needs to do more on HIV Vaccine Research

Total HIV vaccine trials hosted in Africa (completed and ongoing) = 50; Phase I: 30; Phase I/II: 9; Phase II: 6; Phase IIa: 1; Phase IIb: 3; Phase III: 1

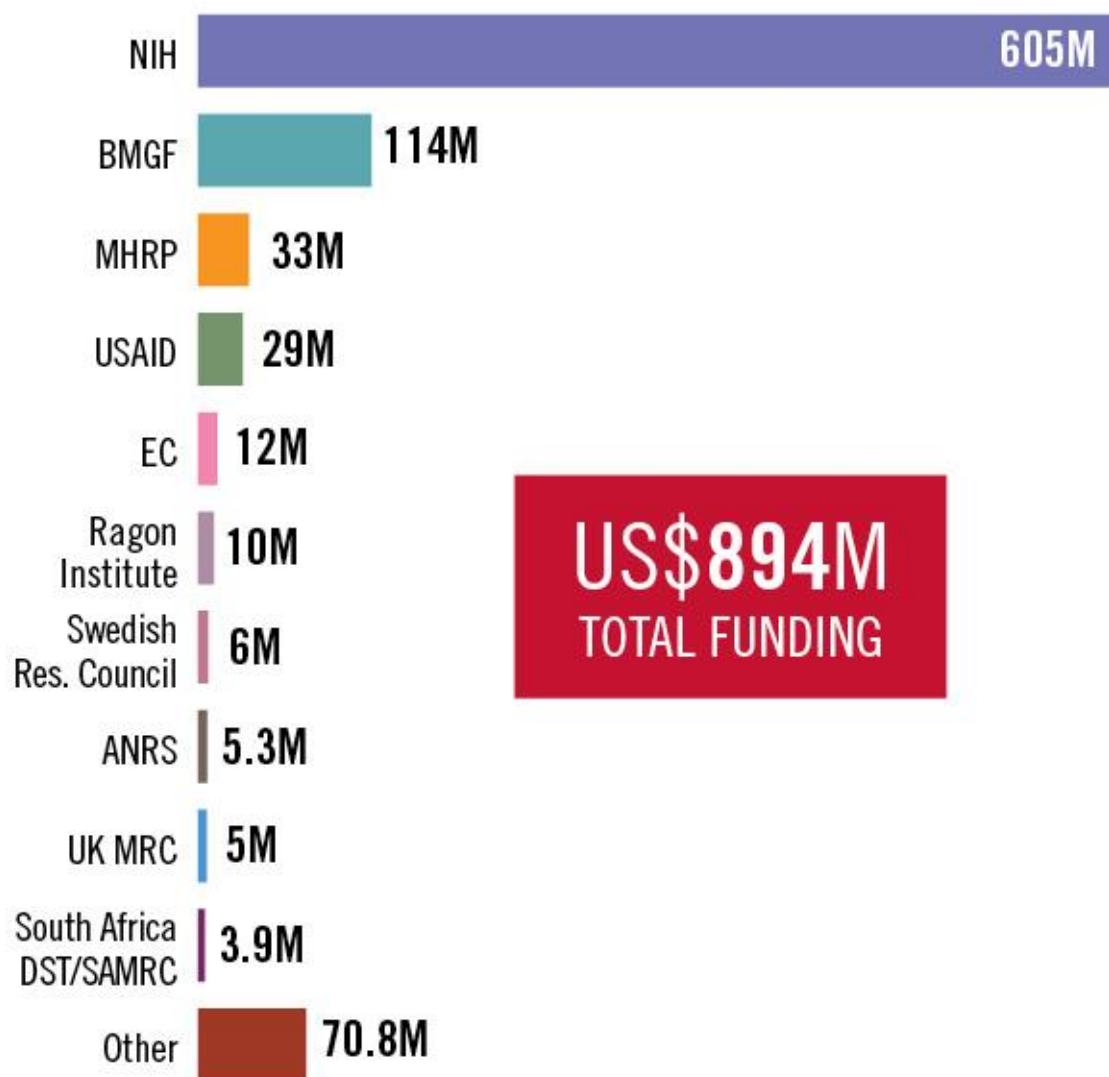
Percentage of HIV vaccine trials hosted in different regions of the world (Completed and Ongoing)



Country	Region	Phase I	Phase I/II	Phase II	Phase IIa	Phase IIb	Phase III	Total
Kenya	Eastern Africa	10 ©	2 ©	1 ©; 1 Ψ	1 ©	1 →		16
Malawi		1 ⌘				1 →		2
Rwanda		4 ©	1 →	1 Ψ; 2 →				8
Tanzania		1 ©; 1 →	1 closed to follow-up; 2 ©; 1 →	1 ©		1 →		7
Uganda		9 ©; 1 →	1 ©; 1 →	1 ©; 1 Ψ				14
Zambia		1 ©; 1 →	1 →	1 ©; 1 Ψ				5
Botswana	Southern Africa	2 ©				1 →		3
Mozambique		1©	1 →	1 ©		1 →		4
South Africa		7 ©; 4 →; 1 ⌘	5 →	1 closed to follow-up; 1 ©		2 →; 1 ⌘	1 →	23
Swaziland		1 ©						1
Gambia	West Africa	1©						1

Key to symbols: ©= completed; ⌘ = terminated; → = ongoing; Ψ = withdrawn

TOP AIDS VACCINE FUNDERS, 2016 (US Million)



Region	People living with HIV 2017	New HIV infections 2017			AIDS-related deaths 2017	People accessing treatment 2017
		Total	Aged 15+	Aged 0-14		
Eastern and southern Africa	19.6 million [17.5 million–22.0 million]	800 000 [650 000–1.0 million]	710 000 [580 000–890 000]	92 000 [81 000–130 000]	380 000 [300 000–510 000]	12.9 million [11.4 million–13.4 million]
Asia and the Pacific	5.2 million [4.1 million–6.7 million]	280 000 [210 000–390 000]	280 000 [210 000–390 000]	10 000 [7 400–14 000]	170 000 [110 000–280 000]	2.7 million [2.4 million–2.9 million]
Western and central Africa	6.1 million [4.4 million–8.1 million]	370 000 [220 000–570 000]	310 000 [180 000–470 000]	67 000 [38 000–100 000]	280 000 [180 000–410 000]	2.4 million [2.1 million–2.5 million]
Latin America	1.8 million [1.5 million–2.3 million]	100 000 [77 000–130 000]	99 000 [75 000–130 000]	2400 [1800–3600]	37 000 [28 000–51 000]	1.1 million [992 000–1.2 million]
The Caribbean	310 000 [280 000–420 000]	15 000 [11 000–26 000]	14 000 [10 000–24 000]	1100 [710–1 900]	10 000 [7 100–17 000]	181 000 [159 000–188 000]
Middle East and North Africa	220 000 [150 000–300 000]	18 000 [10 000–31 000]	17 000 [9 200–28 000]	1 300 [780–1 900]	9 800 [6 400–15 000]	63 200 [58 600–65 700]
Eastern Europe and central Asia	1.4 million [1.3 million–1.6 million]	130 000 [120 000–150 000]	130 000 [120 000–150 000]	—*	34 000 [25 000–41 000]	520 000 [458 000–541 000]
Western and central Europe and N America	2.2 million [1.9 million–2.4 million]	70 000 [57 000–84 000]	69 000 [57 000–83 000]	—*	13 000 [9 900–18 000]	1.7 million [1.5 million–1.8 million]
Global totals	36.9 million [31.1 million–43.9 million]	1.8 million [1.4 million–2.4 million]	1.6 million [1.3 million–2.1 million]	180 000 [110 000–260 000]	940 000 [670 000–1.3 million]	21.7 million [19.1 million–22.6 million]

* Estimates for children are not published because of small numbers.

AVMI as a Catalyst for HIV Vaccine Advocacy

Key HIV Vaccine Advocacy Issues

- Increased participation of African Scientists in HIV Vaccine Research at all phases
- Increased hosting of HIV vaccine research in Africa
- Increased funding of HIV vaccine Research by African governments and philanthropists
- Highly developed infrastructure in some of the trial sites – should boost collaboration among different African countries
- National HIV vaccine framework developed by many African countries

Key HIV Vaccine Advocacy Issues

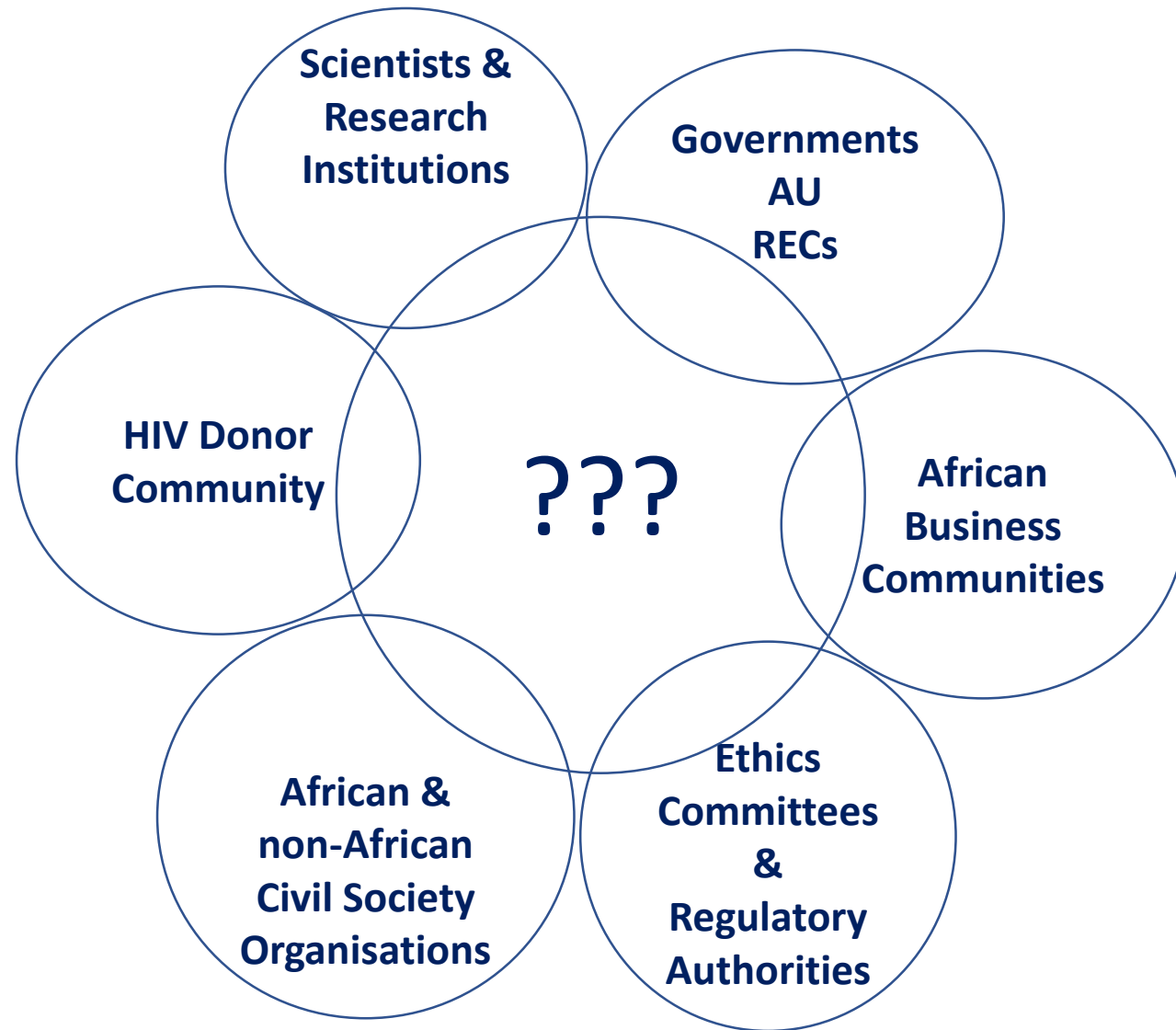
- Need to address regulatory challenges affecting HIV vaccine research in Africa
- Need to address ethical challenges
- Human capacity???
- Infrastructural capacity

Need to fill the Lacuna in HIV Vaccine Advocacy in Africa

AVMI needs to leverage the

- Increased political awareness of the benefits of HIV prevention
- Increased awareness of the critical role of HIV control to the realisation of the SDGs
- Better coordination of the global HIV vaccine R&D process
- The emergence of new philanthropists in Africa
- The transition of many African countries from low income countries to middle income countries

Potential role of AVMI as a Catalyst for HIV Vaccine Research Advocacy in Africa



Some important Questions

- Can AVMI occupy this space?
- What will it take for AVMI to take over this space?
- What can prevent AVMI from taking over this space?

Next Steps

Urgent Need for the conversation on
AVMI and HIV Vaccine Advocacy in
Africa, and to define a way forward

Merci beaucoup d'avoir écouté

Thank you very much for listening

Muito obrigado por ouvir