

Global and Local Trends in the HIV Pandemic... Where are We Now?



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HIV is a Chronic Disease

Normal Life Expectancy with 1 pill/day

- Highly Active Antiretroviral Therapy:
 - Decreases morbidity/mortality by 72%
 - Promotes a normal life expectancy
 - The expected age at death of a 20-year-old patient starting ART during 2008–10, who had a CD4 count of more than 350 cells/ μ L 1 year after starting ART, was **78.0 years** (77.7–78.3)
 - Decrease transmission by 100%



Survival of HIV-positive patients starting antiretroviral therapy between 1996 and 2013: a collaborative analysis of cohort studies

[The Antiretroviral Therapy Cohort Collaboration](#) [†] • [Show footnotes](#)

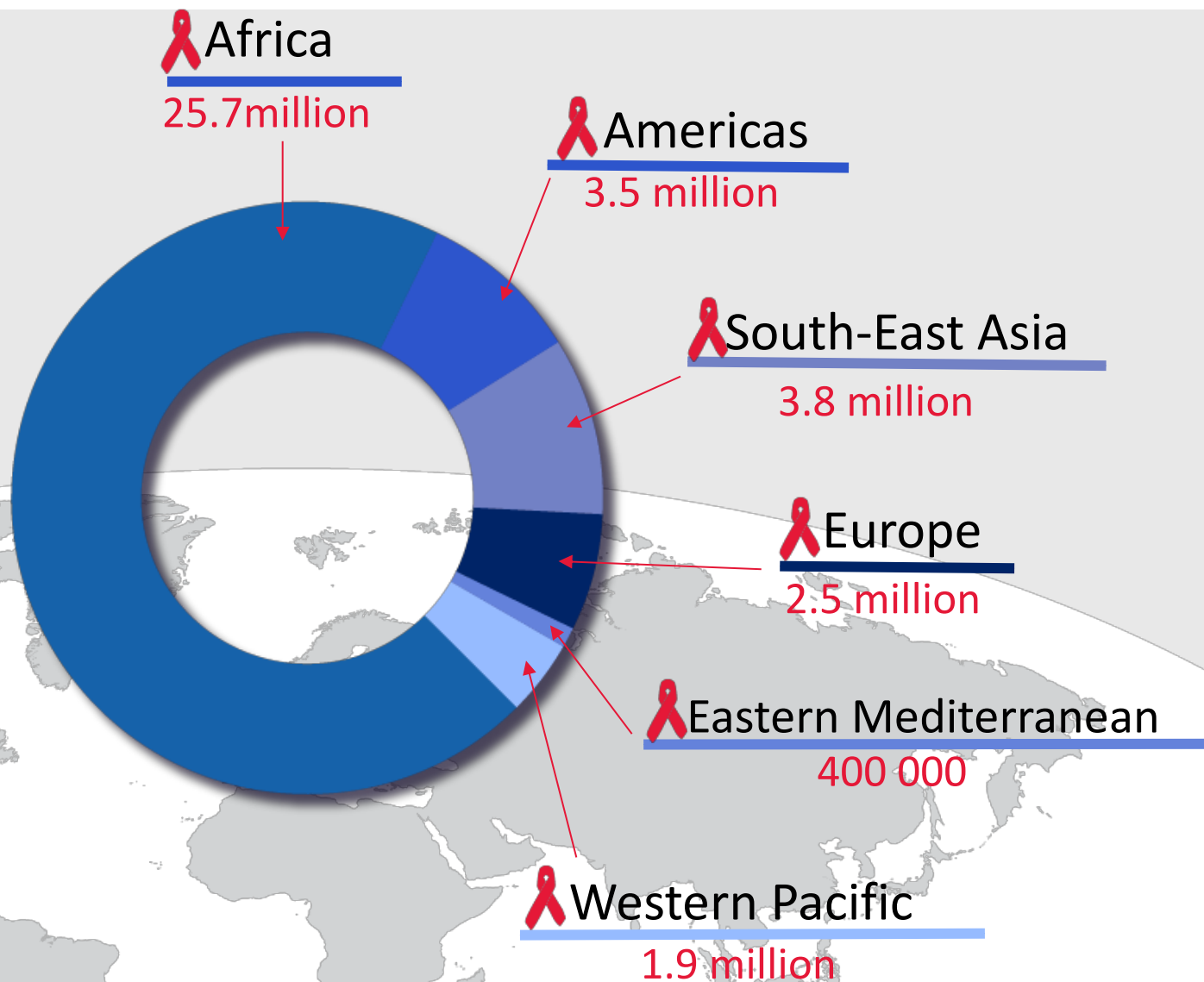
[Open Access](#) • Published: May 10, 2017 • DOI: [https://doi.org/10.1016/S2352-3018\(17\)30066-8](https://doi.org/10.1016/S2352-3018(17)30066-8) •



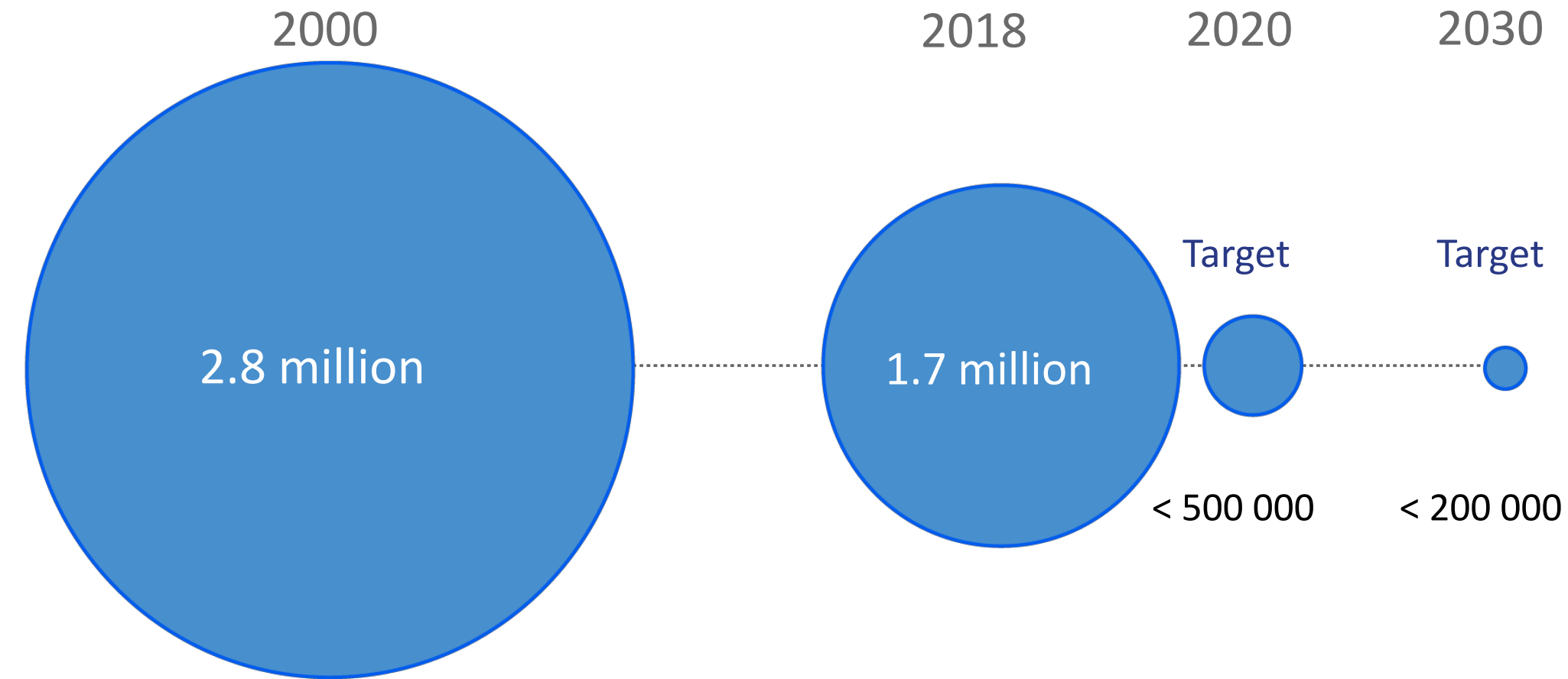
period of ART in
20

Number of People living with HIV by WHO Region

37.9 million
people living
with HIV globally



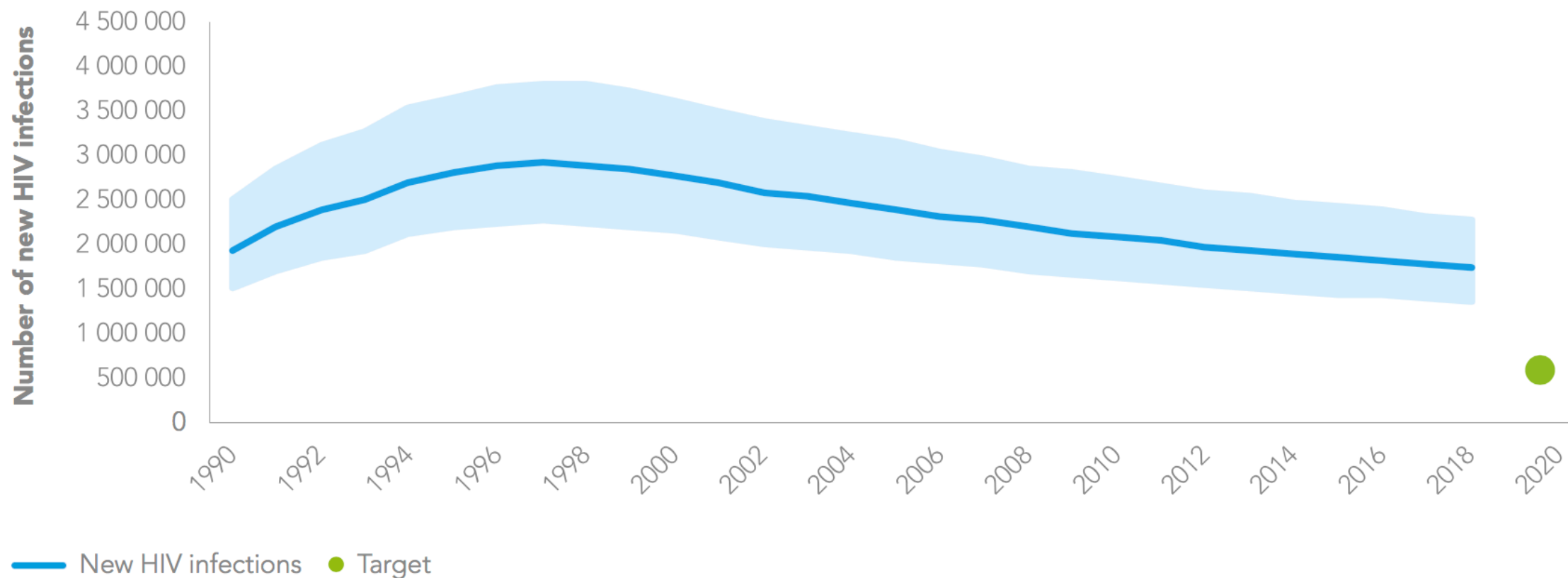
New HIV Infections Declining Globally



Source: UNAIDS/WHO estimates

Gains Diminishing in Magnitude over Time

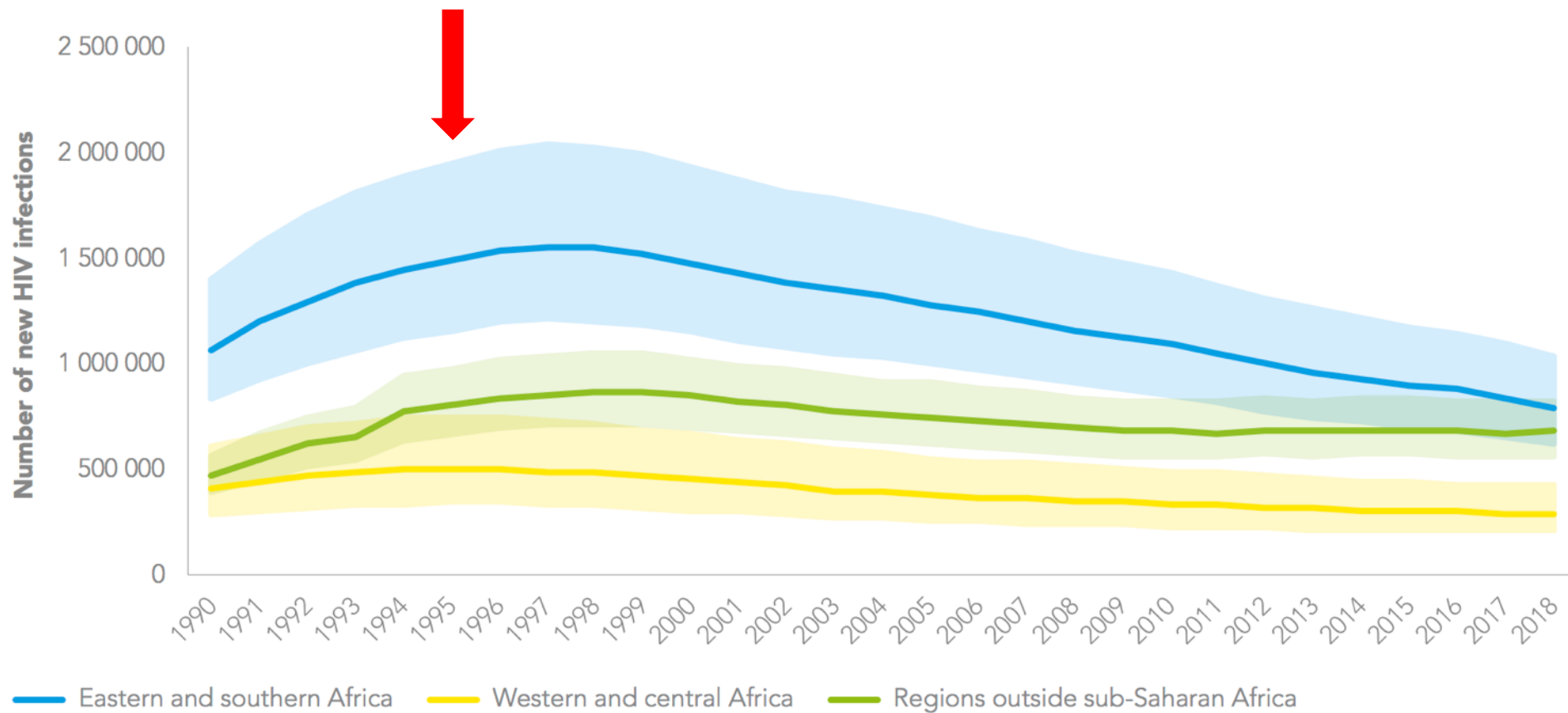
Number of New HIV Infections Globally 1990-2018, and 2020 Target



Source: UNAIDS 2019 estimates.

Trends in Eastern, Southern Africa Driving Improvement in Global Trends

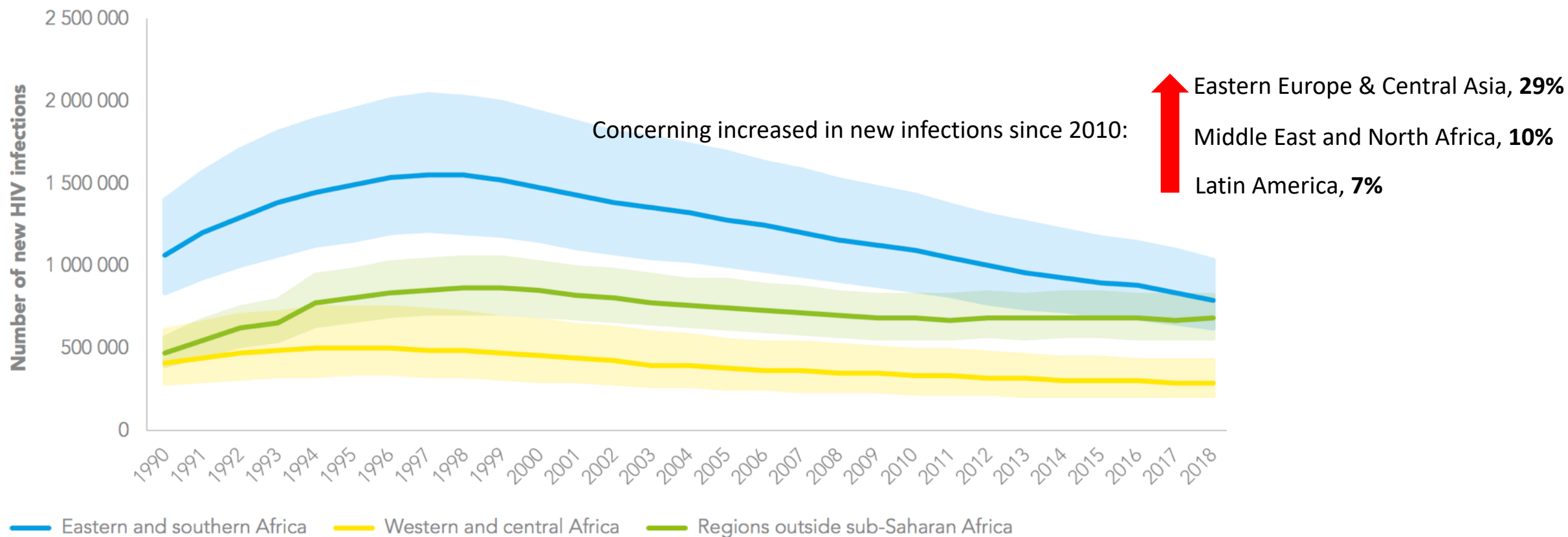
Number of New HIV Infections In and Outside of Sub-Saharan Africa 1990-2018



Source: UNAIDS 2019 estimates.

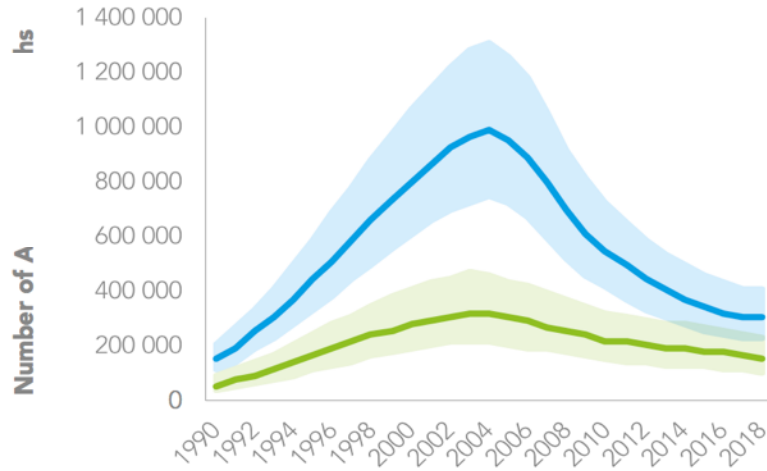
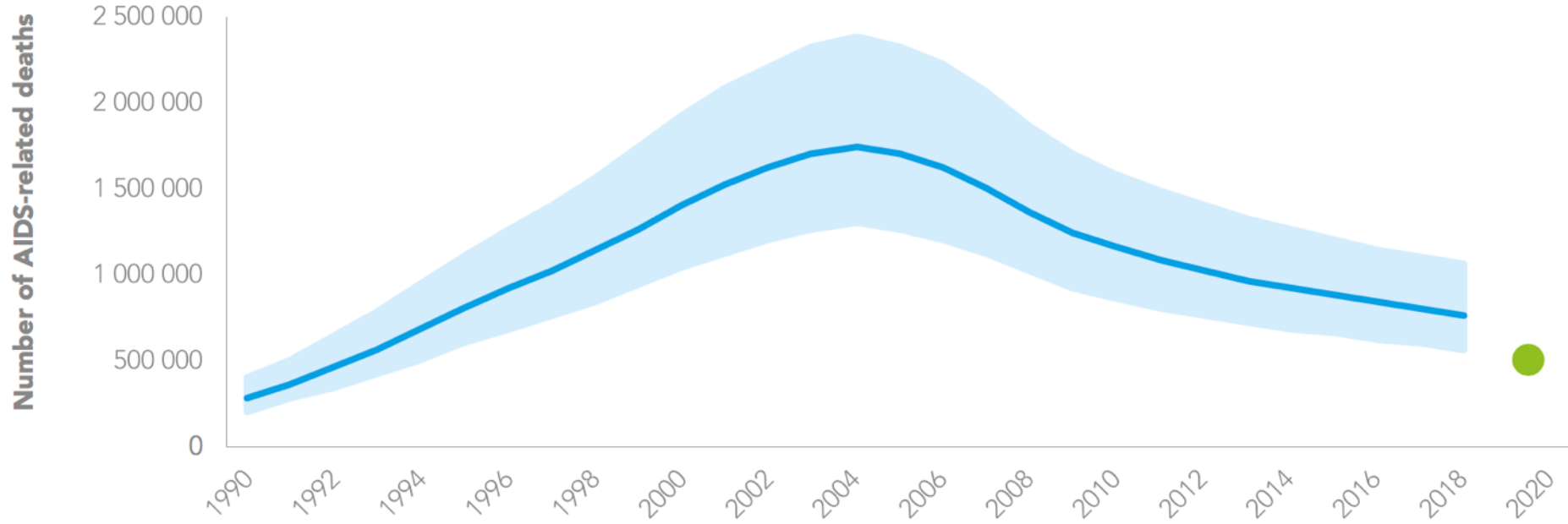
Trends in Eastern, Southern Africa Driving Reductions in New Infections

Number of New HIV Infections In and Outside of Sub-Saharan Africa 1990-2018



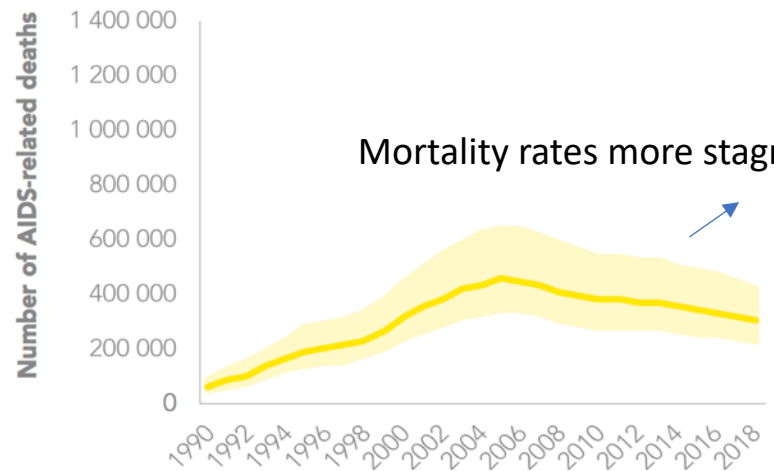
Source: UNAIDS 2019 estimates.

Global AIDS-related deaths are declining



— Eastern and southern Africa
— Western and central Africa

Source: UNAIDS 2019 estimates.



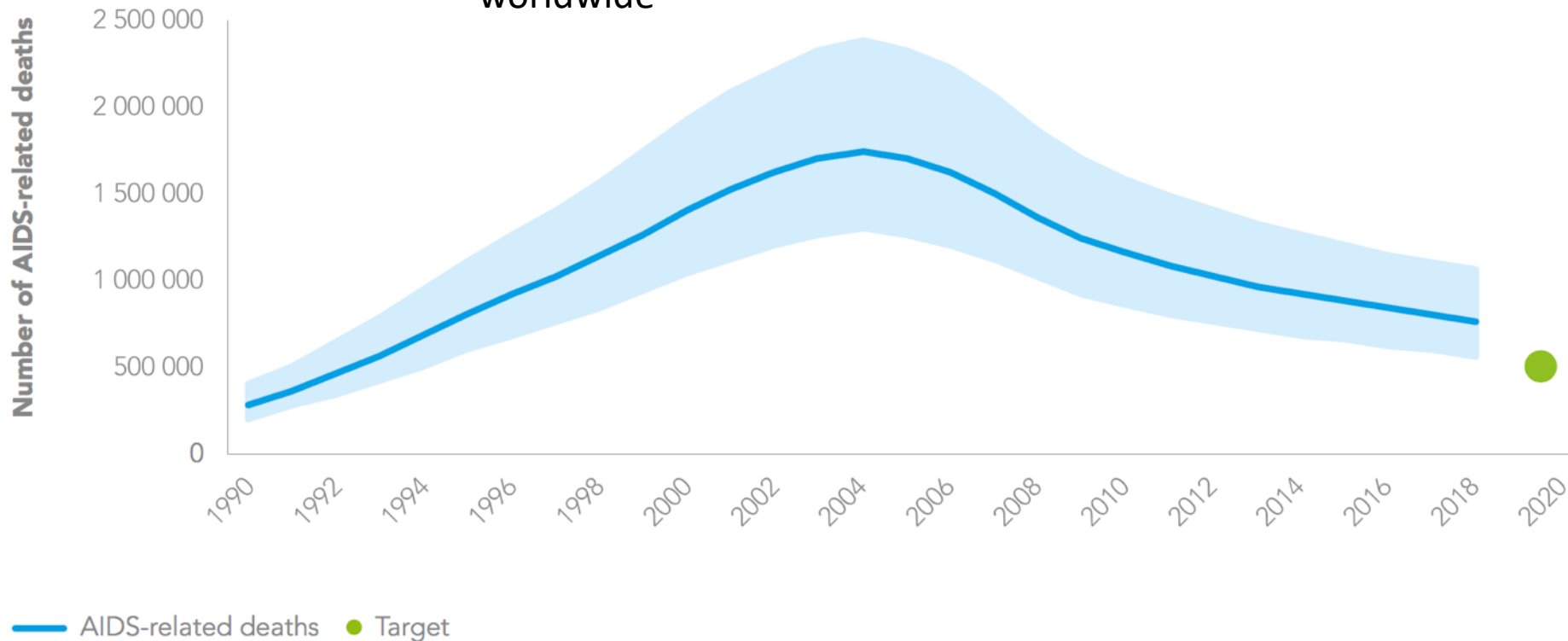
— Regions outside sub-Saharan Africa

Source: UNAIDS 2019 estimates.

Opposing mortality trends among youth

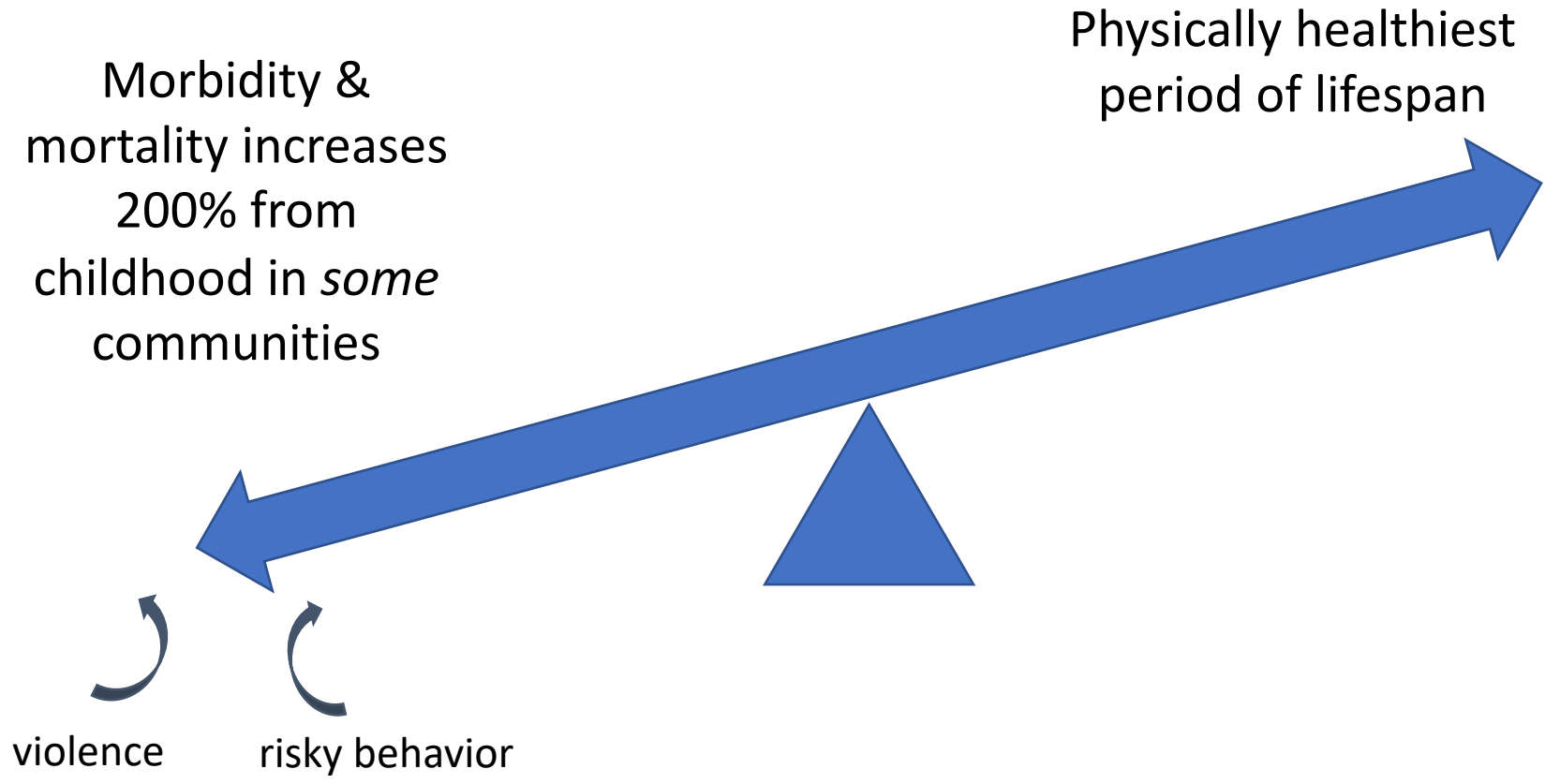


- 50% increase in deaths among adolescents (10-19yrs)
- leading cause of death African adolescents
- 2nd leading cause of death among adolescents worldwide



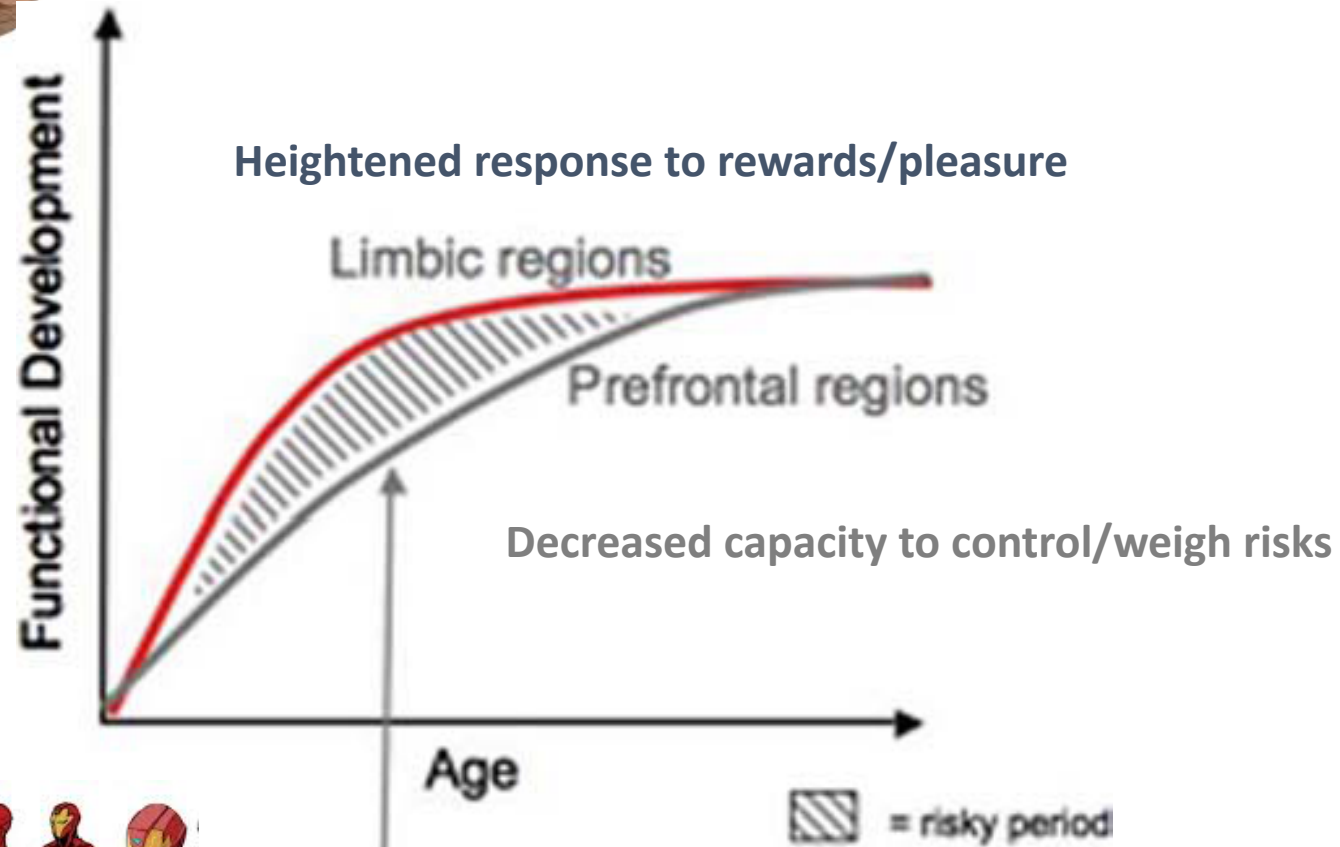
Source: UNAIDS 2019 estimates.

Adolescent health paradox

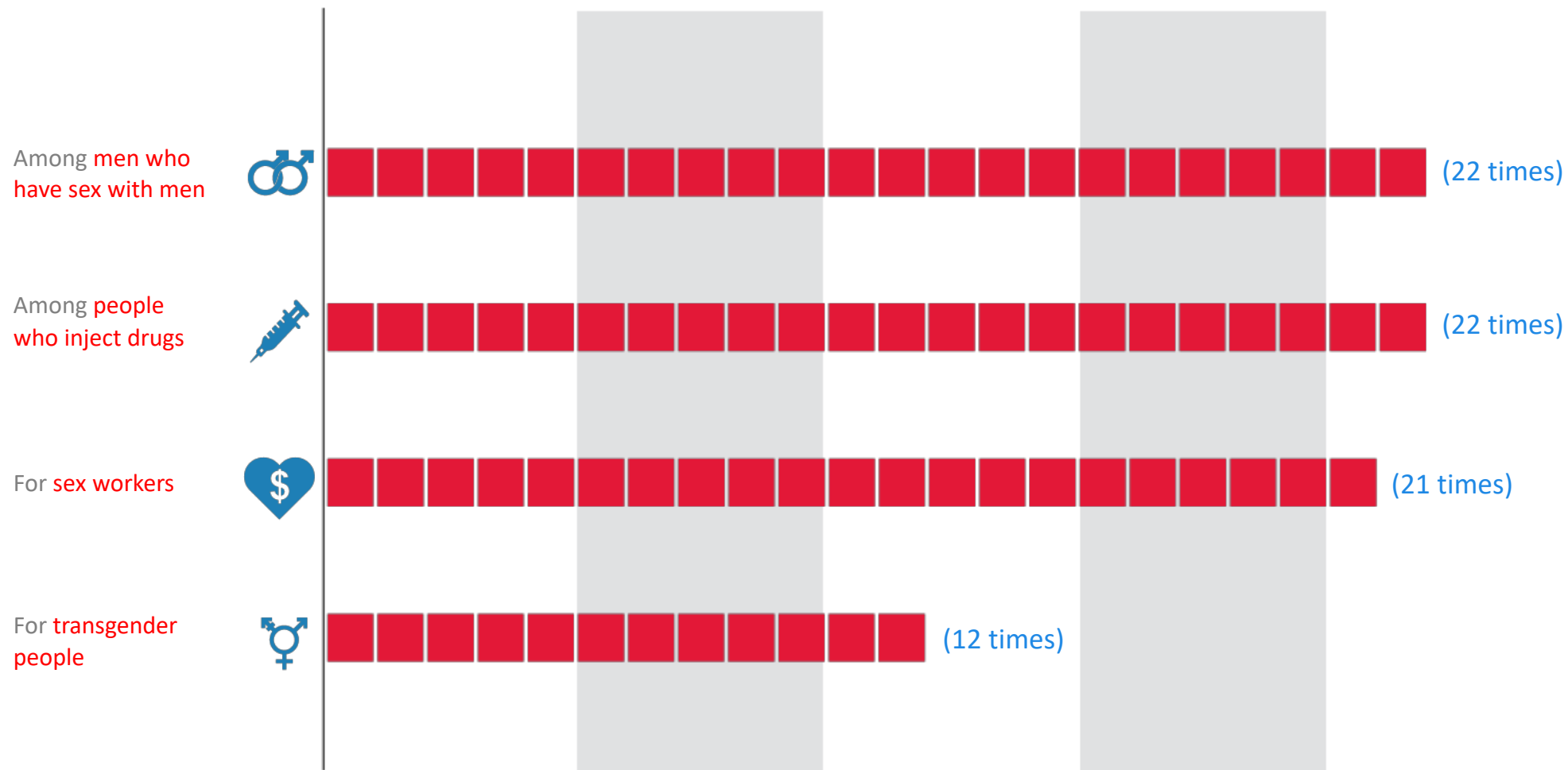




Development Mismatch

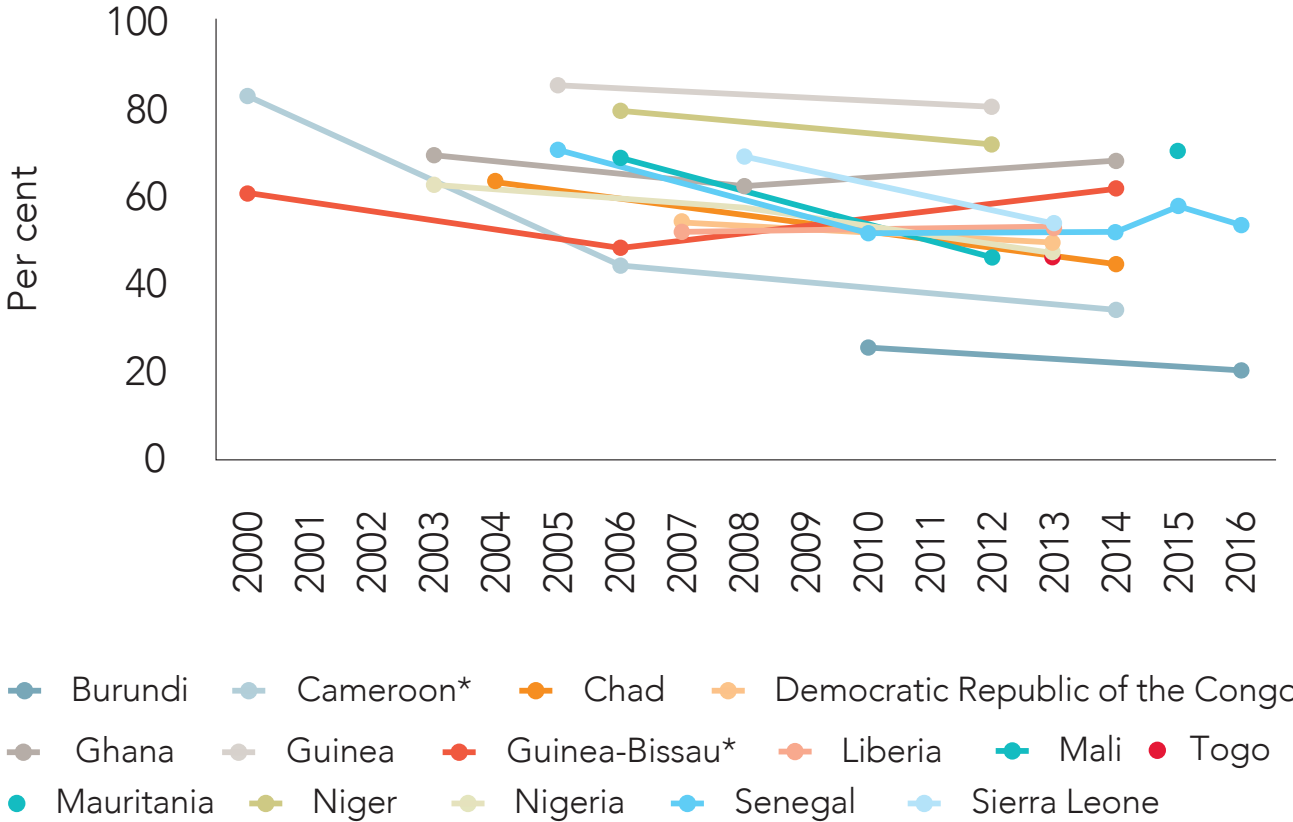


Increased risk of acquiring HIV among key populations



Stigma decreasing, but remains prevalent

Percentage of men and women aged 15–49 who would not buy vegetables from a shopkeeper living with HIV, western and central Africa, 2000–2016



*Female respondents

Increasing Psychological Distress in First Year on ART in Nigeria

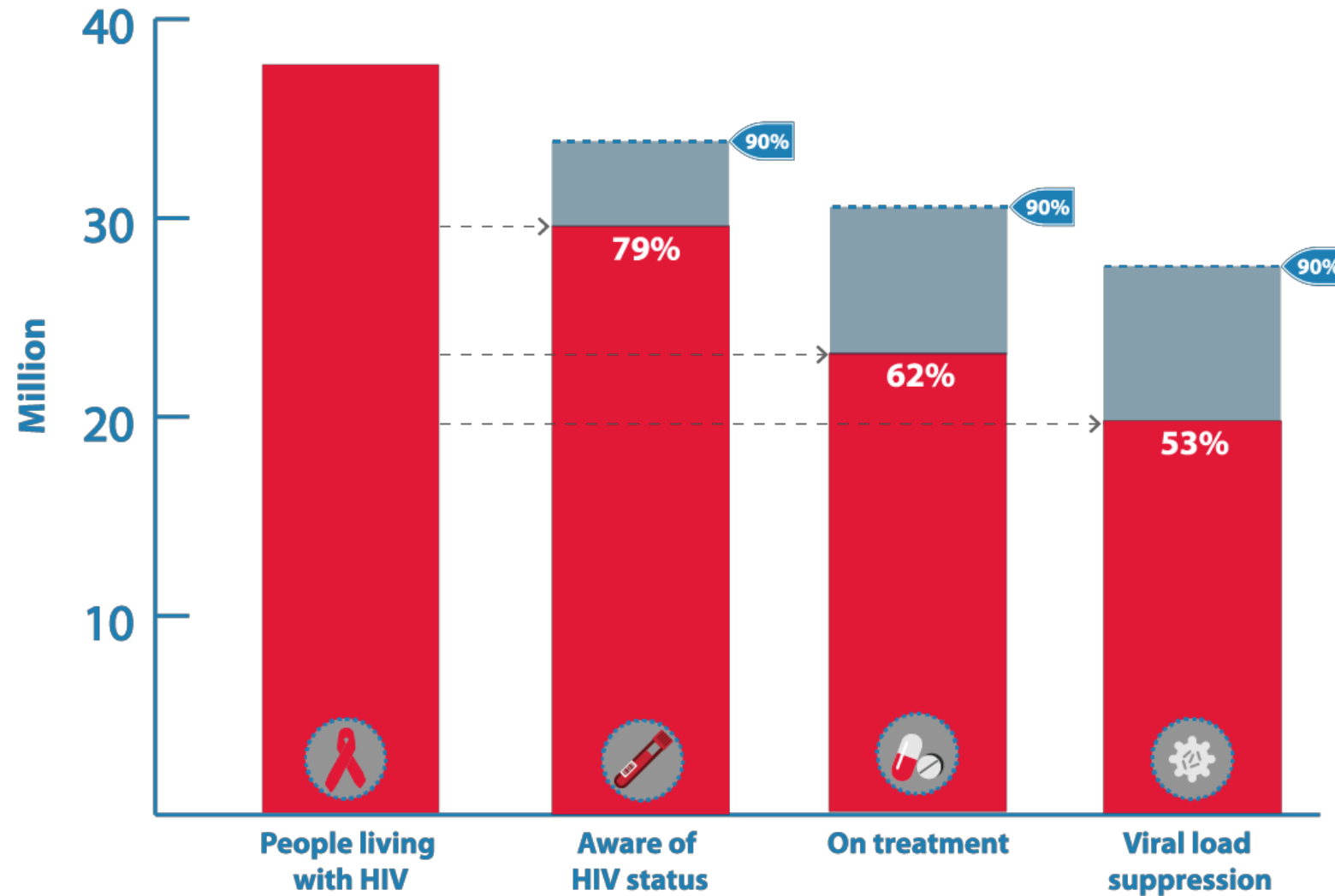
Distress Score	Enrollment (n=78)	4 Month (n=77)	12 Month (n=74)
0	21%	23%	16%
1	26%	27%	14%
2	27%	16%	1%
3	10%	6%	12%
4	13%	16%	26%
5	4%	8%	20%
6	0%	4%	11%
7	0%	0%	0%
8	0%	0%	0%
9	0%	0%	0%

→ moderate, or severe psychological distress

17% **28%** **57%**

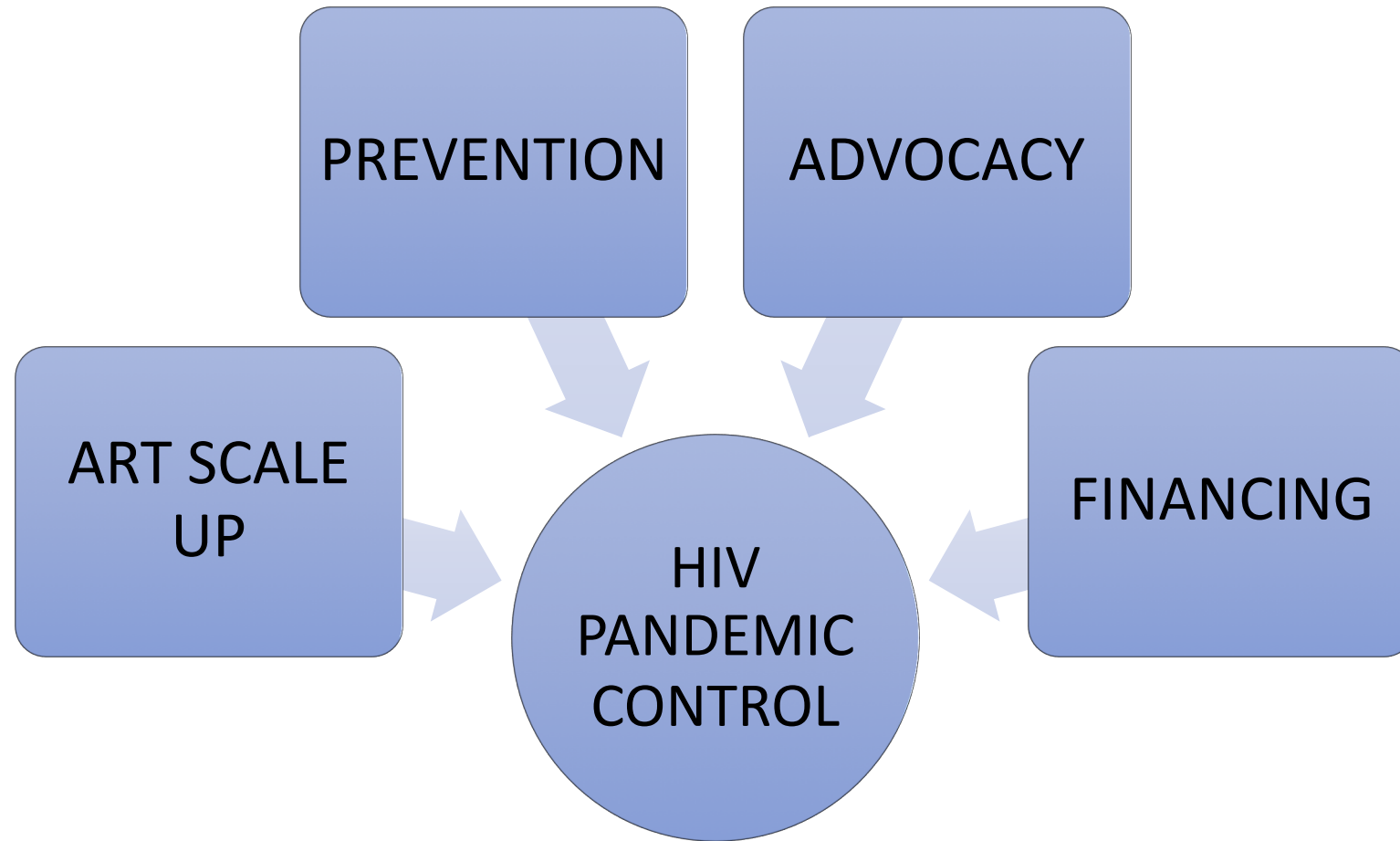
Ahonkhai et al, unpublished data

UNAIDS 90-90-90 targets established 2013



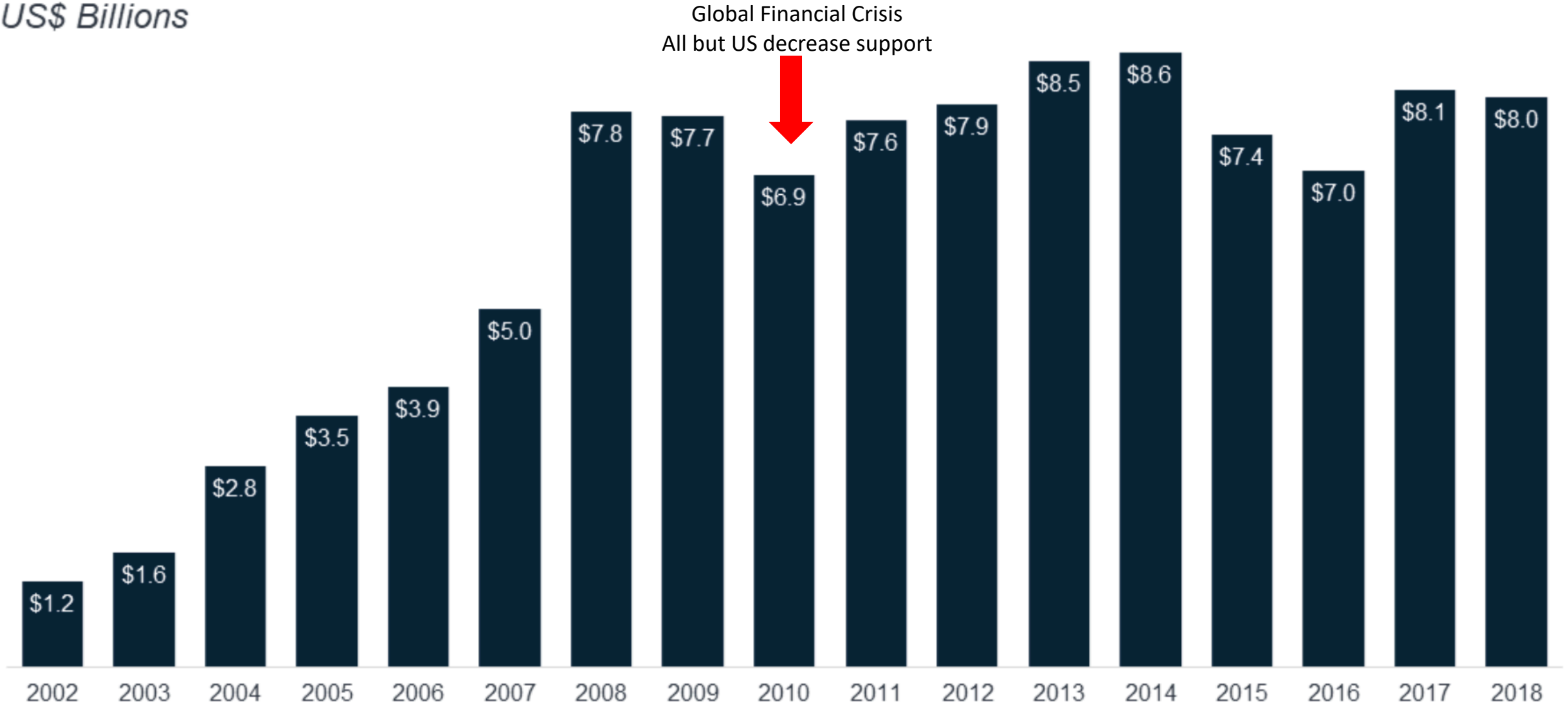
Source: UNAIDS/WHO estimates

Global Success Story

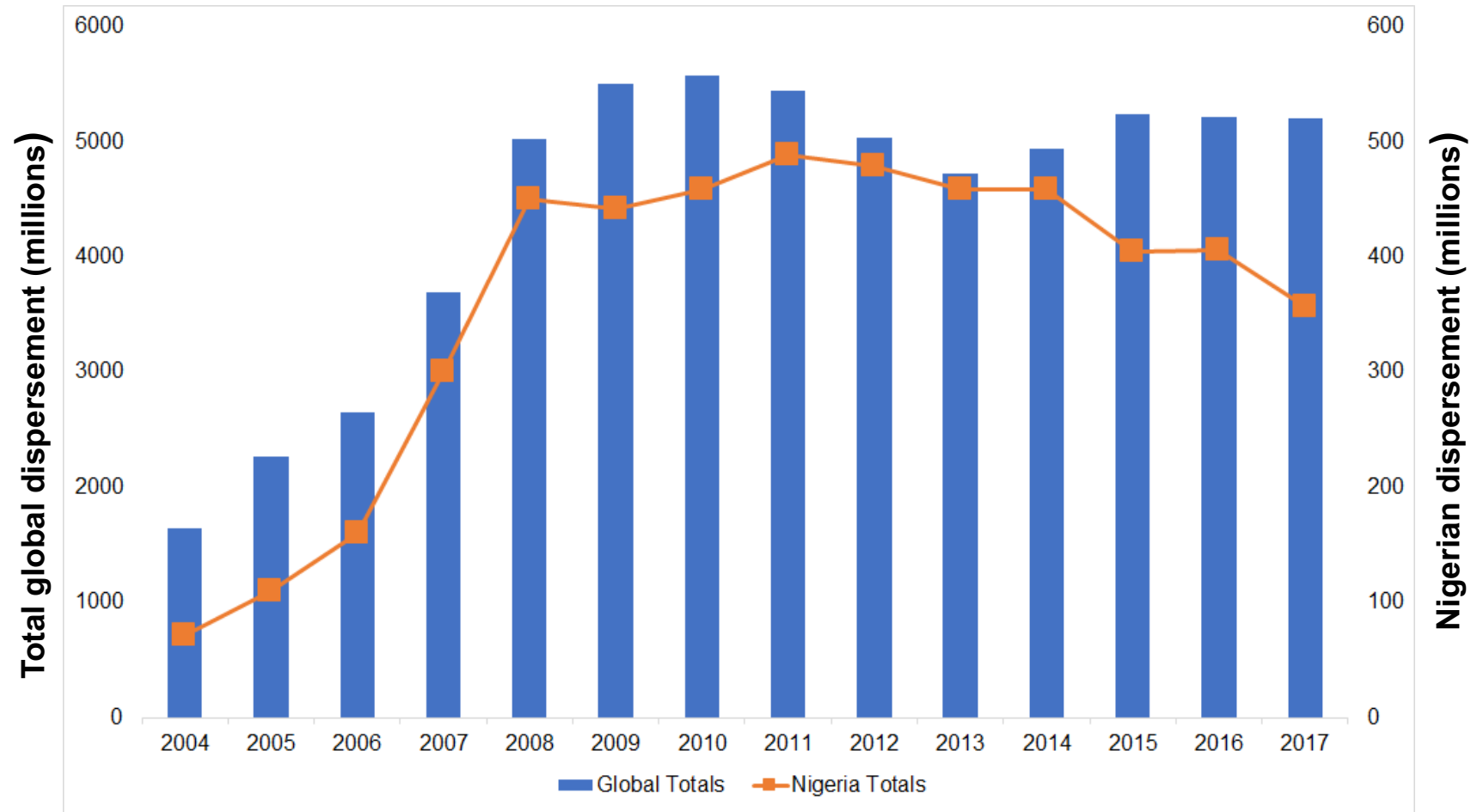


HIV Funding from Donor Governments, 2002-2018

US\$ Billions



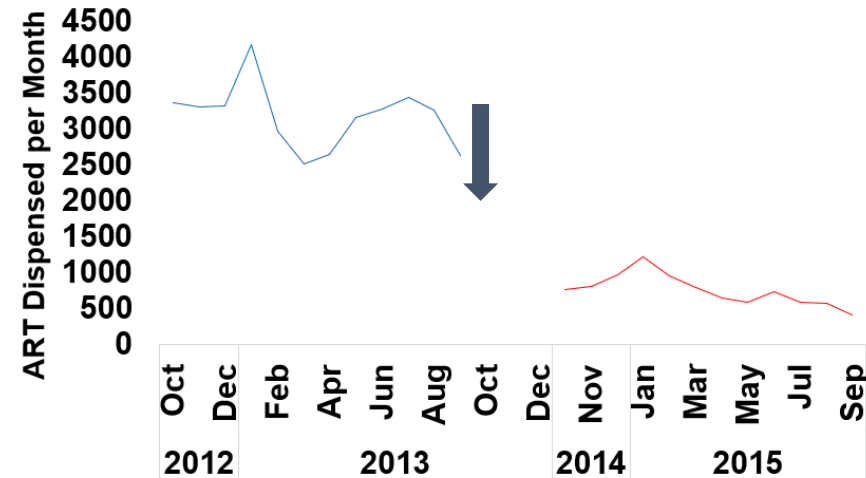
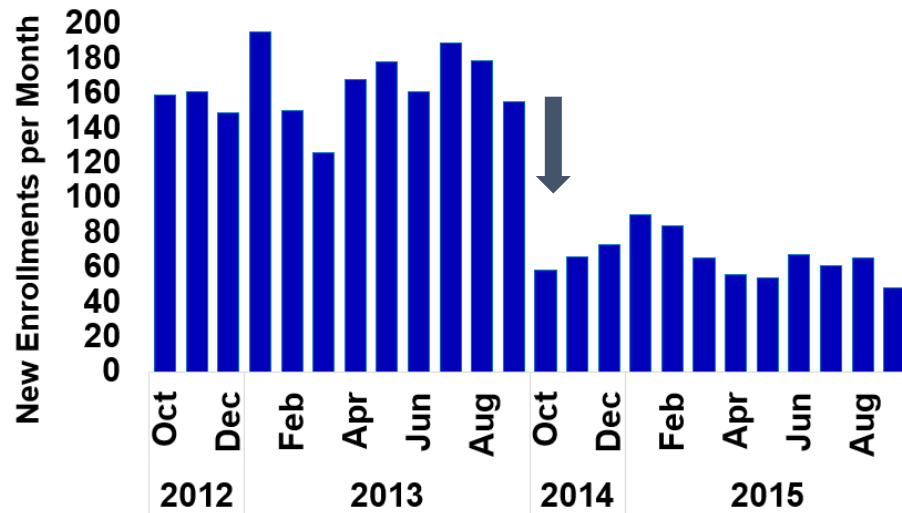
Decreasing donor support in Nigeria



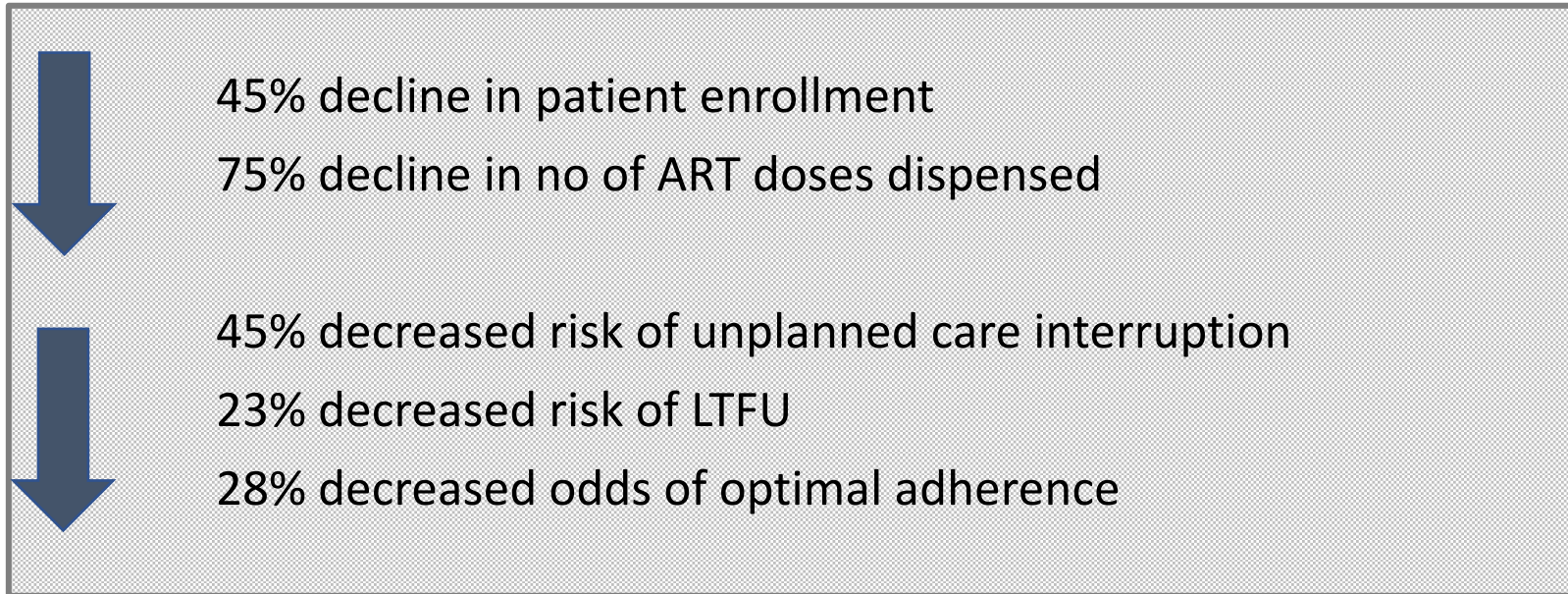
- PEPFAR funding to Nigeria peaked in 2011, and has decreased substantially since
- Expectation that the Government of Nigeria would increase financial commitment from 7 to 50%

Impact of User Fees on Enrollment and ART Dispensing

Cohort Description
N=2757 (>14yrs)
NIMR
Enrolled before (2012-2013) and after (2014-2015)
user fees instituted in 10/2014

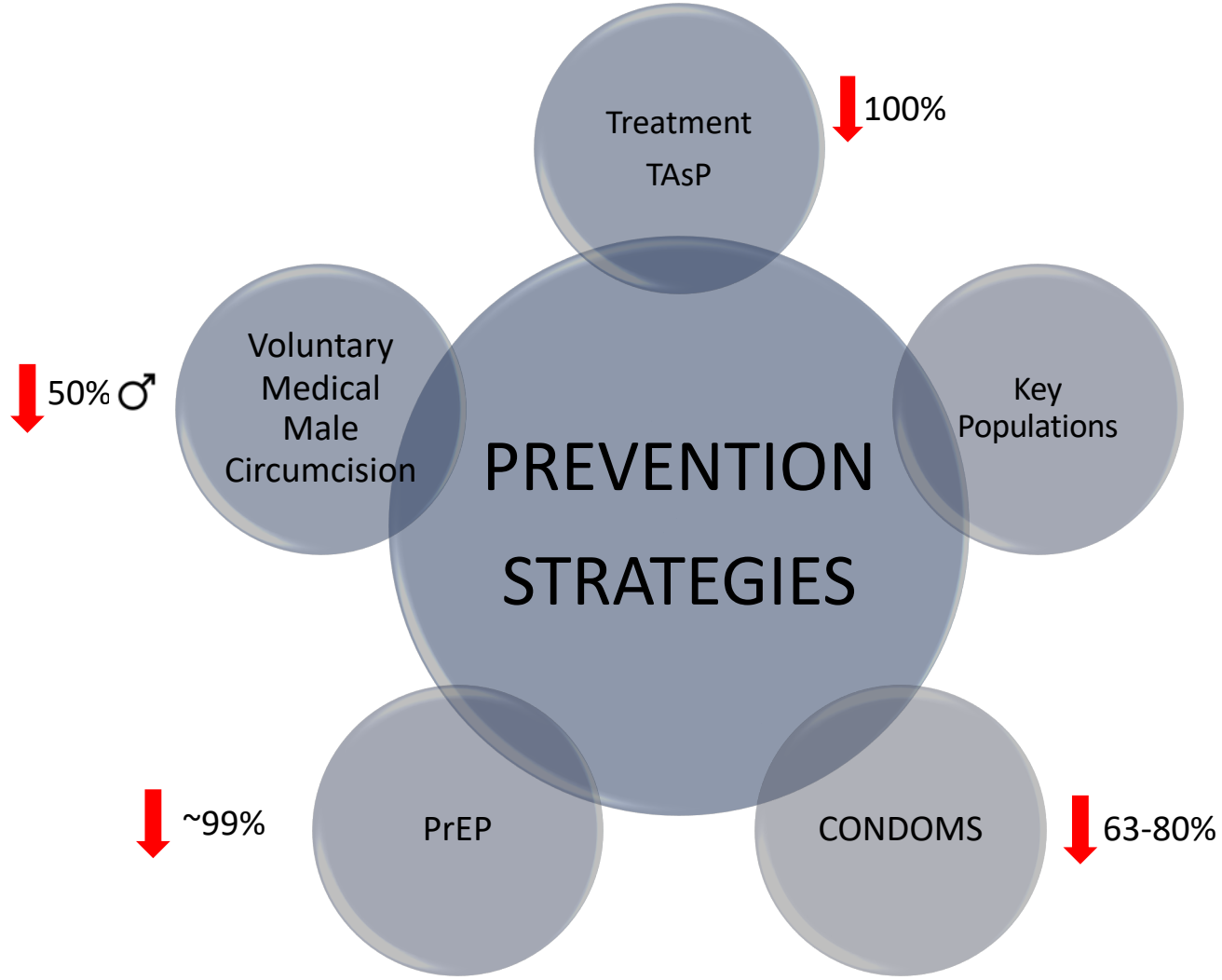


User Fees associated with:



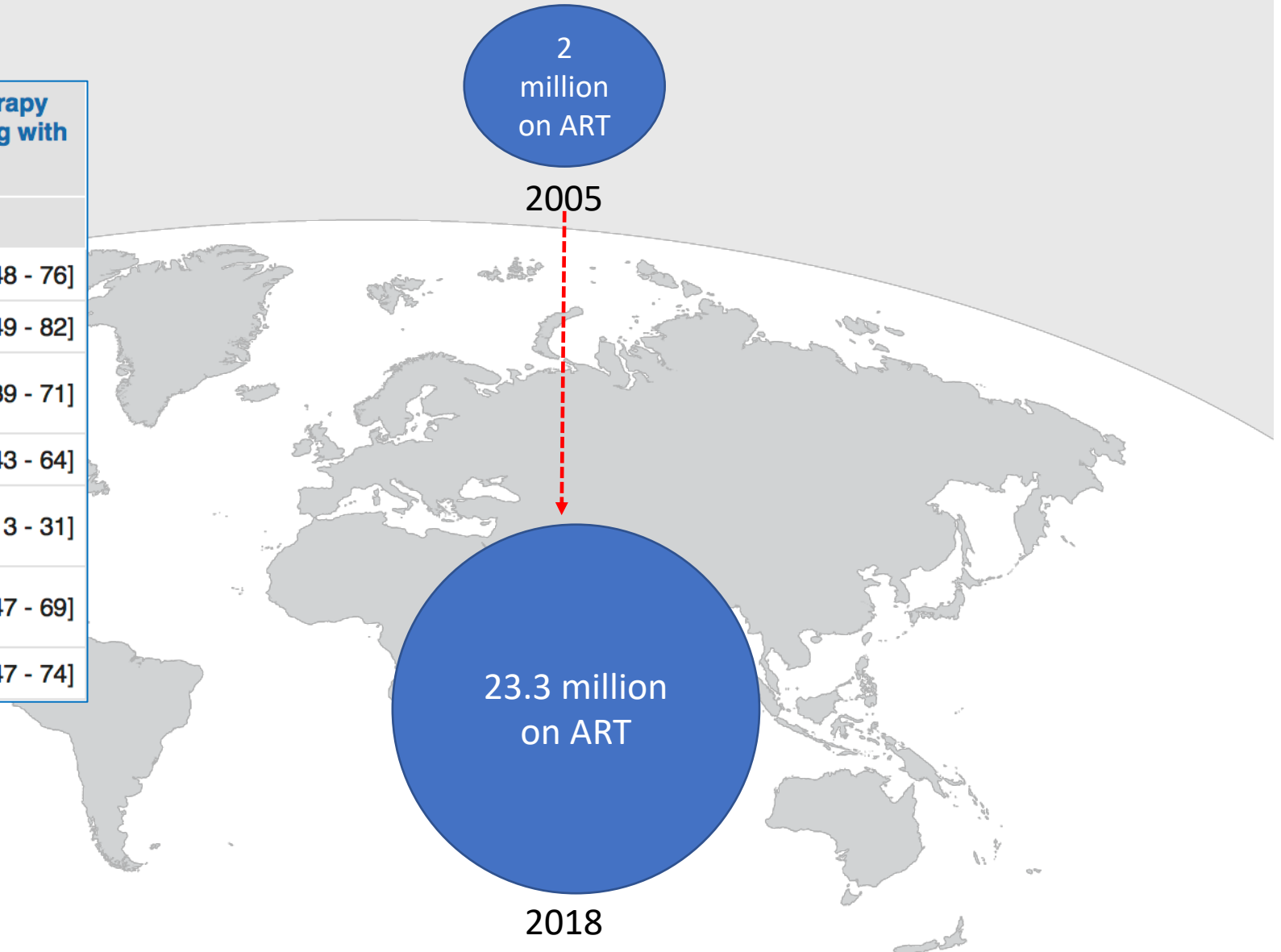
All ages impacted, but those employed and/or with tertiary education
Over-represented in the post-fee era (24% vs. 32%, $p < 0.001$).

Prevention Strategies

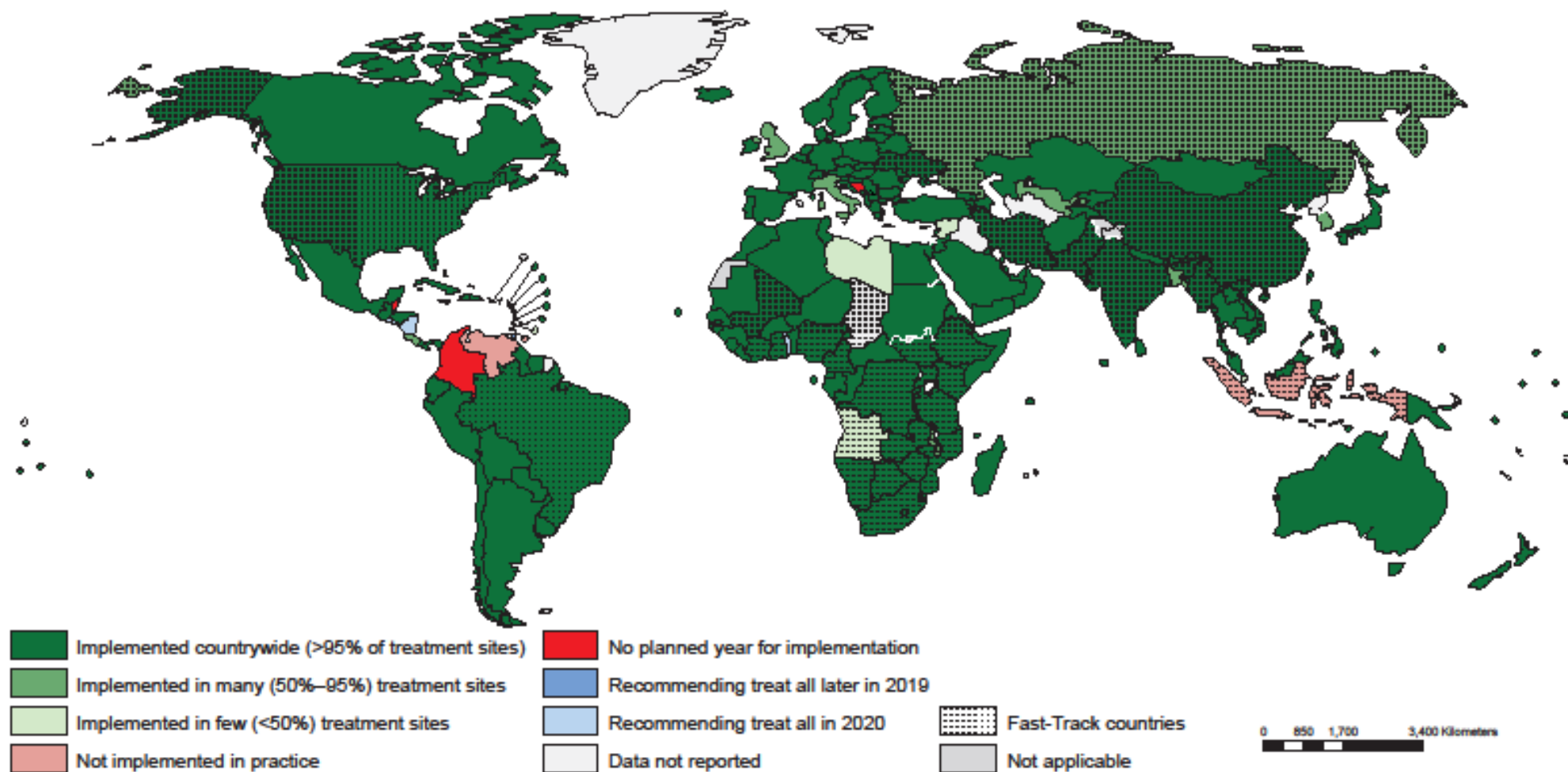


ART Scale Up Globally

	Estimated antiretroviral therapy coverage among people living with HIV (%) ⁱ
WHO region	2018
Africa	64 [48 - 76]
Americas	67 [49 - 82]
South-East Asia	53 [39 - 71]
Europe	55 [43 - 64]
Eastern Mediterranean	21 [13 - 31]
Western Pacific	59 [47 - 69]
(WHO) Global	62 [47 - 74]



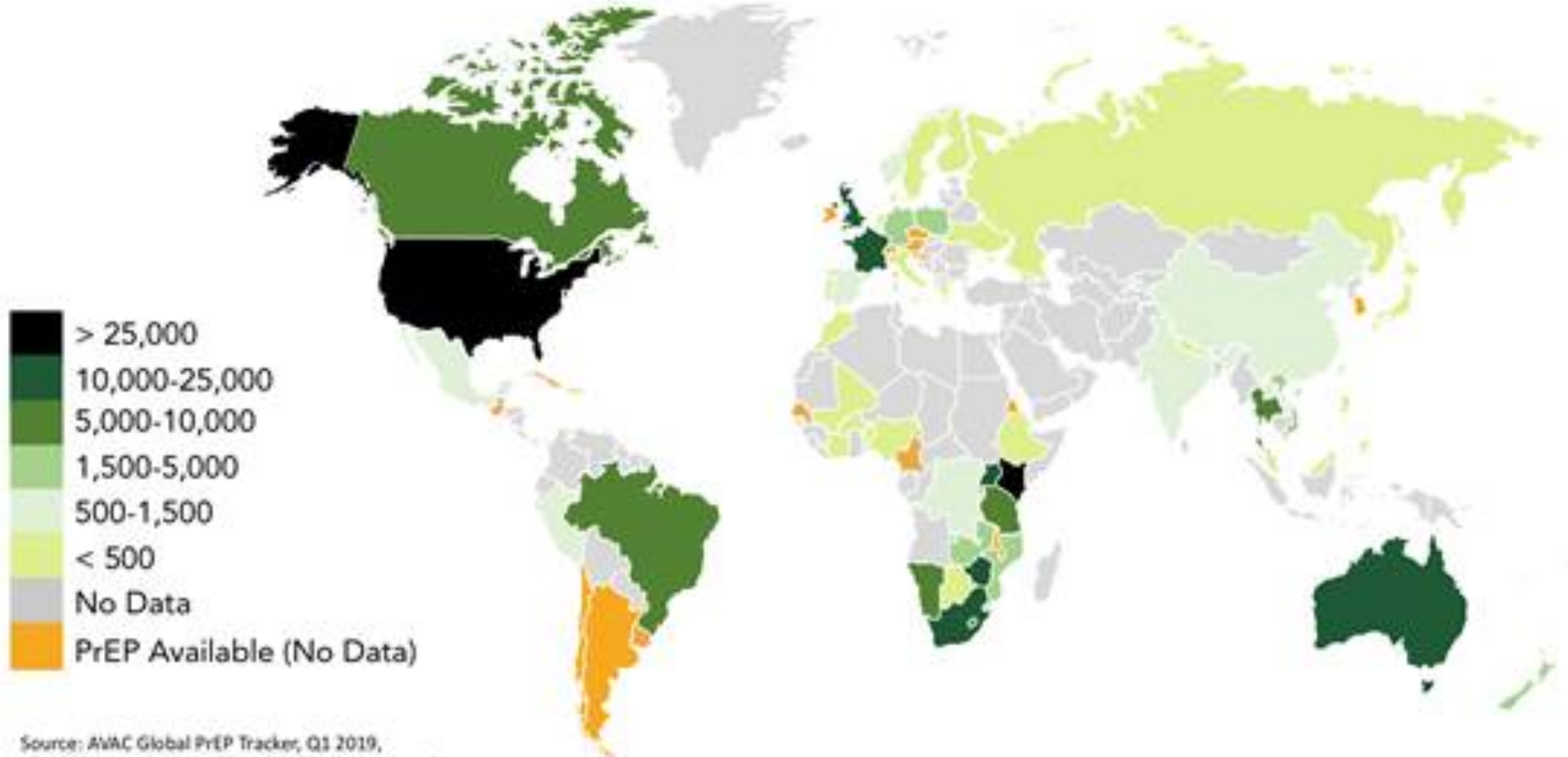
Implementation of Treat All ART recommendation among adults and adolescents living with HIV (situation as of July 2019)



Source: Global AIDS Monitoring (UNAIDS/WHO/UNICEF) and WHO HIV Country Intelligence Tool, 2019

PrEP Scale Up Globally

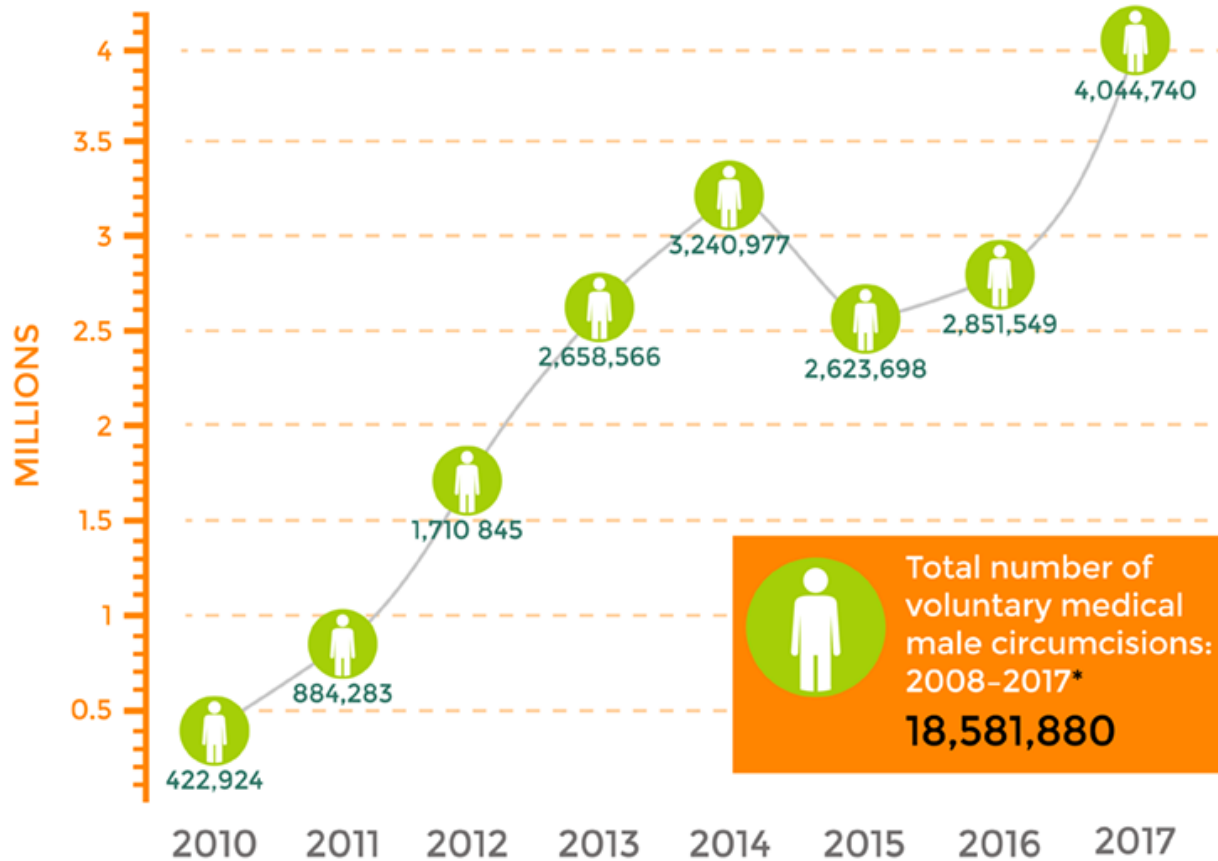
PrEP Initiations by Country, April 2019



Source: AVAC Global PrEP Tracker, Q1 2019,
<https://www.prepwatch.org/country-updates/>

Scale up of Voluntary Medical Male Circumcision

Voluntary medical male circumcision (VMMC) for HIV prevention in the 14 UNAIDS and WHO priority countries**



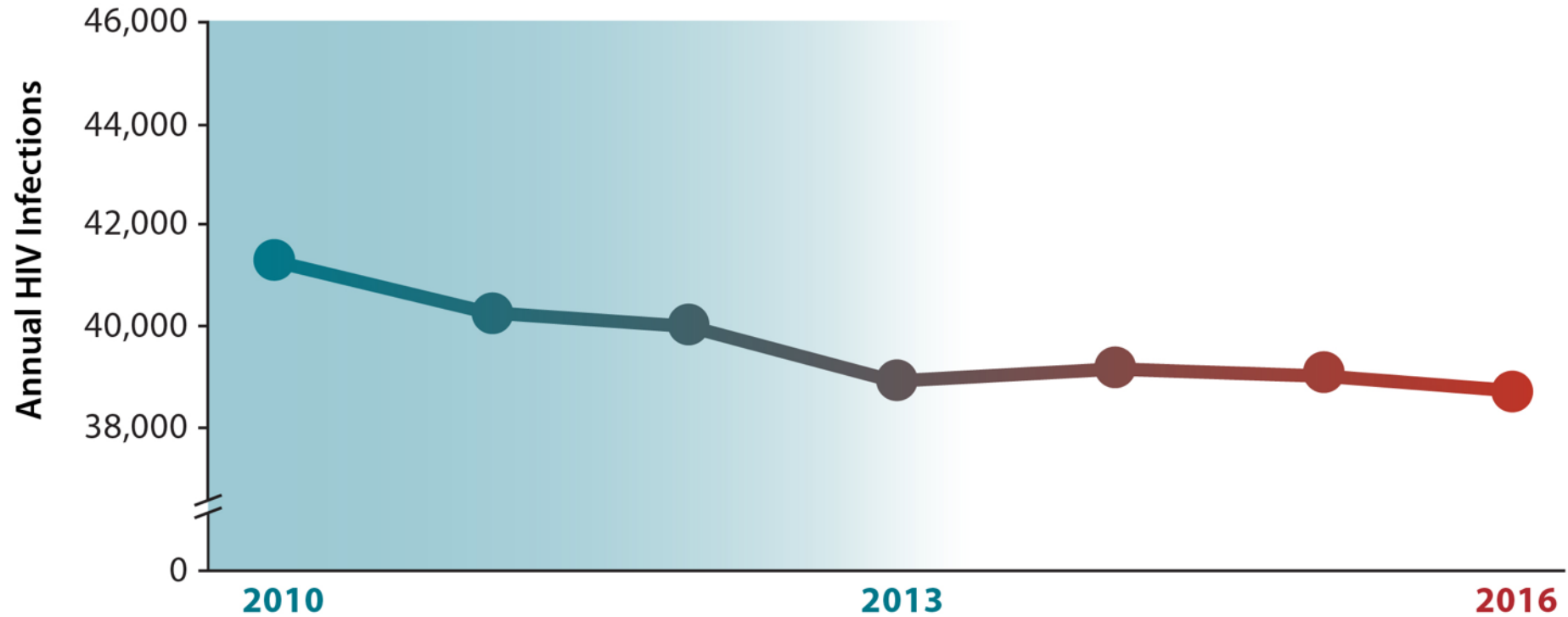
- Global target 90% of 10-29yo males in priority countries by 2021

*Calendar years 2008 and 2009 are included in total numbers.

**UNAIDS and WHO 14 priority countries: Botswana, Eswatini, Ethiopia, Kenya, Lesotho, Malawi, Mozambique, Namibia, Rwanda, South Africa, Tanzania, Uganda, Zambia, Zimbabwe

Source: Global AIDS Monitoring, national programmes, UNAIDS/UNICEF/WHO.

HIV Infections Started to Stabilize in 2013



For more information, visit
cdc.gov/nchhstp/newsroom



U.S. Department of
Health and Human Services
Centers for Disease
Control and Prevention

HIV in the Southern US

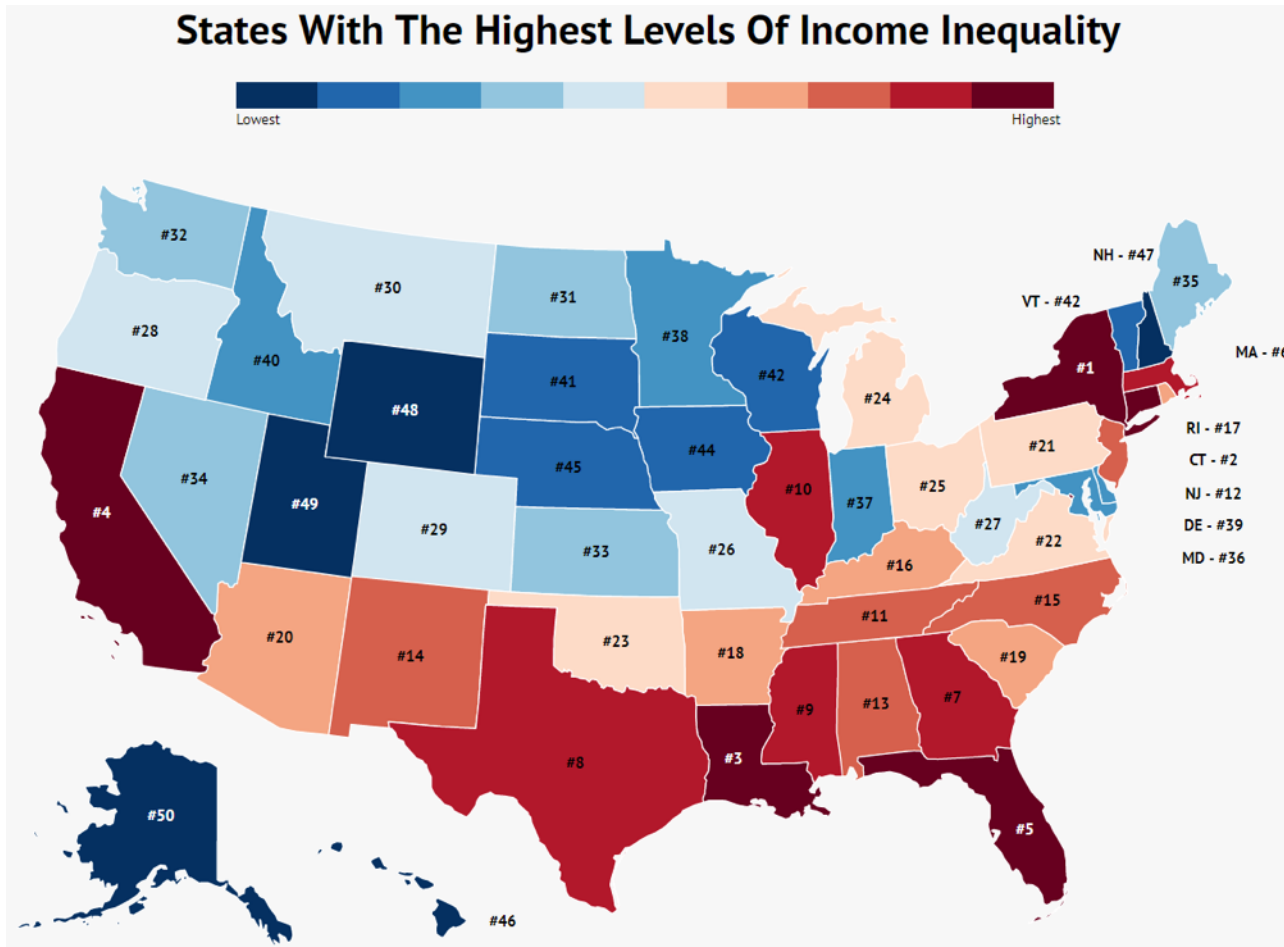
Of the 38,739 new HIV diagnoses in the US* in 2017,
19,968 (52%) were in the South.

From 2012 to 2016, HIV diagnoses remained stable in the US.**



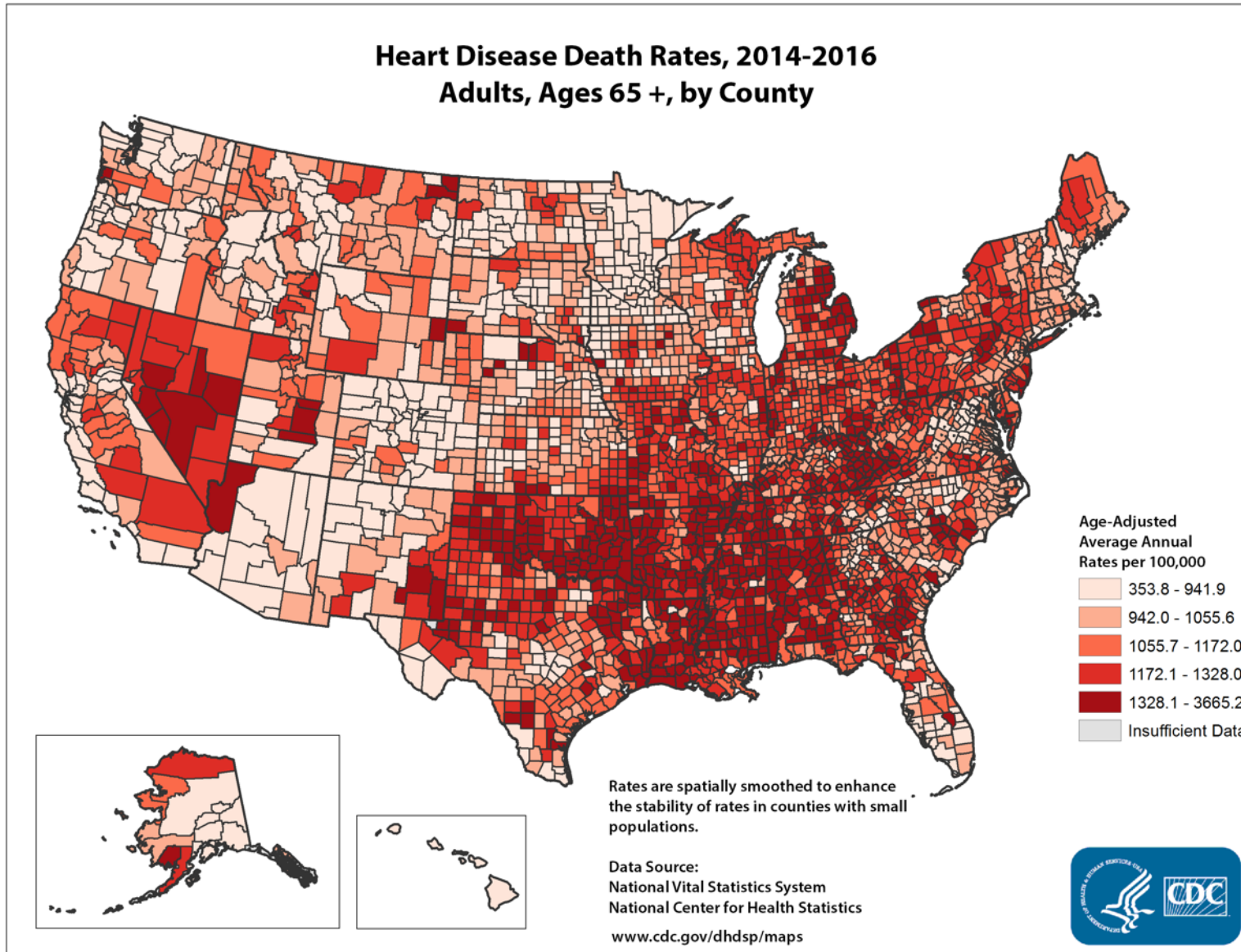
- HIV diagnoses fell 27% in the US dependent areas.
- HIV diagnoses fell 17% in the Northeast.
- HIV diagnoses fell 6% in the Midwest.
- HIV diagnoses remained stable in the South.
- HIV diagnoses remained stable in the West.

Drivers of HIV Disparities in the Southern US



- Income inequality
- Uninsured/underinsured
- Phobia of “others”
- Racism
- Intersecting Stigmas

Regional disparities In health: heart disease



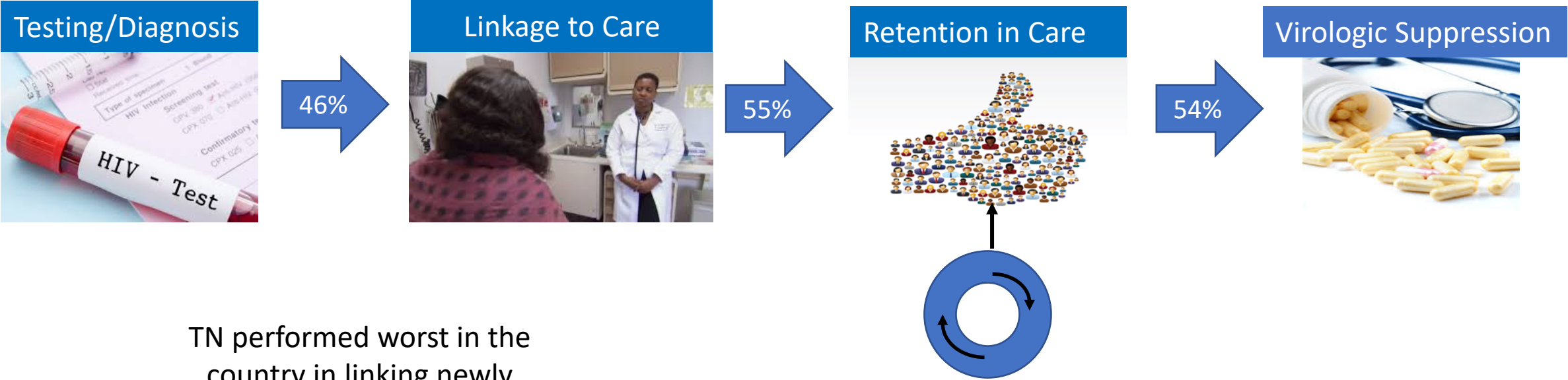


HIV in TN

- 16,190 people living with HIV
- 71% of new infections are in 4 of 95 counties
 - Shelby (39%), Davidson (21%), Hamilton(6%), and Knox (5%)
- Black individuals disproportionately affected
 - Black female 14X greater than White
 - Black male 6X greater than White

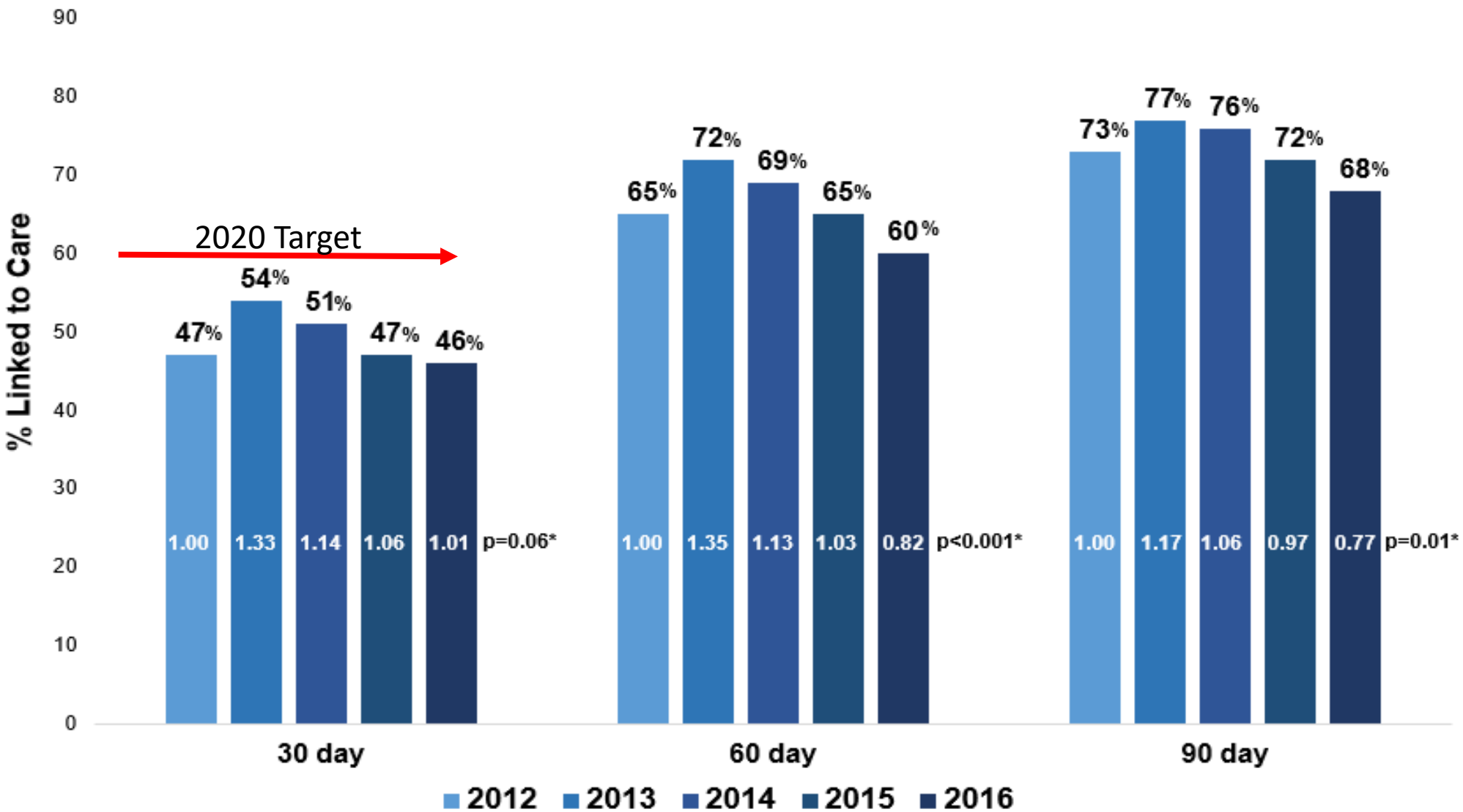
New Infections 2012-2016	
Sex	
Male	79%
Female	21%
Race/Ethnicity	
White (non-Hispanic)	32%
Black (non-Hispanic)	59%
Hispanic (all Races)	5%
Other/Unknown	3%
Age at diagnosis, Median [IQR]	31 [24, 44]
Transmission Risk Factor	
Heterosexual	22%
MSM	55%
IDU	3%
MSM/IDU	2%
Other/Unknown	18%

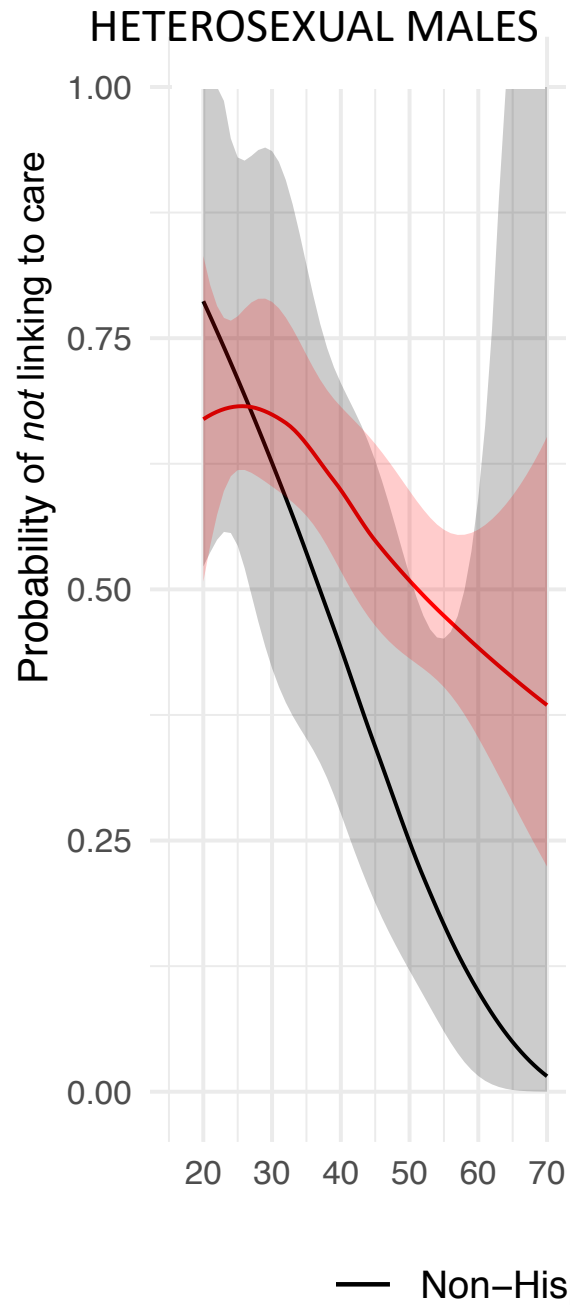
Continuum of HIV Care in TN



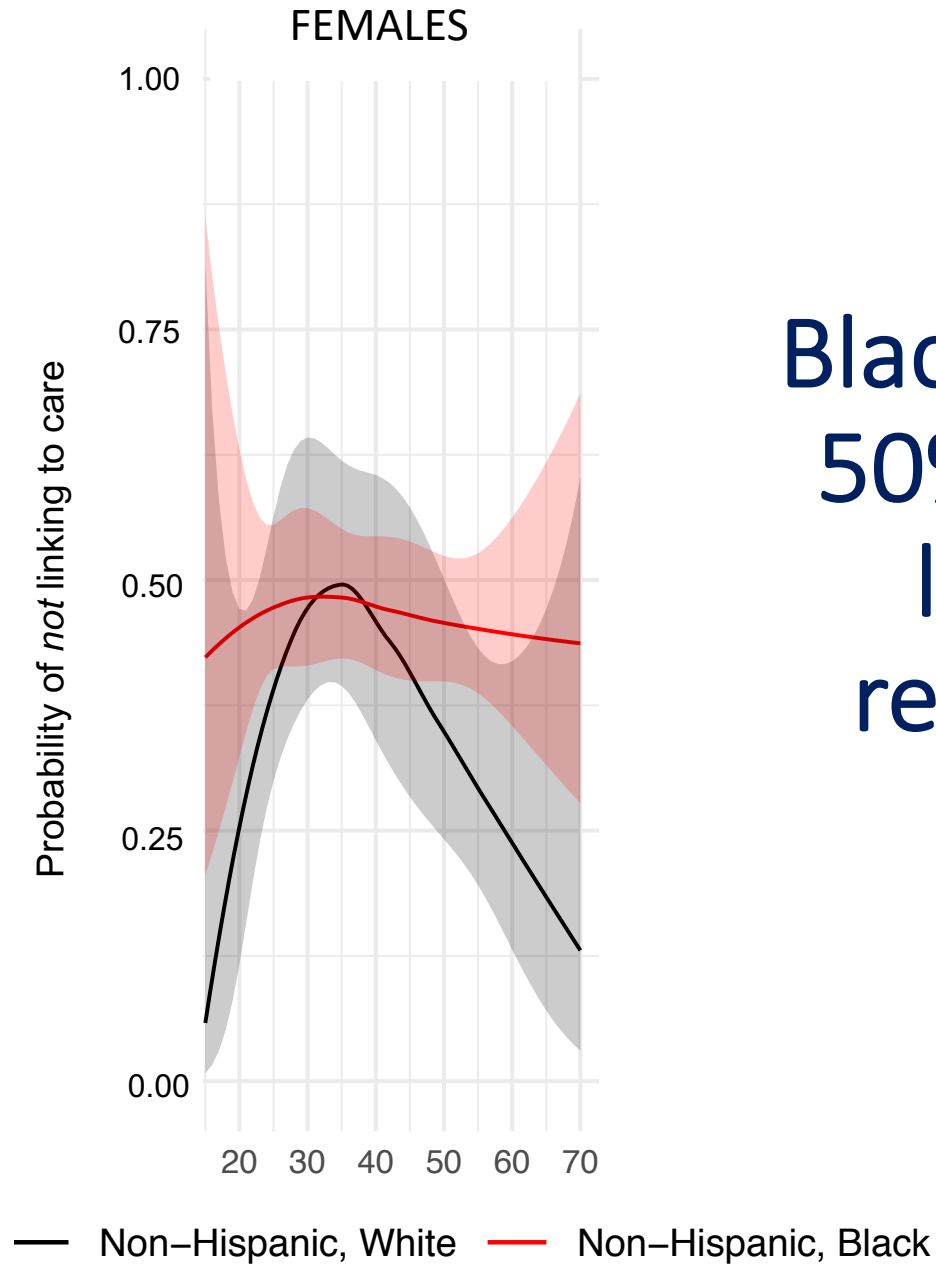
TN performed worst in the country in linking newly diagnosed patients to care

No improvement in linkage to HIV care over time

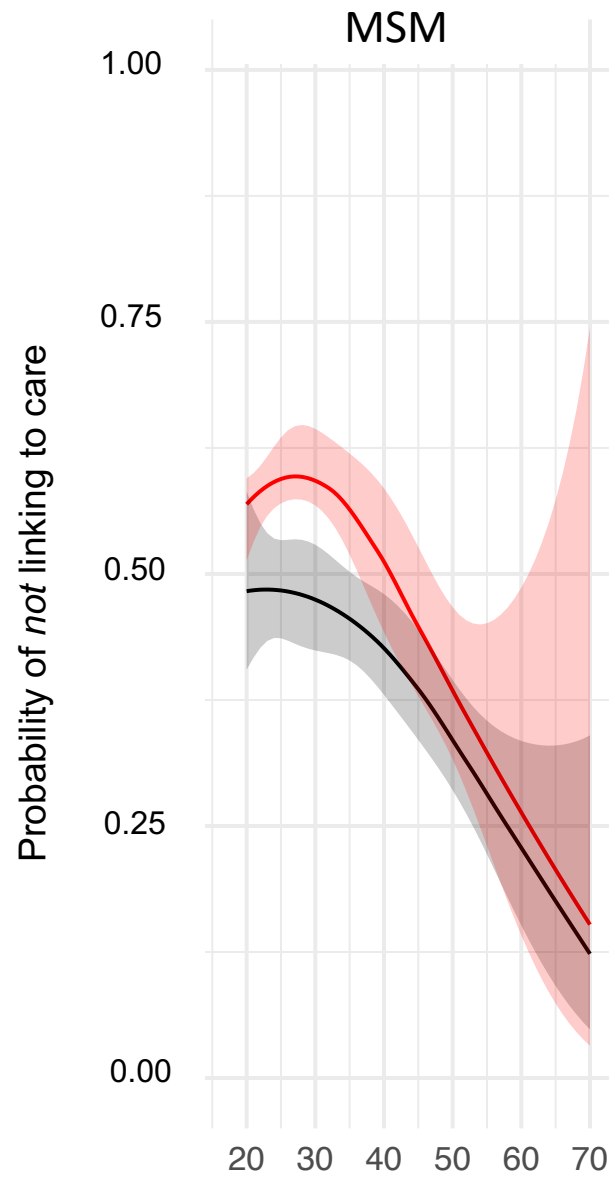




Young, heterosexual males have a 70% chance of not linking to care



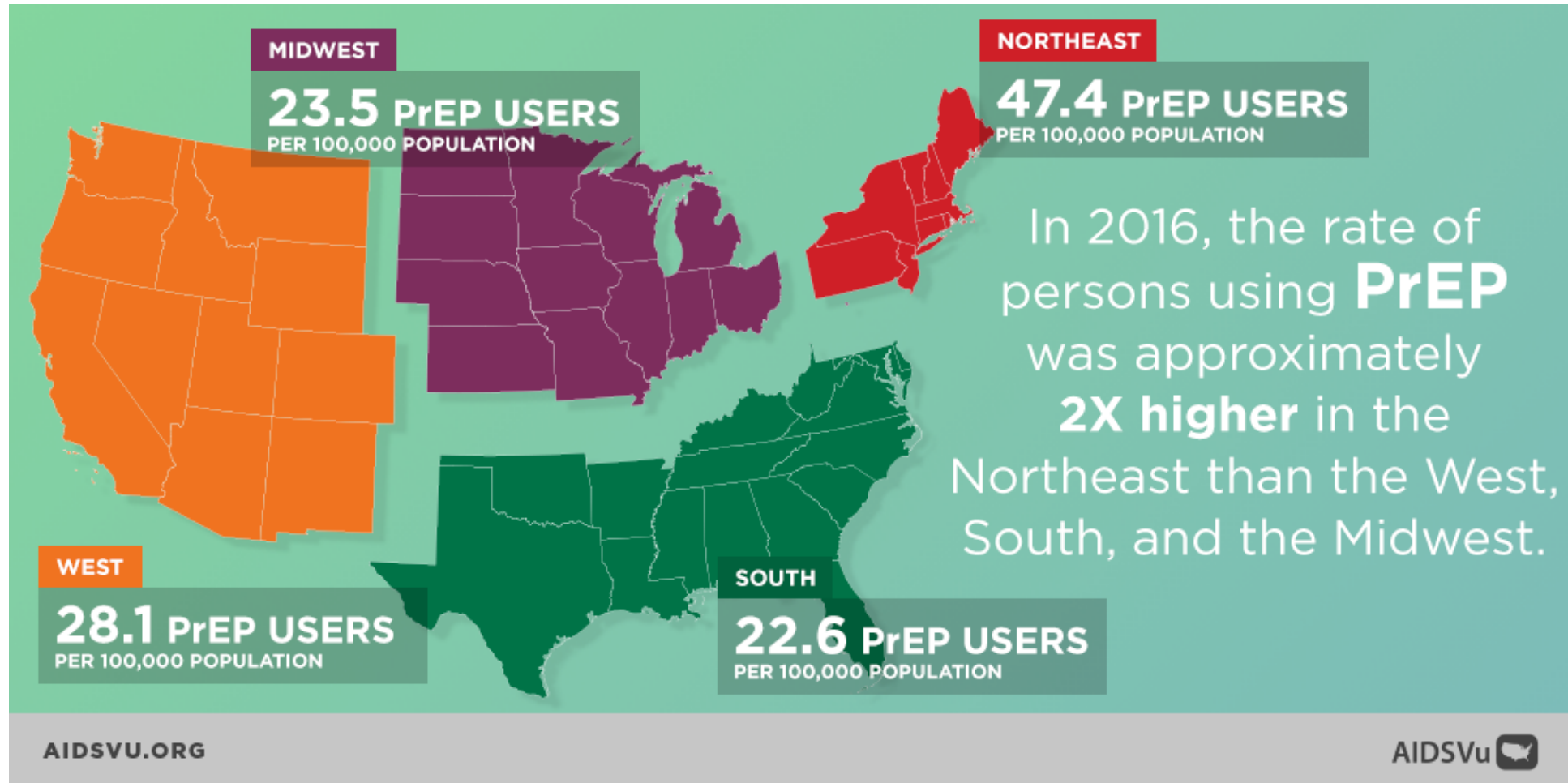
Black women have a
50% chance of not
linking to care
regardless of age



Young black MSM have more than 50% chance of not linking link to care

— Non-Hispanic, White — Non-Hispanic, Black

Poor uptake of PrEP in the Southern US



PrEP Demonstration Projects

The logo for Project PrIDE features the text "Project PrIDE" in a large, bold, black serif font. Below it, the text "PrEP • Implementation • Data2Care • Evaluation" is written in a smaller, bold, black sans-serif font. The background is a vibrant rainbow of vertical stripes in shades of green, yellow, orange, red, purple, blue, and green, with a paint-drip effect at the bottom.

Project PrIDE

PrEP • Implementation • Data2Care • Evaluation

Editorial

February 7, 2019

Ending the HIV Epidemic A Plan for the United States

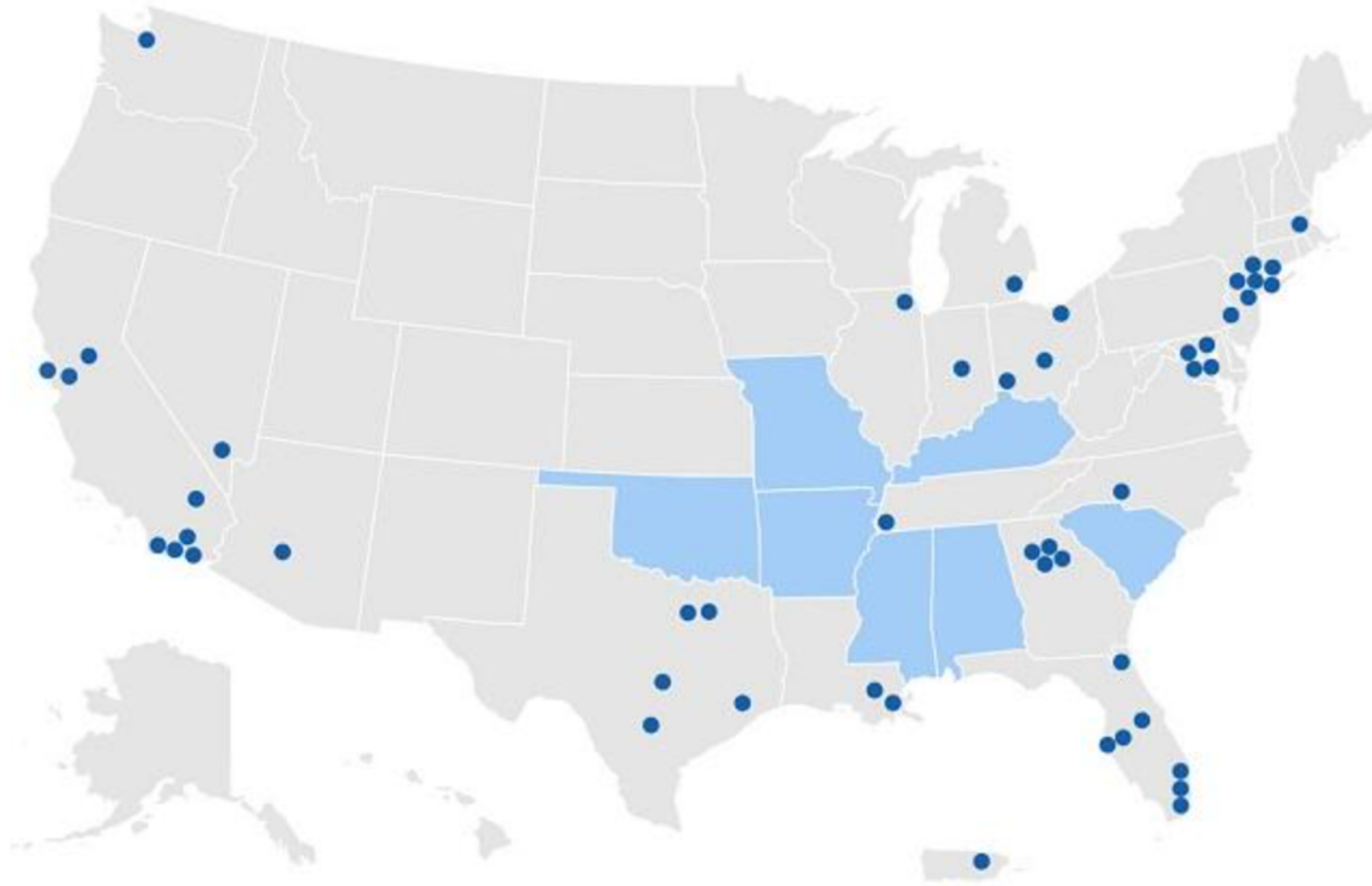
Anthony S. Fauci, MD¹; Robert R. Redfield, MD²; George Sigounas, MS, PhD³; et al

» [Author Affiliations](#) | [Article Information](#)

JAMA. 2019;321(9):844-845. doi:10.1001/jama.2019.1343

Renewed Focus

48 counties, San Juan, DC, with >50% of HIV Diagnoses 2016-2017



End the Epidemic Framework

GOAL:

75%
reduction
in new HIV
infections
in 5 years
and at least
90%
reduction
in 10 years.



ENDING THE HIV EPIDEMIC: A PLAN FOR AMERICA



Diagnose HIV as
early as possible



Treat HIV quickly
and effectively



Protect people
at risk



Respond quickly
to clusters of
new cases

End the Epidemic Local Efforts



By 2024, Nashville will:

- Ensure that 90% of residents living with HIV know their status
- Decrease new infections by 2/3rds
- Link 90% of people diagnosed with HIV to care
- Engage 90% of those linked to care
- Eliminate disparities in outcomes

Ending the Epidemic Nashville

A 5-Year Plan to End the HIV Epidemic in Davidson County, Tennessee

Final Thoughts

- Tremendous progress has been made
 - Gains diminishing in magnitude over time
 - Sustained efforts needed to “end the epidemic”
 - ART and PrEP are tremendously effective for HIV treatment and prevention
 - Implementation science is key for developing more effective strategies to deliver ART treatment and prevention services
 - Continued financing, advocacy, and stigma reduction efforts are critical
 - Key populations and minority populations remain at greatest risk for infection and poor outcomes
- 