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Strategy Development: Landscape Analysis - HIV

VERSION: 29 MAY 2020



SDGs and HIV/AIDS

Goal 3. Ensure healthy lives and promote well-being for all at all ages



Target 3.3: By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases

Indicator 3.3.1: Number of new HIV infections per 1,000 uninfected population, by sex, age and key populations

\$7 billion

funding shortfall for HIV in 2018 to reach 2020 goal of \$26.2bn

\$19bn

\$26.2bn

Funding for HIV in low- and middle-income countries by source (US\$ bn), 2018 vs 2020 target

Fast Track targets

By 2020

90-90-90

Treatment

500 000

New infections among adults

< 500 000

AIDS-related deaths

ZERO

Discrimination

By 2030

95-95-95

Treatment

200 000

New infections among adults

< 500 000

AIDS-related deaths

ZERO

Discrimination



37.9 million people living with HIV in 2018, ~54% (20.6 million) in East and Southern Africa

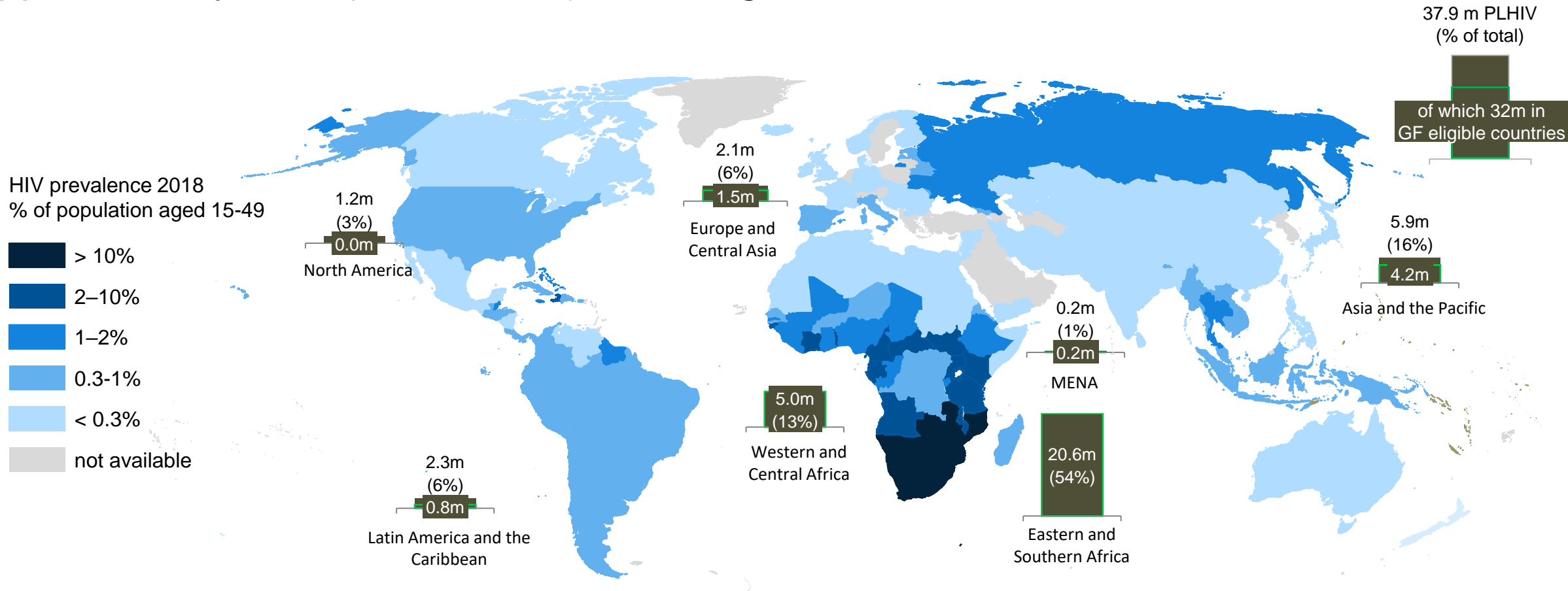
Progress towards 95-95-95 (2018)



Key Messages

- **Off track to meet 2030 targets** - drastic (90%) reduction in new infections needed to meet incidence and mortality goals.
- **Prevention** - Large gaps in coverage of key prevention programs- need to further scale programs and address structural drivers to achieve better progress on incidence reduction.
- **Prevention of Mother to Child Transmission and Pediatric Treatment** - progress is varied across regions and underlying issues for new child infections need to be addressed.
- **Testing and Treatment** - significant progress globally, but varied progress across regions and for specific populations. Tailored and differentiated service delivery approaches, including community approaches need to be scaled up.
- **Key populations & partners remain disproportionately affected** - 54% of new HIV infections globally in 2018. Need to scale programs and coverage of programs.
- **Strengthen integration of human rights interventions into HIV prevention, testing and treatment services** - significant progress needed to reach target of zero discrimination, including addressing bottlenecks and barriers to key services.
- **Addressing co-infections and co-morbidities** - progress on providing TB treatment for people living with HIV, however need for more intensive focus on co-infections and co-morbidities as part of overall package of HIV treatment and care.
- **Opportunity to focus on more catalytic interventions/approaches** - in countries where domestic financing for HIV response increases.

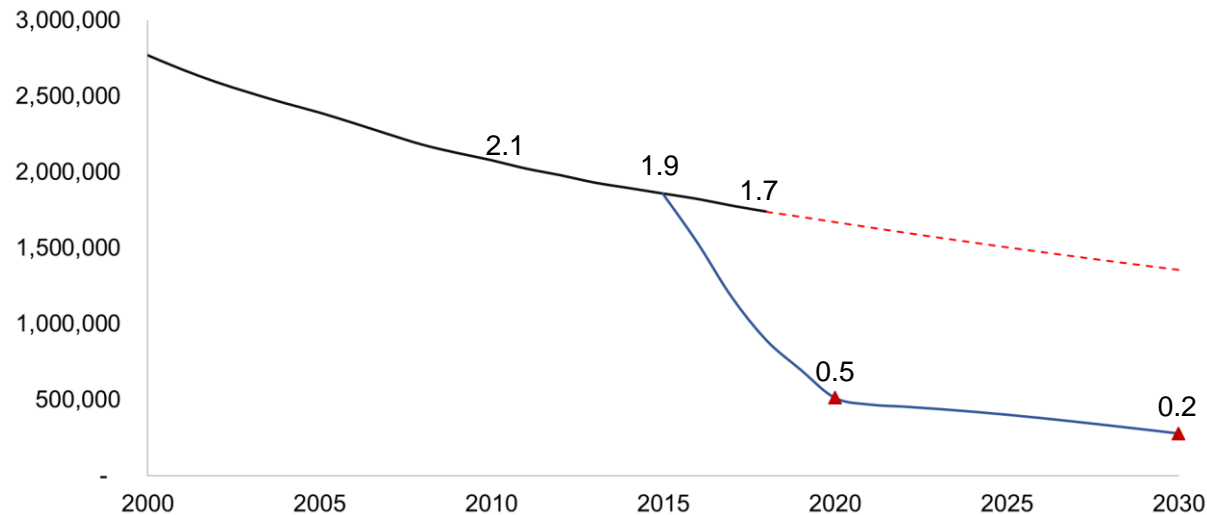
People Living with HIV: 37.9 million people living with HIV in 2018, of which approximately 54% (20.6 million) are living in East and Southern Africa



Incidence and mortality targets: significant reductions in number of new infections and deaths to meet 2030 goals

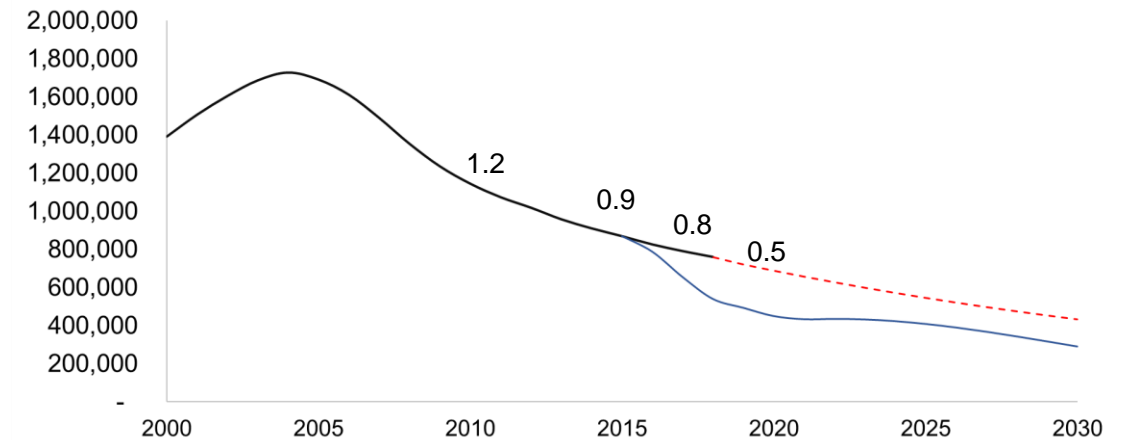
Incidence: 1.7m infections in 2018 vs. 0.5m 2020 target

new HIV infections in all countries (m)



Mortality: 0.8m deaths in 2018 vs. 0.5m 2020 target

of AIDS related death in all countries (m)

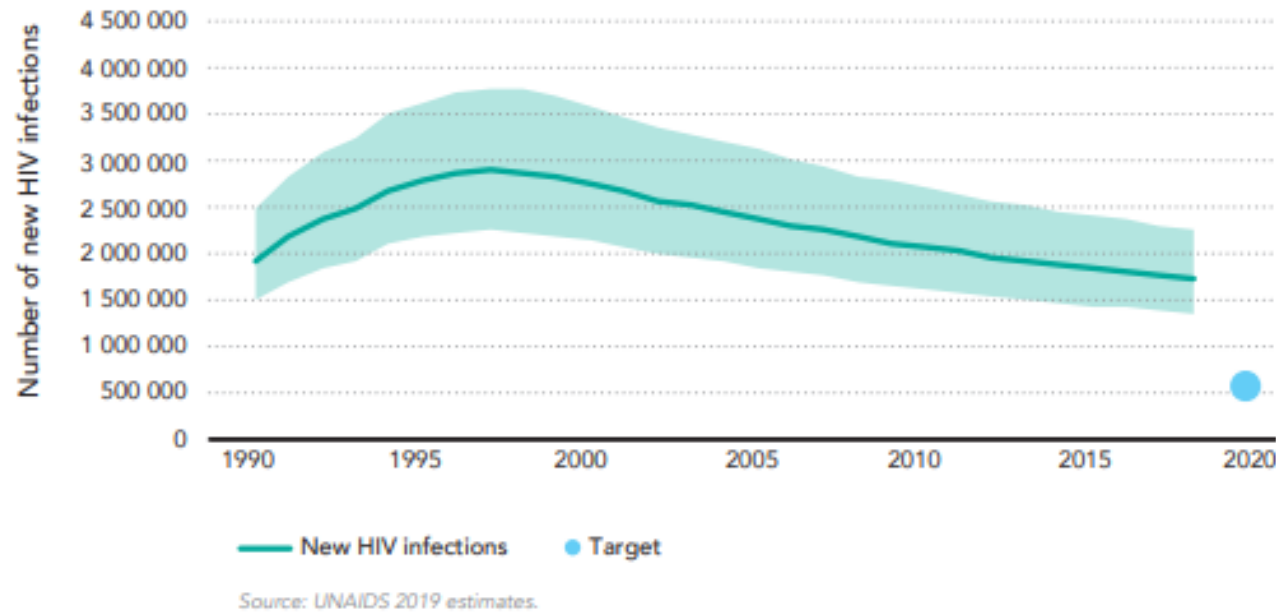


— AIDS deaths — UNAIDS Fast Tracks target - - - Continuation of recent trend

Addressing issues across the treatment cascade, scaling-up prevention and improving data collection needed to move closer to 2030 goals with focus on regions/countries where trends are reversing or stagnated.

New HIV infections: Globally an 11% reduction in new HIV infections since 2015, but progress masks populations still experiencing high levels of HIV acquisition and geographical disparities

Number of new adult HIV infections, global, 1990-2018

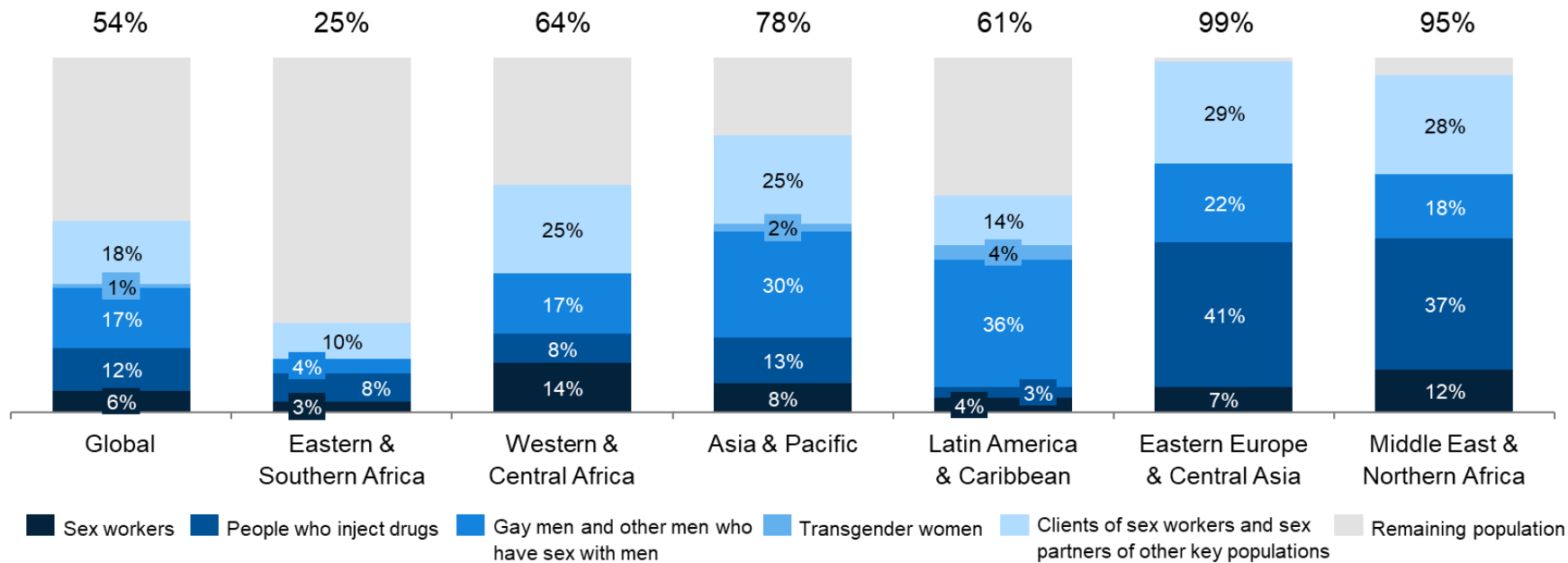


- East & Southern Africa has had the most progress since 2015 – down from 900,000 new infections to 800,000 new infections in 2018.
- Asia & the Pacific has also made gains down from 330,000 in 2015 to 310,000 in 2018.
- There are a number of regions (West & Central Africa, Middle East & North Africa, Eastern Europe & Central Asia, and Latin America & the Caribbean) where progress is stagnant or new infections are increasing.

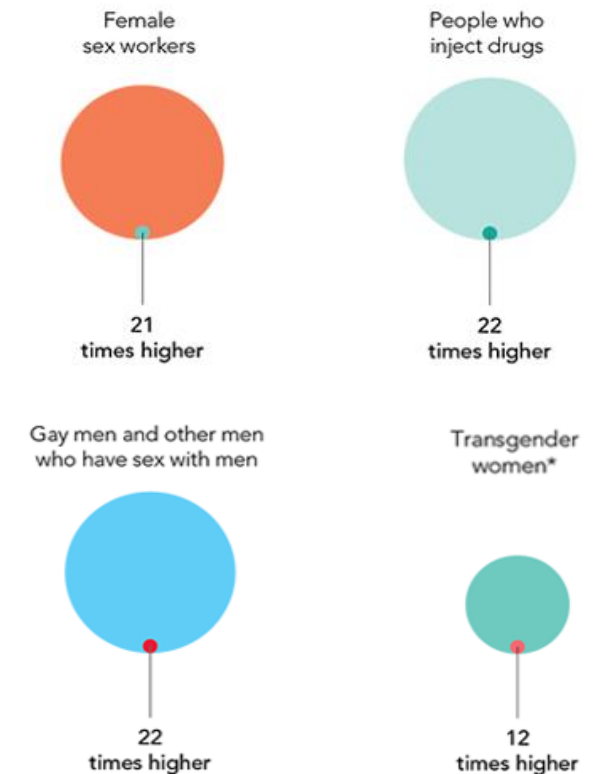
In regions where the epidemic is largely among key populations, progress is stagnant or new infections are increasing. In high burden contexts, new infections remain high among AGYW and their male partners & key populations.

New HIV infections: globally key populations and their sexual partners account for 54% of all new infections, over 80% of new infections outside of Africa are among key populations and their sexual partners

Share of new HIV infections among key populations, by region, 2018



Relative risk of HIV acquisition, compared to general population, global, 2018



Source: UNAIDS data (2019)

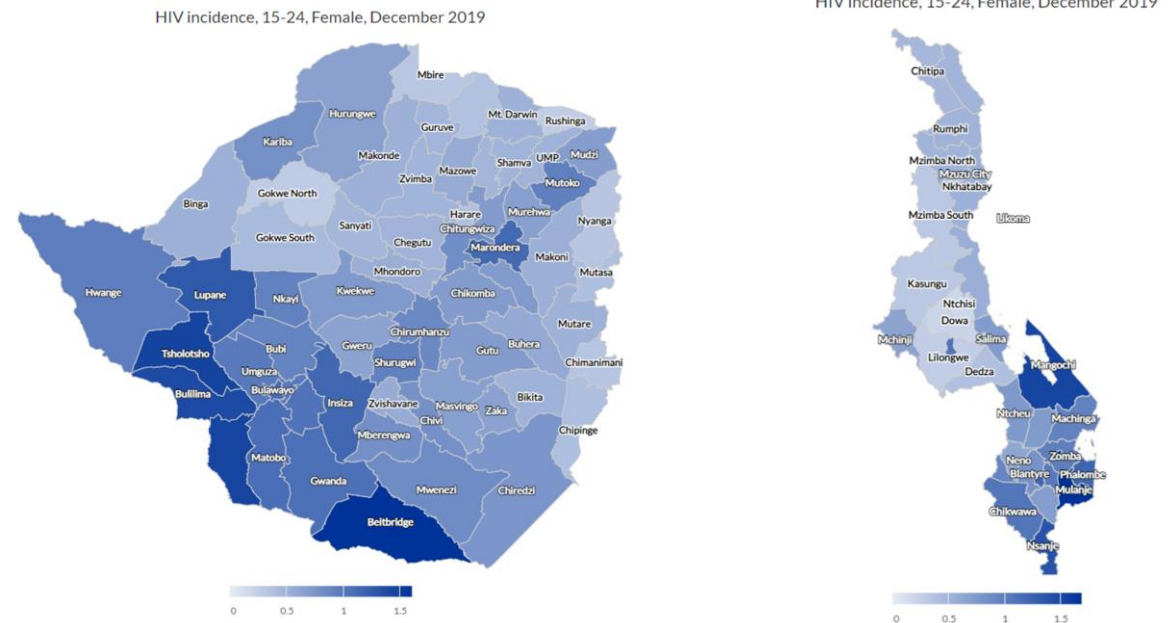
Transgender women (TGW) data comes from Asia and the Pacific, Latin America and the Caribbean, west and central Europe and North America

Young key populations (e.g. <25 years) are also at greater risk of new HIV infections. There is need to address the large gaps in prevention and testing programs for key populations and other vulnerable/high-risk populations.

New HIV infections high burden locations: vulnerabilities by gender, sex, geography

- Sub-Saharan Africa: region with highest number of new infections annually, **59% new infections among women.**
- Large differences in new infections by gender, age, geography:
 - **AGYW (15-24 years) are at 2.4 times the risk of HIV than males** of same age group
 - In many countries, **higher incidence in women 25-34 years** than in AGYW (15-24 years)
 - **Male-to-female transmission 4 times more likely** than female-to-male (POP-ART 2019). Reaching men with prevention and treatment remains critical

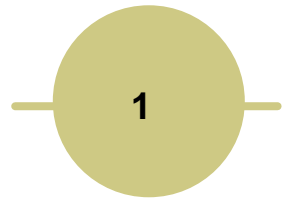
Illustration: HIV incidence by geographical area
Zimbabwe Malawi



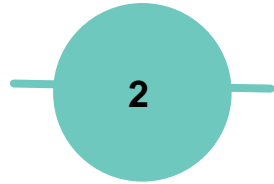
Source: preliminary UNAIDS 2020 district estimates for HIV incidence, 15-24 year old females.

Improve targeting and tailoring of HIV programs to address specific needs and vulnerabilities of populations at risk - gender and age-related barriers, priority locations and variable transmission dynamics.

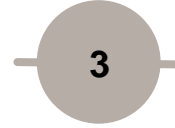
Prevention: off-track to meet 2020 HIV prevention targets



Combination prevention¹ for adolescent girls and young women



Combination prevention with key populations²



Comprehensive condom programs



Voluntary medical male circumcision (VMMC) and SRH services for men and boys



Rapid introduction of Pre-exposure prophylaxis

Goals/Targets

90% of high-incidence locations covered prevention services

90% of key populations who reported receiving at least 2 prevention services in the past 3 months

90% condom distribution need met
20bn condoms distributed per year

+25m VMMCs in 14 priority countries in Africa

3 million³ use PrEP

Key Figures

31% of high-incidence locations covered

Sex workers: **47%**
Men who have sex with men: **33%**
People who inject drugs: **32%**

55% of need met

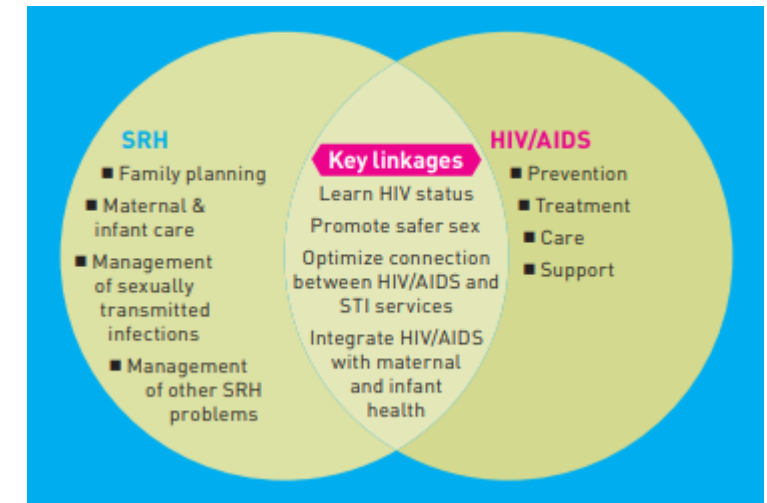
11m (cumulative) VMMCs in 14 priority countries (2016-2018)

87k receiving PrEP (2018)

Status quo approach to prevention not working - need for better use of local data and improved tailoring/targeting of interventions according to client needs.

Prevention: Opportunity to strengthen outcomes through service integration

- Opportunity to expand HIV service access and retention through linkages between HIV and other health services (e.g. sexual and reproductive health (SRH), primary health care)
- Especially relevant in Sub-Saharan Africa where highest number of new infections annually are among women (**59%**)
- For example, ECHO trial (2019)¹ noted the high rates of new HIV infections (3.8% year) amongst (AGYW) participants already accessing sexual health services – missed opportunity for service integration
- While there has been some success in incorporating SRH and family planning services into HIV testing programs, there has been less success the other way – i.e. incorporation of HIV testing in SRH/Family Planning Programs



Source: Sexual and Reproductive Health & HIV/AIDS A Framework for Priority Linkages, WHO, UNFPA, IPPF, UNAIDS

Opportunity to increase access and retention to HIV prevention, testing and treatment services through service integration.

¹ Large-scale study in Eswatini, Kenya, South Africa and Zambia found no significant difference in risk for HIV infection among HIV negative women 15-36 years taking three different contraceptive methods. Source: UNAIDS

Illustration: Scale-up of HIV prevention in Zimbabwe among female sex workers

Community-led 'Sisters with a Voice' program launched to provide free preventive and clinical services for female sex workers

Context

HIV prevalence among female sex workers estimated at **41.4 %** in 2018.

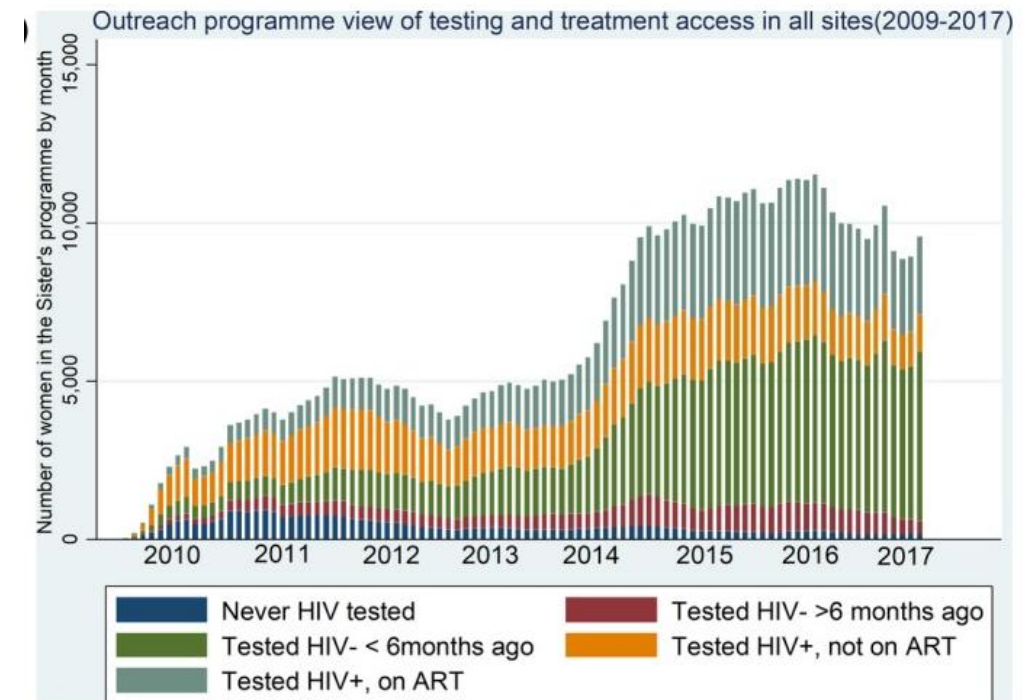
Criminalization and stigmatization of sex work long prevented sex workers from accessing public health services – which is associated with poorer health outcomes.

Results

Nation-wide expansion to 31 clinics located at major urban, town and highway hubs for sex work across the country.

>67,000 FSW reached since 2009 at least once (amounting to 194,000 clinic visits).

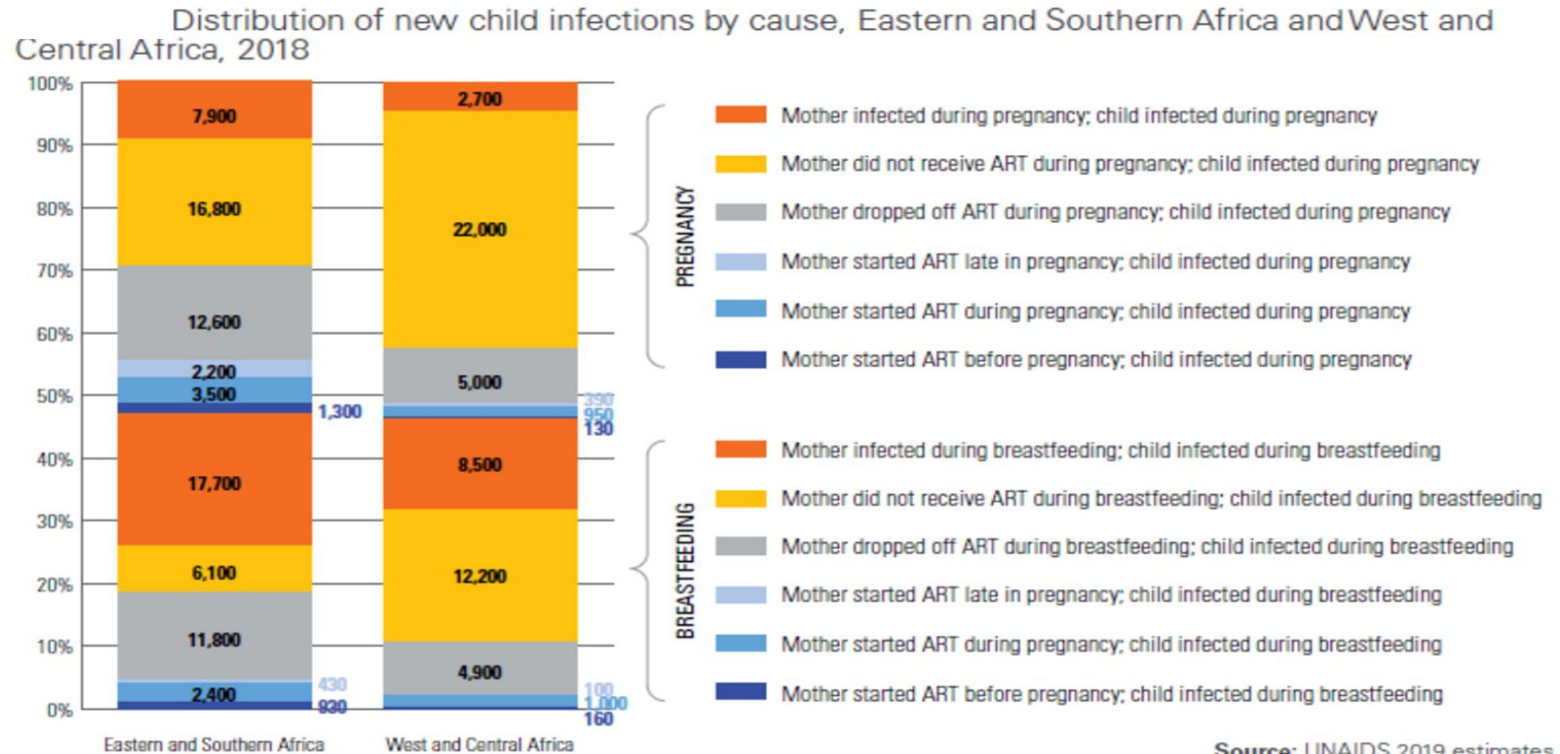
In 2017, the last year for which full statistics are available, over **24,000 women were reached with clinical services** (57% of all estimated FSW).



Successful scale-up of HIV prevention for female sex workers in Zimbabwe driven by tailored, community-based health services.



Mother-to-child transmission: reasons for new infections in children vary depending on context

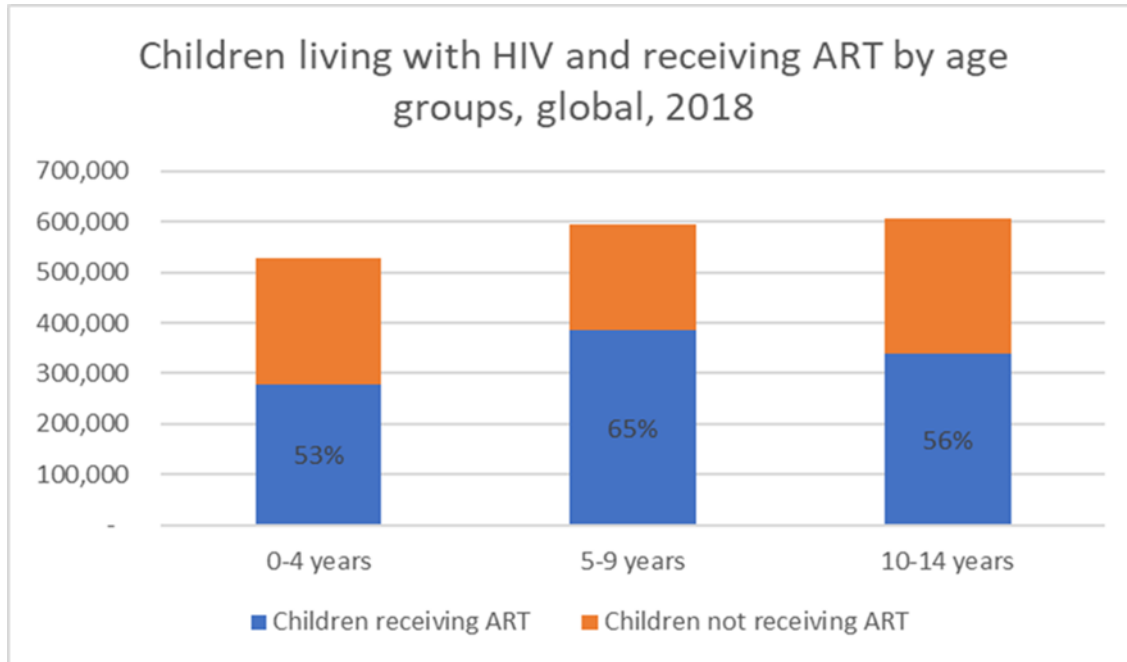


Source: UNAIDS 2019 estimates.

- Not all countries face the same challenges regarding eliminating mother-to-child transmission of HIV.
- There is a need to understand where which means of transmission is contributing to the most new HIV infections among children in a country or region.

Underlying issues (i.e. late diagnosis, poor antenatal coverage, retention and mother infection during breast-feeding) for new child infections need to be addressed.

Pediatric HIV: children living with HIV are not being diagnosed and treated early enough to prevent HIV-related morbidity and mortality

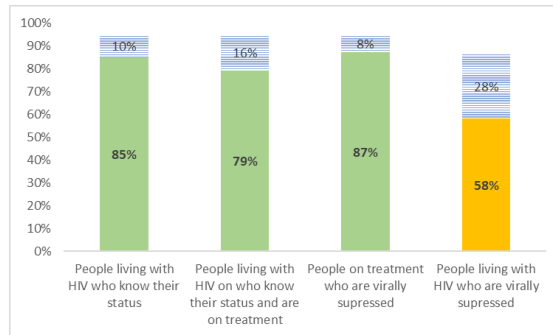


- Start Free Stay Free AIDS Free Framework targets of fewer than 20,000 new HIV infections per year among children under 15 are far from being reached.
- In 2018, there were an estimated 160,000 new infections in children under 15.
- The majority of new pediatric infections are in the 5-14 age group.
- More than 80% of 1.7 million children living with HIV are in Sub-Saharan Africa (SSA).
- There were an estimated 100,000 AIDS-related deaths in 2018.

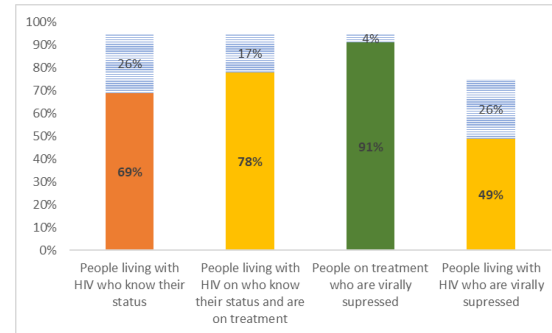
Maintaining and enrolling children on ART requires differentiated interventions and scale-up of point of care interventions and appropriate linkages in the continuum of care to ensure support (both at community and peer levels).

Treatment cascade: steady progress towards 95-95-95 targets, although progress varies widely across regions and countries

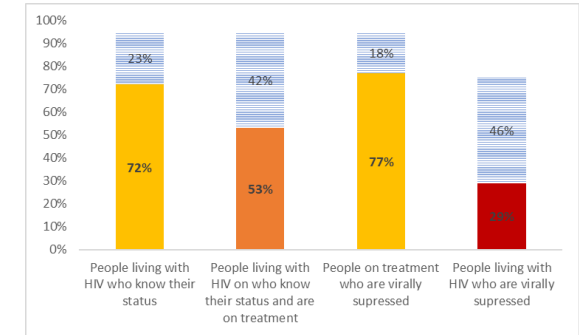
71% Eastern & Southern Africa



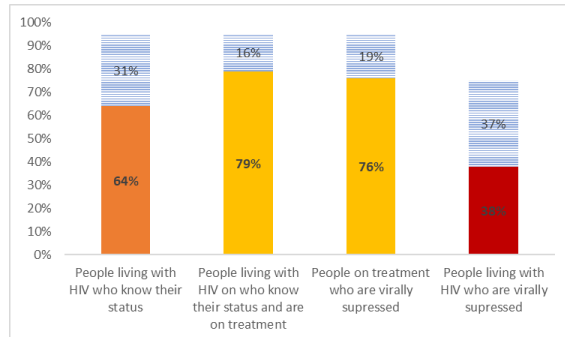
7% Asia & Pacific



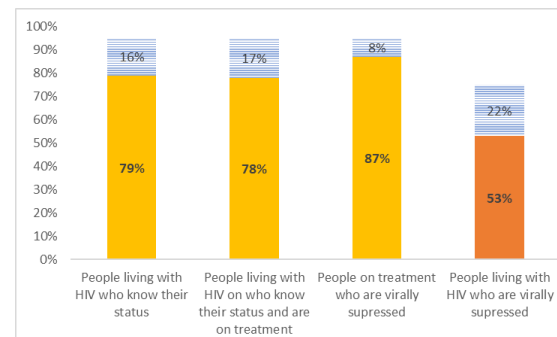
1% Eastern Europe & Central Asia



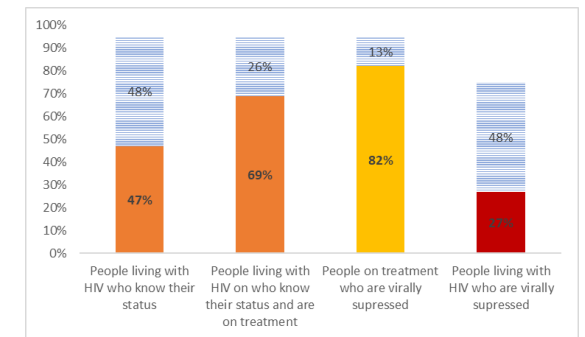
17% Western & Central Africa



3% Latin America & Caribbean



1% Middle East & N. Africa



xx% share of global burden

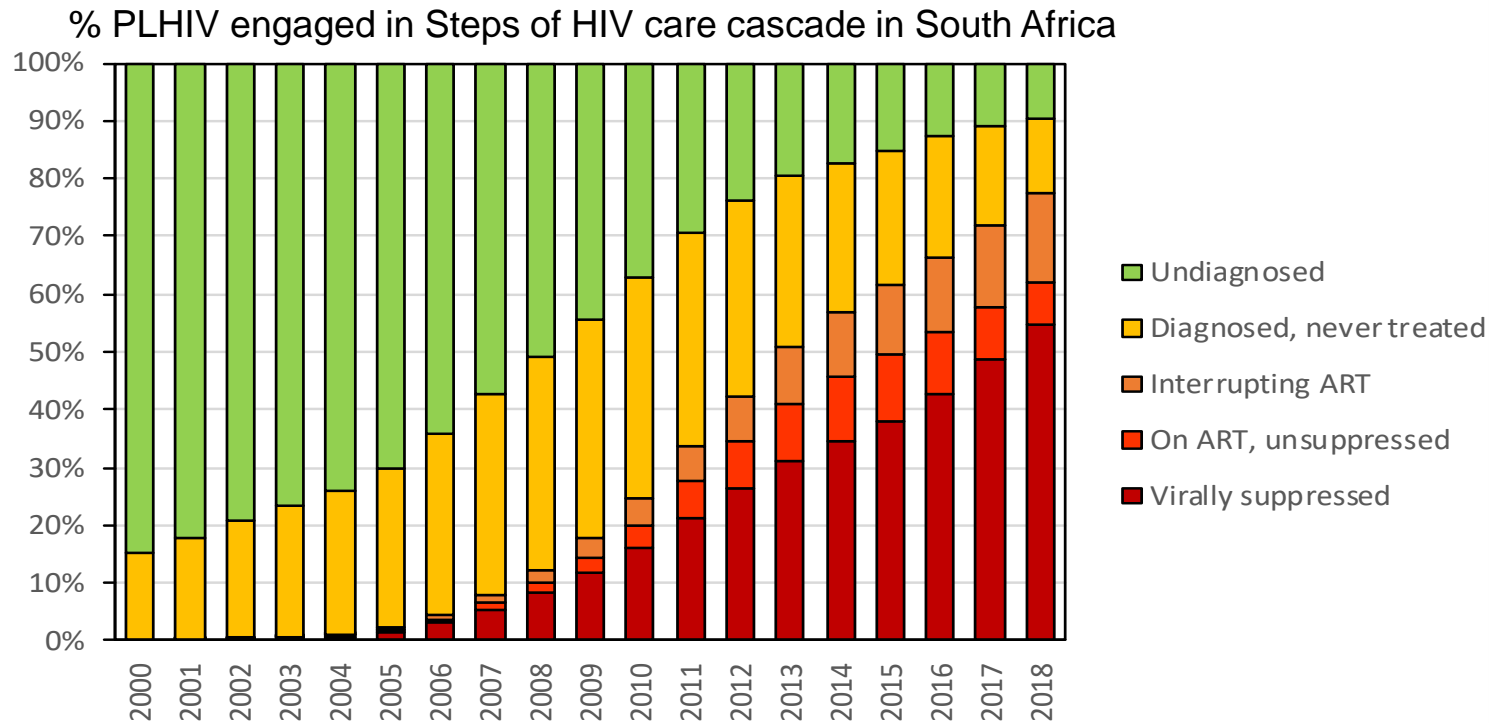


gap to reaching target

Reaching 95-95-95 targets especially in sub-geographies and sub-populations lagging behind requires scale-up of differentiated ART (DART) service delivery models which is essential to reduce AIDS related morbidity and mortality.

Example: treatment challenges in South Africa

Rapid scale-up of ART; high coverage; program quality challenges



Western Cape: Responses under evaluation

- Make it easier for PLHIV to **test, link to care**, then **remain on ART** by scaling-up **differentiated service delivery**
- Reduce effort spent on treating people who are “stable” in care
- Identify and give more attention to people at highest risk of transmission:
 - People who are **newly infected**
 - People who are **non-adherent** or **resistant** to their ART
 - People who may **have advanced disease** and/or have **fallen out of care**

Addressing program quality and supply chain issues, as well as human-rights related barriers, in these circumstances is critical to unlock benefits of treatment.

Treatment cascade: Advanced HIV Disease (AHD)

Management of advanced HIV disease

A package of interventions including screening, treatment and/or prophylaxis for major opportunistic infections, rapid ART initiation and intensified adherence support interventions should be offered to everyone presenting with advanced HIV disease.

(Strong recommendation, moderate-quality evidence)

WHO (2017) Guidelines for managing advanced HIV disease and rapid initiation of antiretroviral therapy. WHO, Geneva.

- AIDS related mortality is consistently higher in men – in 2016 they accounted for 58% of estimated AIDS-related deaths.
- Despite progress made in treatment case, program quality issues, low retention, late HIV diagnosis and late initiation of ART remain.
- Loss to follow-up with poor re-engagement in care significantly increases risk of dying from AIDS.

Illustration



- 1/3 of PLHIV initiating ART in Sub-Saharan Africa have advanced HIV disease
- ~10% die within first 3 months of enrollment
- Growing evidence to suggest that an increasing proportion of people with AHD are patients who had previously engaged with the health system and started ART, and subsequently disengaged from care

Sources: IeDEA and COHERE Cohort Collaborations (2018) Global Trends in CD4 Cell Count at the Start of Antiretroviral Therapy: Collaborative Study of Treatment Programs. Clin Infect Dis. 66:893-903 ; Auld AF, Shiraishi RW, Oboho I et al (2017) Trends in prevalence of advanced HIV disease at antiretroviral therapy enrollment: 10 countries, 2004–2015. Morb Mortal Wkly Rep 2017; 66:558–63



- Late diagnosis continues to be a challenge in Latin America - over 40% of people diagnosed with a CD4 count of under 350 cells per mm³ in 12 of 14 reporting countries.
- Guatemala, 71% of people had a CD4 count of under 350 at diagnosis, and nearly half (46.9%) AHD.

Source: Global AIDS Update 2019, UNAIDS

While provision of ART reduces mortality, additional actions (including linkage to and retention in care) are needed to mitigate morbidity and mortality in patients with AHD.

Differentiated Service Delivery (DSD): strengthening impact, cost-effectiveness and program quality and moving us closer to epidemic transition

DSD for ART

WHO

Individual

Group

WHERE

Facility

- Fast Track ART Refills
- Appointment Spacing
- Multi-Month Scripting and Dispensing

- Facility ART Refill Group
- Facility-Based Adherence Group
- Facility Adolescent Clubs

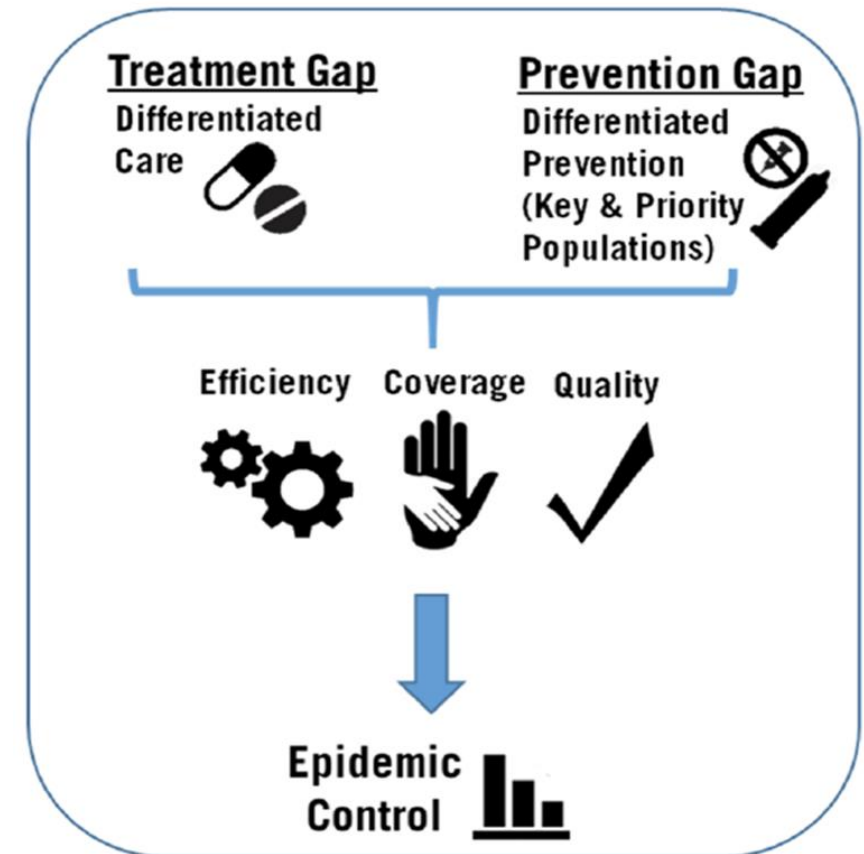
Community

- Community Drug Distribution
- Mobile Outreach
- Home-based care (with or without ART Initiation)

- Community ART Refill Group
- Community-Based Adherence Group
- Community Adolescent Clubs

Reference: Adapted from Rabkin R 2019.

Framework for achievement of HIV epidemic control



Reference: El-Sadr WM, Harripersaud K, Rabkin M 2017

Scale-up and roll-out of client-centered DSD approaches (both treatment and prevention), including community-centered approaches, are critical to reaching 95-95-95 and prevention targets.

Treatment: Universal test and treat (UTT) programs are contributing to reductions in HIV incidence, but need to also be complemented by comprehensive prevention programs

- Only **53 % (43-63%)** of **PLHIV** virally suppressed.
- **Stigma and fear of stigma undermine treatment adherence** by compromising social support mechanisms, as shown through pooled data and meta-synthesis.
(Source: Croome et al 2017, Katz et al 2013)
- **Adaptive planning and programming** is needed, alongside scale-up of other prevention measures, to achieve further reductions in incidence.
- **Retention through all stages of the cascade** needs to be strengthened and tailored to specific populations.

“UTT clearly contributes to HIV incidence reduction, but incidence nonetheless remains high.....90-90-90 does not result in HIV elimination and UTT will not control generalised HIV epidemics on their own.”

- Dr Kevin de Cock, US Centers for Disease Control and Prevention, CROI 2020



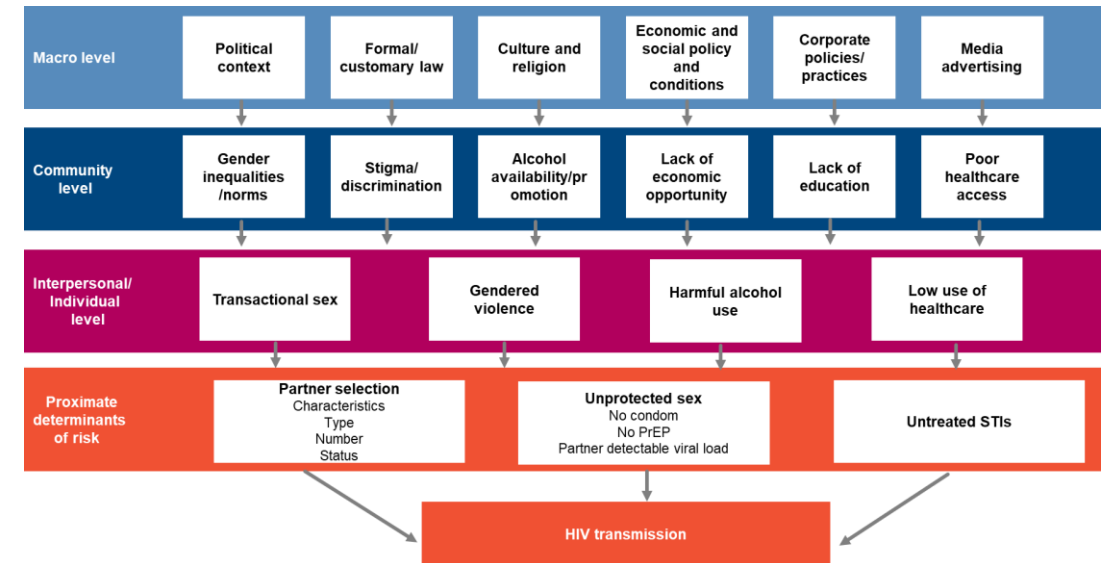
Four large-scale Treatment as Prevention trials in East & Southern Africa 2012-2018 showed impact of UTT on incidence, but also points to the limits of a test and treat approach to reducing HIV incidence.

The full HIV cascade - prioritized, person-centered HIV prevention programs, differentiated testing, linkages to health services for ART access and viral suppression – is required for epidemic control.

Structural drivers and social determinants of HIV: addressing drivers of infection, poor treatment outcomes

- Opportunity to complement core components of HIV programs by addressing:
 - Upstream social determinants of HIV infection and mortality
 - Drivers of lack of access to and lack of retention in treatment & prevention programs
- Cross-sectoral collaboration critical to maximize reach of interventions (e.g. with education, social protection, labor sectors)

Structural drivers of HIV

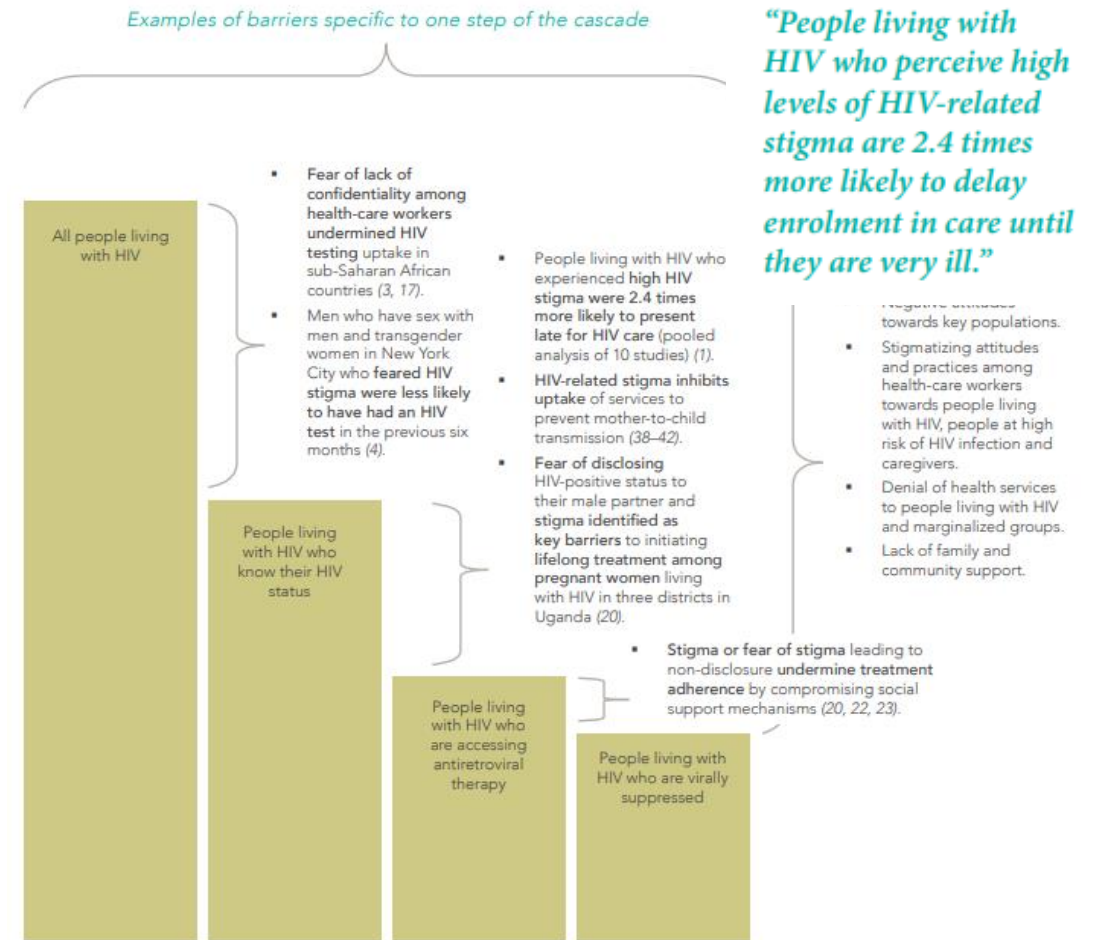


Addressing social determinants of HIV is critical to reduce new HIV infections, ensure access to HIV testing and treatment, retention in care and addressing co-infections/ co-morbidities.

Human Rights: stigma, discrimination and other human-rights and gender related barriers interfere across the cascade

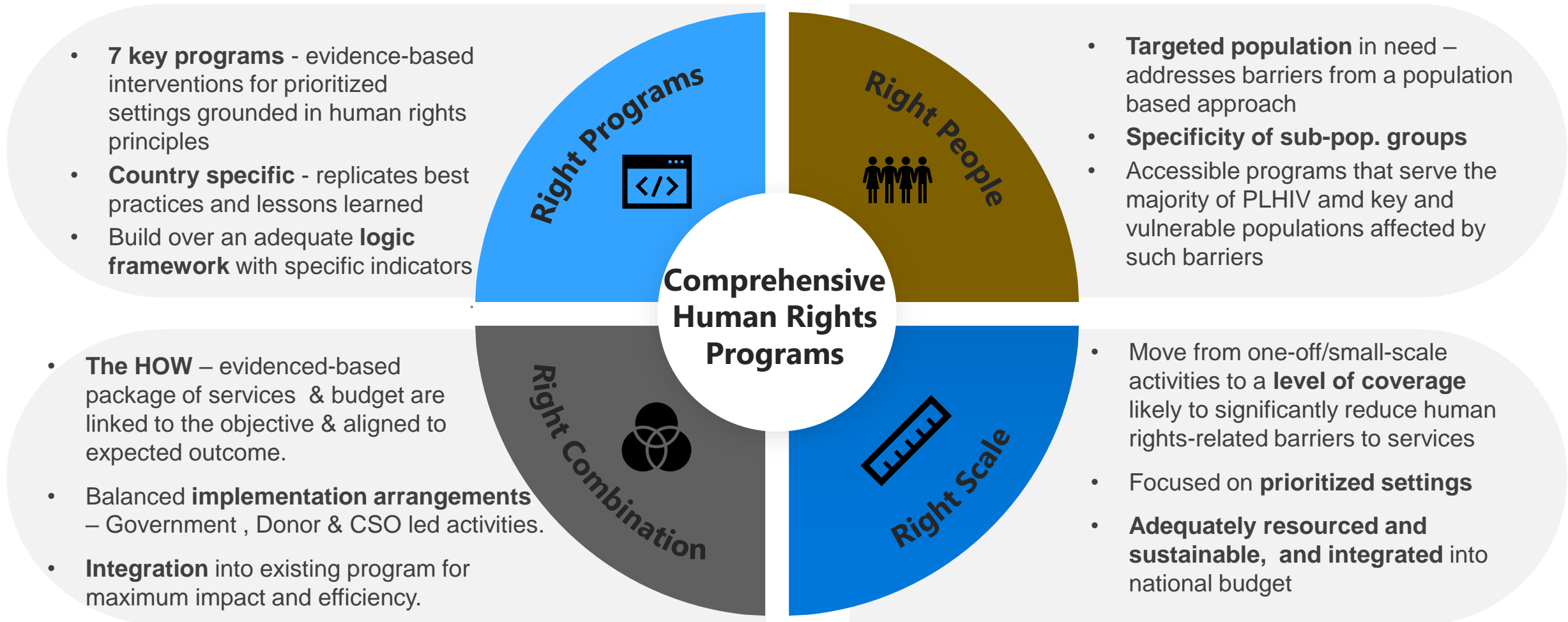
Stigma and discrimination associated with poor health outcomes:

- HIV infection associated with experienced stigma among MSM and perceived stigma among female sex workers
- Diagnosed/treated for STI's associated with fear of seeking healthcare because MSM and denied healthcare because MSM
- Women living with HIV who experience intimate partner violence are significantly less likely to start or adhere to ART, with worse clinical outcomes
- People who inject drugs are likely to avoid testing if they have been previously refused treatment or services by health-care workers



Legal, policy and structural barriers to services for priority populations need to be addressed to reduce HIV transmission and improve treatment outcomes.

Human Rights: Key elements for comprehensive human rights programs



Reducing human rights-related barriers is critical to increasing the effectiveness of HIV interventions and reducing new HIV infections, particularly among key and vulnerable populations.

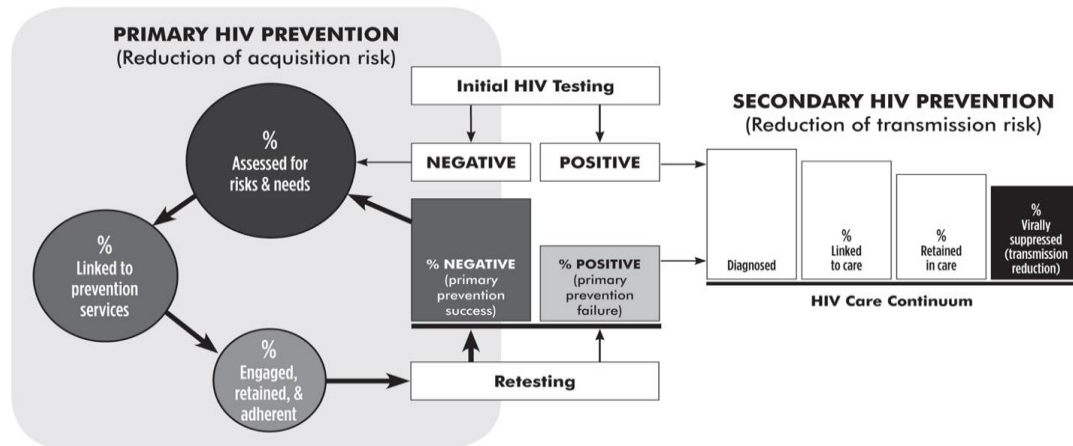
Key populations: should be engaged throughout the prevention and treatment cascade

“Key populations are defined groups who, due to specific higher-risk behaviors, are at increased risk of HIV irrespective of the epidemic type or local context. Also, they often have legal and social issues related to their behaviors that increase their vulnerability to HIV.”

Consolidated Guidelines on HIV Prevention, Diagnosis, Treatment And Care For Key Populations Key Populations, July 2014

Key populations include: sex workers, gay and other men who have sex with men, transgender people, people who inject drugs and prisoners and other incarcerated people.

Engagement



← Addressing human rights and gender equity, including stigma, discrimination and violence →

Horn T, et al. Towards an integrated primary and secondary HIV prevention continuum for the United States: a cyclical process model. *J Int AIDS Soc.* 2016 Nov 17;19(1):21263.

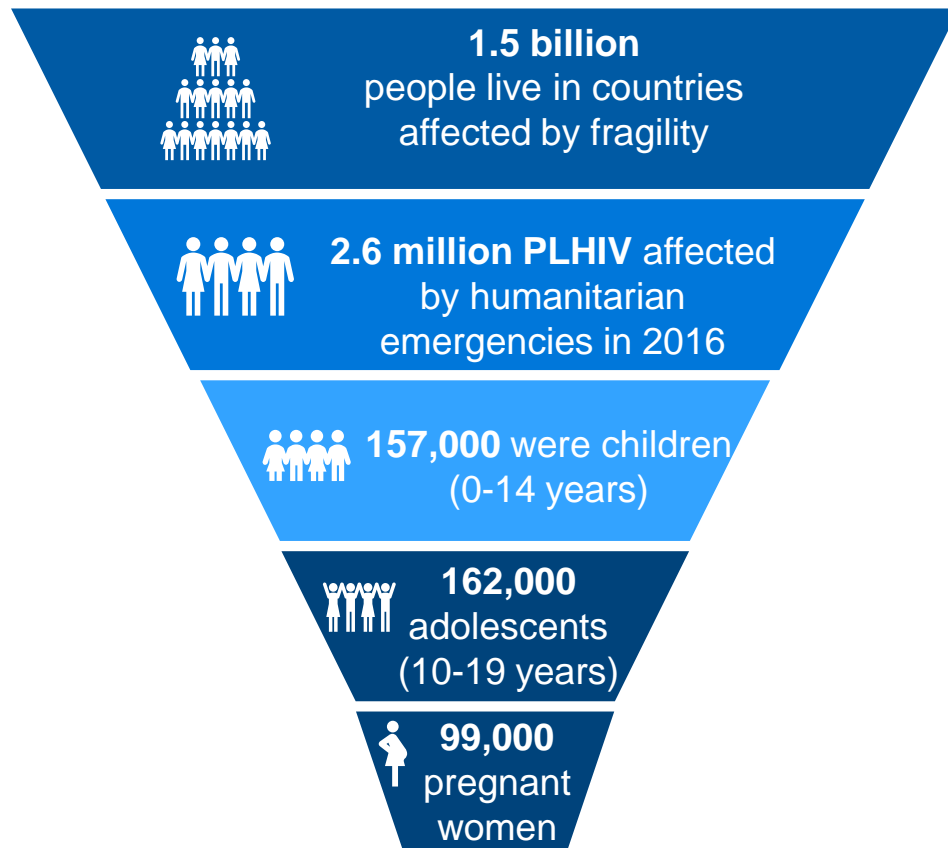
Comprehensive Programming



Prioritize high coverage prevention and treatment programs to reduce new infections and AIDS-related deaths among key populations/sexual partners of key populations.

Addressing vulnerable populations: in addition to key populations, other groups are at increased HIV risk due to context – emergencies, displacement, insecurity

Illustration: Humanitarian Emergencies and vulnerability to HIV



Key Challenges

Increased vulnerability:

Humanitarian emergencies and armed conflict exacerbate existing vulnerabilities and inequalities, increasing the risk of HIV for key and other vulnerable populations

Health services: Emergencies disrupt health services, which may interfere with vital access to treatment for people living with HIV

“Left behind”: Refugees and displaced people are not usually included in national HIV strategies, meaning that prevention and treatment services may not reach them

Sexual and gender based violence: Women, girls and adolescents (girls and boys) are particularly vulnerable to sexual violence in emergencies and armed conflict

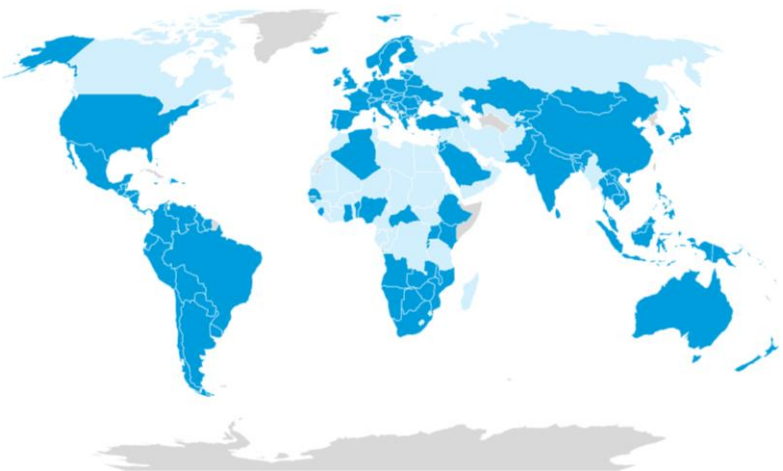
Irregular displacement: Prevents migrants and mobile people from accessing social and health services, and from being informed about their rights, which may further reduce access

Food insecurity: Emergencies often result in food insecurity and malnutrition

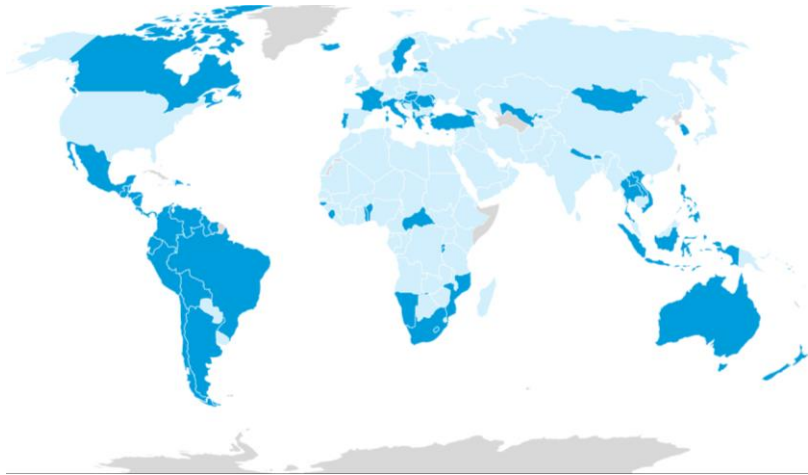
Gender equity: despite progress, significant progress still to be made in achieving gender-equity to improve HIV program outcomes

Yes No No Data

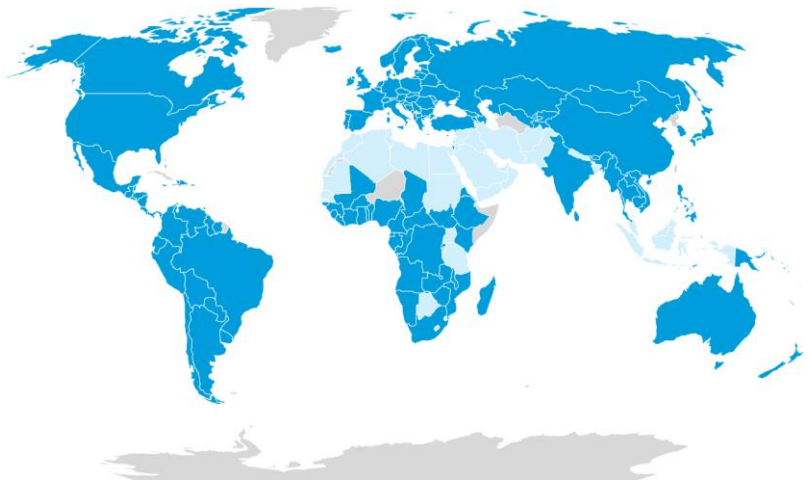
Is there a domestic violence legislation?



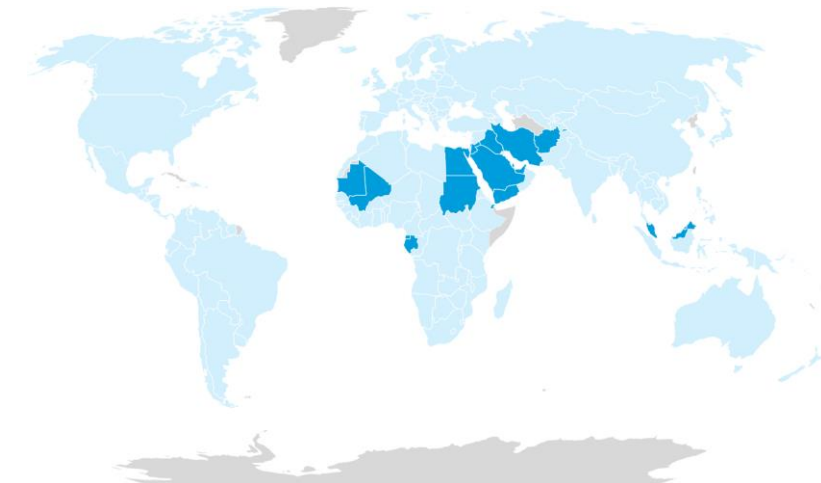
Does legislation explicitly criminalize marital rape?



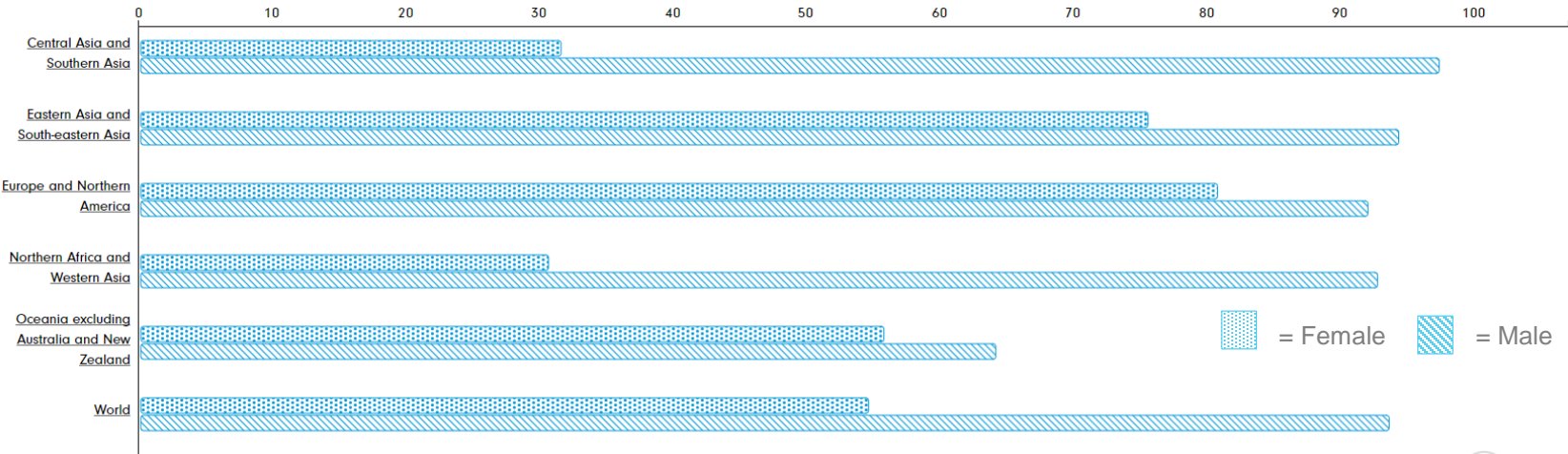
Do sons and daughters have equal rights to inherit assets from their parents?



Are married women by law required to obey their husbands?



Labor force participation rate (%)



Source: Progress of the World's Women, UN Women, 2019.

Gender Equity: how do gender inequities impact disease outcomes?



Among the 13 Sub-Saharan Africa countries with the largest epidemics, 70% of new HIV infections among 15-24 year-olds occurred among females



Transgender women are 12 times more likely to acquire HIV than members of the general population



Men are less likely to access HIV testing or seek, use and adhere to ART, and are more likely to have a lower cluster of differentiation 4 (CD4) count at treatment initiation due to late diagnosis

Key Approaches and Interventions:

- Improving the ability of a country or program to collect and use sex and age disaggregated data through national health information systems and special surveys if necessary (i.e. key populations)
- Differentiated HIV prevention approaches, including: gender and age-responsive HIV testing and counselling, the promotion of male **and female** condoms and access to comprehensive sexual and reproductive health (SRH) services
- Addressing harmful gender norms – including gender-based violence - that keep people out of services or make it hard for them to adhere to treatment
- Implement differentiated adherence support programs that respond to gendered realities
- Invest in differentiated approaches for male/female/transgender and other key populations

HIV co-infections and co-morbidities: opportunity to leverage Global Fund programs to catalyze wider outcomes



- Increased access to ART treatment and monitoring results in fewer deaths from AIDS-related causes.

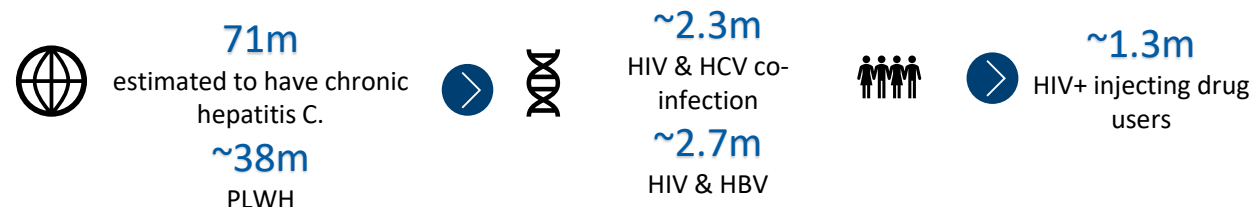


- Morbidity and mortality is increasingly driven by co-infection with other diseases - including TB and hepatitis C (HCV), and co-morbidity with non-communicable diseases (NCDs) – including cervical cancer and HPV.



- April 2015, framework for financing co-infections and co-morbidities of HIV (TB, malaria) which allows possibility to support beyond TB/HIV.
- While significant investments have been made in TB/HIV interventions - TB deaths among PLHIV halved since 2010, likely related to ART treatment – there is still more to do – e.g. further roll out of TPT, including new shorter regimens (3HP, 1HP).

Illustration: Opportunities to make progress on HIV and HCV co-infection



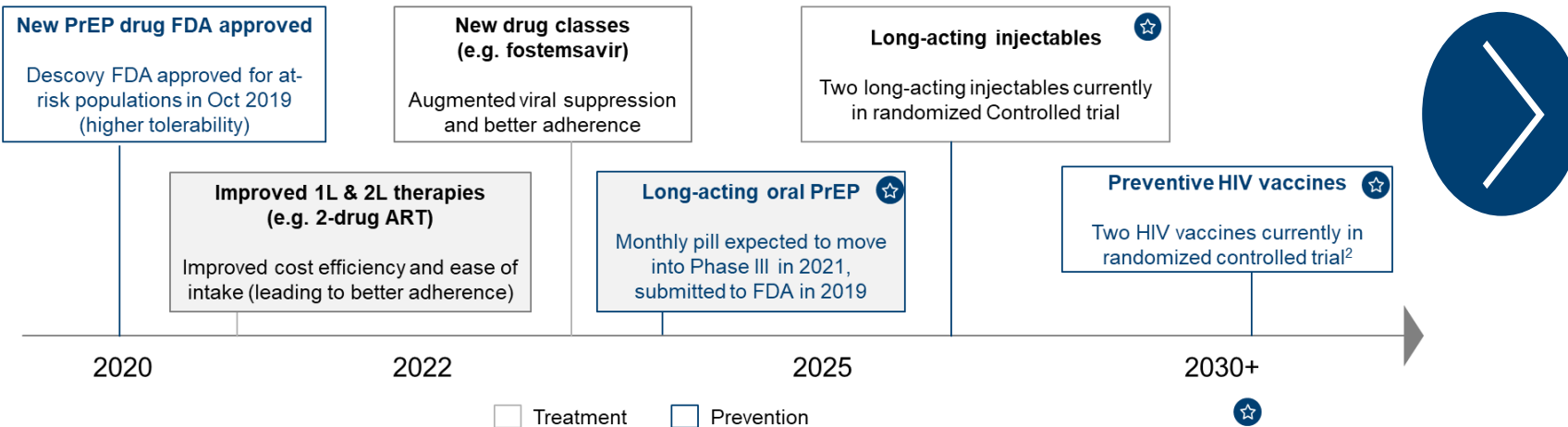
- WHO Pre-Qualified diagnostics and treatment for eligible low- and middle-income countries have come down significantly in price since 2014 – from \$750-900 to ~\$90ppp – even lower for CHAI supported countries that commit to scale-up of HCV treatment.
- Facilitate better integration of HCV testing/treatment with harm reduction interventions.
- Integration of HCV testing within existing GeneXpert platforms – support needed for policy change.

Opportunities to further catalyze investments in co-infections and co-morbidities which have direct impact on people living with HIV (and TB and malaria).

Innovative product pipeline: opportunity for Global Fund to play critical role in scale-up of new tools, technologies and regimens (prevention, diagnosis, treatment)

Illustrative

High-level pipeline

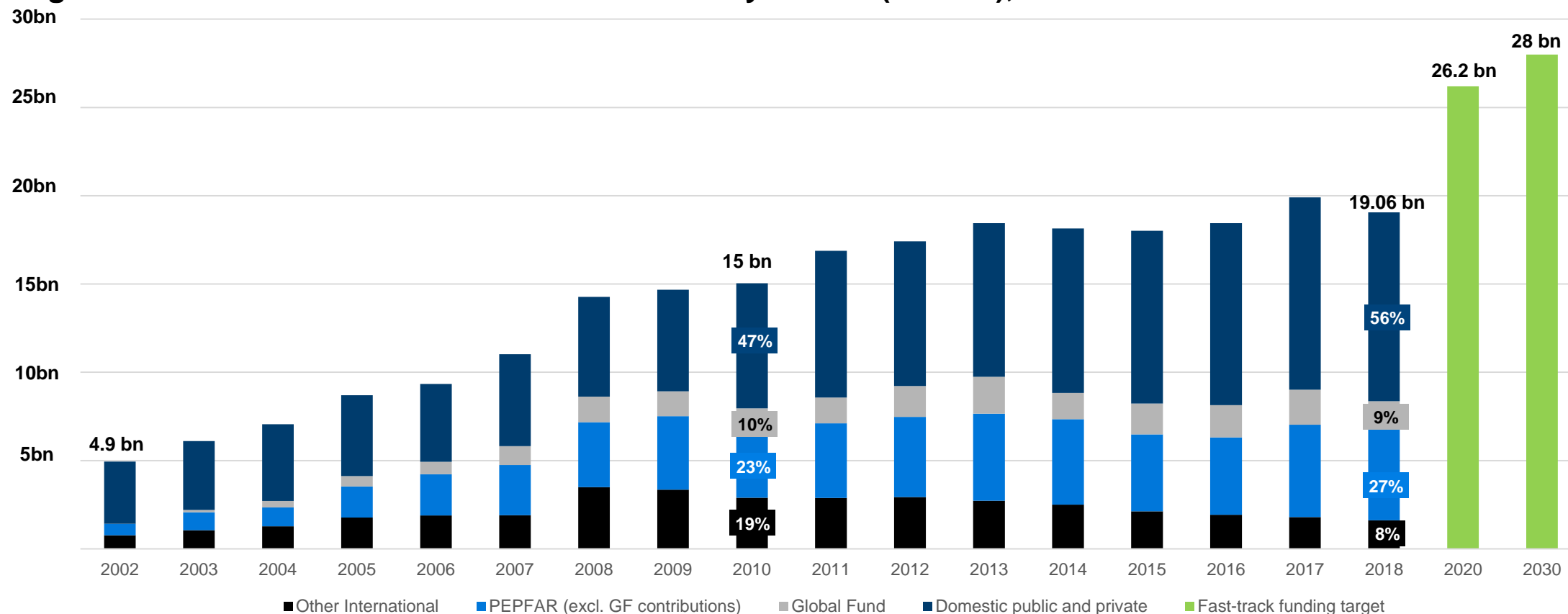


- **Country level:** investment in delivery systems for **access** (facilities, integration, community-based platforms); demand creation; capacity - including at **community level**.
- **Partnerships:** coordination to prepare for efficient and effective roll-out of new products; early identification of 'game-changers'.

Strengthen and adapt access platforms (i.e. family planning clinics, ART clinics) and demand creation platforms to ensure equitable and targeted roll-out and scale of new technologies and products (prevention, diagnosis, treatment).

Catalytic role of Global Fund in HIV funding landscape

Funding for HIV in low- and middle-income countries by source (US\$ bn), 2019



As domestic resources increase and global funds become an increasingly smaller share of overall funding landscape, the Global Fund must seek to play a catalytic role across different contexts.

COVID-19 and HIV

- **COVID-19 threatens to substantially undermine progress** on HIV.
- Recent modelling convened by WHO and UNAIDS¹ estimates that a **6 month interruption in the supply of ARVs in sub-Saharan Africa** would lead to **over 500,000 adult HIV deaths**. Interruption to condom supplies and peer education would **increase vulnerability to HIV**, although physical distancing measures could reduce risky sex.
- **Prevention and rapid containment of COVID-19 is a priority** in minimizing the impact on services to PLHIV and people who need HIV prevention services.
- HIV investments should protect **continuation of essential HIV services, focusing on treatment and prevention**.
- **HIV prevention programs** are likely to be particularly affected by COVID-19 responses. Delivery modalities will need to adapt and may result in fewer in-person services, which could affect the distribution of key prevention commodities. There is a need to adapt and protect the distribution of key HIV prevention and SRH commodities and intensify shift towards virtual/online health information & behavior change interventions and community mobilization.
- **Maintaining treatment programs**, while reducing risk of COVID-19 to PLHIV, requires adaptive responses noting the WHO guidance to immediately enroll all PLHIV not on treatment.
- **Focus on ensuring availability of key commodities** – such as condoms, injecting equipment, ARVs for ART and PrEP, methadone/ buprenorphine for Opioid Substitution Therapy (OST), family planning commodities, STI treatment. This will intensify the need for in-country and partner coordination and supply and distribution adaptation and protection, in order to avoid stock-outs at all levels.
- **Focus on strengthening of community systems/responses** needed as governments and communities adapt their HIV programs in light of COVID-19. Important to ensure that communities are part of decision-making to adapt and create local solutions, and provide local safety nets, including for vulnerable populations.

1. Britta L Jewell, Edinah Mudimu, John Stover, Debra ten Brink, Andrew N Phillips et al. 2020. Potential effects of disruption to HIV programmes in sub-Saharan Africa caused by COVID-19: results from multiple mathematical models. Pre-print [here](#).