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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

**Fast Track targets**

<table>
<thead>
<tr>
<th>By 2020</th>
<th>By 2030</th>
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</thead>
<tbody>
<tr>
<td>90-90-90 Treatment</td>
<td>95-95-95 Treatment</td>
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<tr>
<td>500 000 New infections among adults</td>
<td>200 000 New infections among adults</td>
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<tr>
<td>&lt; 500 000 AIDS-related deaths</td>
<td>&lt; 500 000 AIDS-related deaths</td>
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<tr>
<td>ZERO Discrimination</td>
<td>ZERO Discrimination</td>
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**Progress towards 95-95-95 (2018)**

79% (67-92%) People living with HIV who know their status
78% (69-82%) People living with HIV who know their status and who are on treatment
86% (72-92%) People on treatment who are virally suppressed
53% (43-63%) People being with HIV who are newly suppressed

**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.

**$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

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

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.

HIV

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)

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.

Source: UNAIDS data (2019). Projected continuation of recent trend is based on fitting a linear (where the trend is increasing) or exponential (where declining) fit of the past 6 years (2013-2018) to project 2019-030, assuming that the pace of program implementation continues as it has over the last 6 years without significant improvement or deterioration.
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.

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


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.
HIV

Prevention: off-track to meet 2020 HIV prevention targets

1. Combination prevention for adolescent girls and young women

2. Combination prevention with key populations

3. Comprehensive condom programs

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

5. 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 million 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.

Source: Global HIV prevention coalition Third Progress Report, October 2019

1 Includes 28 countries which account for 1.2 million new HIV infections among adults in 2018, which is 75% of all new HIV infections among adults globally. 2 Combination prevention combines behavioral biomedical and structural interventions

3 Sex workers and their clients, men who have sex with men, transgender people, people who inject drugs and prisoners
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

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\(^1\) 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

**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.

**Context**

_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).

**Results**

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

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Source: Strengthening the scale-up and uptake of effective interventions for sex workers for population impact in Zimbabwe, July 2019, Frances M Cowan, Sunga T Chabata, Sithembile Musemburi, Elizabeth Fearon, Calum Davey, Tendayi Ndori-Mharadze, Loveleen Bansi-Matharu, Valentina Cambiano, Richard Steen, Joanna Busza, Raymond Yekeye, Owen Mugurungi, James R Hargreaves, and Andrew N Phillips
Mother-to-child transmission: reasons for new infections in children vary depending on context

- 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 breastfeeding) 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).

Sources: UNAIDS, Start Free Stay Free AIDS Free 2019 report
HIV

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

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.

Source: UNAIDS Special Analysis, 2019, note figures represented do not include the uncertainty bounds which are available at http://aidsinfo.unaids.org/
Example: treatment challenges in South Africa

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

% PLHIV engaged in Steps of HIV care cascade in South Africa

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)


- 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


- 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

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.

Reference: Adapted from Rabkin R 2019.
Reference: El-Sadr WM, Harripersaud K, Rabkin M 2017
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)

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.

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.

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

Sources: UNHCR, WFP and UNAIDS (2018)
Gender equity: despite progress, significant progress still to be made in achieving gender-equality to improve HIV program outcomes

- 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?

![Map showing countries with domestic violence legislation](image1)

![Map showing countries with legislation criminalizing marital rape](image2)

![Map showing countries where sons and daughters have equal inheritance rights](image3)

![Map showing countries where married women are required to obey husbands](image4)

### Labor force participation rate (%)

![Chart showing labor force participation rate by gender and region](image5)

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).

Sources: WHO Global Hepatitis Report, 2017; Clinton Health Access Initiative (CHAI)
Innovative product pipeline: opportunity for Global Fund to play critical role in scale-up of new tools, technologies and regimens (prevention, diagnosis, treatment)

- **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).

1. Significant change in perceived convenience / efficiency vs. current tools, 2. Trials for a third experimental vaccine failed in February 2020

Source: AVAC, WHO, AIDSMap, BBC
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.

Source: UNAIDS and Kaiser Family Foundation July 2018, UNAIDS estimates, Global Fund disbursement reports, UNGASS, GARPR and GAM reports 2006-2018
COVID-19 and HIV

- **COVID-19 threatens to substantially undermine progress** on HIV.
- Recent modelling convened by WHO and UNAIDS\(^1\) 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.