PEPFAR: Increasing program impact and efficiency through data analysis

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DEFINING AN EFFICIENT, SUSTAINABLE RESPONSE

And the steps needed to achieve epidemic control
Business as usual: escalating costs year after year

2.5 MILLION
NEW ADULT HIV INFECTIONS PER YEAR

Source: UNAIDS, 2015
Fast Track Strategy: Program costs decline in out years

0.2 MILLION
NEW ADULT HIV INFECTIONS PER YEAR

Source: UNAIDS 2015
We have a 5-YEAR WINDOW

Source: UNAIDS 2015
Global HIV Funding Has Plateaued and is projected to remain flat

Values in USD, Billions

Source: Kaiser Family Foundation and UNAIDS, 2015
Defining “A Sustainable HIV Response”

Sustainability is *not* only about funding.

A sustainable response can only be achieved when the epidemic is under control and no longer expanding.

How can we achieve epidemic control?

- **Right things**
- **Right places**
- **Right now**
- **Right way**
The **Right Things** to achieve epidemic control

- Expand access to ART: test and start for everyone
  - Find & treat men living with HIV
  - Pregnant & breastfeeding women
  - Children & adolescents
  - MSM & transgender people, sex workers, people who inject drugs
- Develop alternative service delivery models
- Supply chain management: improve tendering & costs
- Prevent new infections in young women (15-24): DREAMS
- Prevent new infections in men (30-45): VMMC & treatment
The **Right Places** for epidemic control

- Focusing limited resources on the highest burden areas
  - Strategic scale-up
  - Refine approach to targeting interventions
  - Collect & use facility-level data
  - Use programmatic data for continuous evaluation of investments
Right Now: Urgent need to control epidemic

- Achieving a sustainable response requires immediate action and focus
- We have a limited window to recalibrate response
  - Use of granular ‘real-time’ data to direct investments
  - Open sharing of data & transparency needed

Do we have the collective will to focus, and to make difficult choices together to achieve epidemic control?
2 FRAMING THE EPIDEMIC TODAY

Where we’re at today, and where we need to be
Dramatic reductions in HIV Incidence Rates
Maintaining momentum is key to achieving epidemic control

Trends in HIV Incidence Rates, 1990-2013

Source: UNAIDS, 2015
Dramatic Impact of PEPFAR & Global HIV Response

Life Expectancy at Birth (in years), 1960-2013; Select Countries

- Botswana
- Kenya
- Lesotho
- Swaziland
- Uganda
- South Africa
- Zimbabwe
- World

HIV/AIDS Epidemic

Source: World Bank, 2014
% Change in New HIV Infections (2004-2014)

Source: UNAIDS, 2015
% Change in New Pediatric HIV Infections (2000-2014)

Source: UNAIDS, 2015
% Change In Adult New HIV/AIDS Infections (2000-2014)

Source: UNAIDS, 2015
New PEPFAR Targets for 2017

12.9 million
women, men, and children on ART

40% reduction in new HIV infections in young women in 10 countries

Total of 13 million voluntary medical male circumcisions

Source: pepfar.gov
8.9 Million
Voluntary Medical Male Circumcisions
TEST & START: EXPANDING TREATMENT

Translation of the science into guidelines and adaptation
PEPFAR Results for 2015

68.2 Million

People were tested & counseled for HIV
PEPFAR Results for 2015

9.5 Million
Men, Women, & Children on Treatment
New WHO ART & PrEP Guidelines

- Treat ALL (at any CD4) – all people living with HIV across all ages
- The sickest remain a priority (symptomatic disease and CD4<350)
- New age band for adolescents (ages 10-19)
- Option B not taken forward; Option B+ as new standard
- PrEP as an additional prevention choice for all people at substantial risk of HIV infection (>3% incidence)
We can support 2 ART clients for the price of 1

Smart policy and service delivery choices yield tremendous cost savings

Source: Stover, 2015
## Reconfiguring Service Delivery Approaches to Achieve Greater Efficiency and Reduce Costs

<table>
<thead>
<tr>
<th>Current Status of Service Delivery</th>
<th>COP 16 Target Approach</th>
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</table>
| **Initiating ART:** multiple visits to determine eligibility, delays and losses in ART Initiation. Multiple CD4 measurements pre-ART. | **Initiating ART:**  
- Adopt Test and START to simplify eligibility  
- Same day ART initiation for all who are ready  
- Optional CD4 at baseline  
- TB screening and pregnancy test at baseline |
| **Stable on ART:** No strategy to differentiate stable patients | **Stable on ART:**  
- Define stable patients as those with undetectable viral load or based on simple clinical criteria |
| **Clinic visits:** Frequent visits for stable patients result in high costs to the health system and patient. Limited pilots of community-based models. | **Clinic visits:** Goal to move to clinic visits every 6-12 months for stable patients. Standardization and scale up of community-based models. Use of non-physician clinicians preferred. |
| **ARV Pharmacy pick-up:** Monthly or more frequent drug pick up results in high costs to the health system and patient. Limited pilots of community-based models or innovation. | **ARV pharmacy pick-up:** Goal to move to pharmacy pick up every 3-6 months. Standardization and scale up of community-based models and innovations (e.g. use of private pharmacies) |
| **Laboratory testing:** Variability in laboratory testing and frequent lab monitoring that is not evidence-based, including CD4, hematology, chemistry, LFTS, and other testing. | **Laboratory testing:** Annual viral load testing and elimination of CD4 testing for routine monitoring. Annual Creatinine is desirable for patients on tenofovir. Annual Hemoglobin is desirable for patients on zidovudine. Eliminate other non-routine labs that are not evidence based. PEPFAR teams need to ensure lab results reach patients and clinicians for decision-making and repeat testing is not done simply because test results do not reach patient charts. |
| **Other cost drivers:** Inefficient procurement practices, poor coordination with other donors, missed opportunities. | **Other cost drivers:** National quantification and coordination for ARV and other procurement (e.g. lab commodities). |
Innovative Service Delivery Models for ART are Urgently Needed

- To decentralize services & decongest crowded clinics
- To engage communities & improve retention
- To improve access for key populations such as PWID, MSM, TG, and sex workers
ARV refill policies affect the cost of treatment
ARV refill policy for stable patients, select high burden countries

1 month ARV refills
- Mozambique

2 month ARV refills
- Nigeria
- Kenya
- Tanzania
- Uganda
- Ethiopia
- South Africa
- Zimbabwe

3+ month ARV refills
- Malawi
- Zambia

Source: GFATM, 2015
Decentralizing ART services
Countries with policies to decentralize ART offer more cost effective services

Source: GFATM, 2015
Shared Responsibility

- Is not about money but about the **policy changes** that are essential to the elimination of HIV as a public health threat
- **Country leadership** on policies and adoption of WHO guidelines must be **within weeks and months** and not years
- Nearly 2/3rd of the **cost of treatment** is service delivery, not the cost of drugs
- Change in policy to every 6 month appointments and tendering to 3-6 month supply of drugs will allow each treatment site to **add 75% more clients on treatment** with the same facility personnel and cost
What if we could double the number of people on lifesaving treatment over the next 5 years?
We can have: **Treatment for All**

If …

- The world prioritizes and fast-tracks treatment
- Countries adopt key policy changes and service delivery models
- Together we provide high-quality implementation

…then we can collectively aim to support 28 million men, women, and children on treatment by 2020 — nearly twice as many as today.
We can prevent >50% of new HIV infections and reduce the number of AIDS deaths by nearly 50%.

This is bold. This is extraordinary. And it is possible.
Treatment for All: 28M on ART by 2020

New HIV Infections and AIDS Deaths

5-year window: 2015 - 2020

Source: Stover, 2015
ENDING MTCT AND TREATING CHILDREN

Virtual elimination of new pediatric infections & accelerating children’s treatment (ACT)
PEPFAR Results for 2015

14.7 Million Pregnant women tested for HIV

831,500 HIV+ pregnant women started ART to protect their babies & improve maternal health
Number of new pediatric HIV infections, 2009-2014

Achieved to date (6 years):
~160,000 fewer new pediatric HIV infections annually

Remaining gap to virtual elimination of MTCT:
~ 140,000 annual new pediatric HIV infections

Source: UNAIDS Estimate, 21 Countries, 2015
Mother-to-Child Transmission Rates at 6 weeks and final status

- Chad
- DRC
- Nigeria
- Angola
- Cameroon
- Burundi
- Cote d'Ivoire
- Ghana
- Ethiopia
- Kenya
- Malawi
- 21 Countries
- Lesotho
- Zambia
- Zimbabwe
- Swaziland
- Uganda
- Namibia
- South Africa
- Botswana

6-week transmission rate

Source: UNAIDS Estimate, 21 Countries, 2015

Majority of vertical transmission now occurs during breastfeeding – need for better retention strategies for new mothers on ART

Global Plan Target: <5% final
Without lifesaving antiretroviral therapy for HIV-infected children, 50% will die before their 2\textsuperscript{nd} birthday. 80% will die before age 5.
Pediatric Treatment: Percent of children <15 years living with HIV on lifelong ART by country, 2014

Source: UNAIDS Estimate, 21 Countries, 2015
Partnering to save children
PEPFAR & Children’s Investment Fund Foundation (CIFF)

Accelerating Children’s HIV/AIDS Treatment (ACT)

- $200M partnership
- Doubling the number of children receiving life saving ART
- FY 2017 Target: 600,000 on treatment
- Interim FY 2016 Target: 500,000 on treatment
- Countries: Cameroon, DRC, Kenya, Lesotho, Malawi, Mozambique, Tanzania, Zambia, Zimbabwe
ACT Results, 2015

PEPFAR is supporting 488,978 children with life-saving antiretroviral treatment in the ACT countries up from 300,000 just 12 months ago.

PEPFAR has more than doubled HIV testing for children during the first year of ACT to 4.3 million in 2015.
DREAMS FOR YOUNG WOMEN & GIRLS

Ensuring young women are Determined, Resilient, Empowered, AIDS-free, Mentored and Safe
Why DREAMS?

Girls and young women account for 71% of new HIV infections among adolescents in Sub-Saharan Africa.
Age-gender disparity in new HIV infections globally, 2014

720,000 new infections primarily driven by infection of young women

Source: UNAIDS 2014 estimates.
Stark Disparity in HIV Prevalence in young women & young men

Prevalence of HIV among high school students in rural KwaZulu-Natal, South Africa (2014)

Source: Abdool Karim Q, 2014
PEPFAR Results for 2015

5.5 Million

Orphans & vulnerable children received care and support services
The DREAMS Partnership

- Launched on WAD 2014
- $385 million public-private partnership
  - PEPFAR
  - Bill & Melinda Gates Foundation
  - Girl Effect, Johnson & Johnson, ViiV Healthcare, and Gilead
- Goal: to reduce new HIV infections in adolescent girls & young women
- Ensure that girls have an opportunity to live Determined, Resilient, Empowered, AIDS-free, Mentored and Safe lives.
WHERE DOES DREAMS WORK

DREAMS currently works in 10 countries:

- Kenya
- Lesotho
- Malawi
- Mozambique
- South Africa
- Swaziland
- Tanzania
- Uganda
- Zambia
- Zimbabwe
New HIV Infections among adolescent girls and young women

Source: UNAIDS, 2015
DREAMS Interventions

- Condom Promotion & Provision
- HIV Testing & Counseling
- PrEP
- Post-Violence Care
- Increased Contraceptive Method Mix
- Social Asset Building
- School-Based HIV & Violence Prevention
- Community Mobilization & Norms Change

Supporting Activities
- Characterization of Male Partners
- Linking Male Partners to Services
- Management & Coordination
- Strategic Information

Decompose Partner Risk
- Decrease Risk in Sex Partners
- Strengthen the Family

Strengthen the Family
- Parenting/Caregiver Programs
- Cash Transfers
- Education Subsidy
- Combination Socioeconomic Approaches

Mobilize Community for Change
- School-Based HIV & Violence Prevention
- Community Mobilization & Norms Change

EMPOWER AGYW & REDUCE RISK

Percentages are from initial country plans and are currently under revision.
The DREAMS Core Package

Mobilize Communities for change

Reduce Risk of Sex Partners
- Mapping to target highly effective interventions (ART, VMMC)
- Youth-friendly sexual and reproductive health care

Empower Girls & Young Women and reduce risk
- Social Asset Building

Strengthen Families
- Social Protection (Cash Transfers, Education Subsidies, Combination Socio-Economic Approaches)

Community Mobilization & Norms Change

School-Based Interventions

Parenting/caregiver Programs
Elements of the Core DREAMS Package

HTC: HIV Testing and Counseling

PrEP: Pre-Exposure Prophylaxis

Violence prevention and post-violence care, including PEP

Condoms, increase consistent use and availability (female & male) + increasing contraceptive method mix

Adolescent-Friendly Health Care

OLDER MEN Diagnose and Linkage to ART

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OLDER MEN Diagnose and Linkage to ART
HIV Prevalence by Sex & Years of Education
Botswana, 2004-2008

Source: De Neve et al., The Lancet, 2015
Education reduces risk of HIV acquisition

Study in Botswana compared young women and men completing 9 versus 10 years of education

One additional year of education for adolescents can reduce HIV acquisition before age 32 by one third

- The protective effect of education is even stronger among young women – risk of HIV acquisition was cut nearly in half

Source: De Neve et al., The Lancet, 2015
DREAMS Innovation Challenge
Inviting investment ideas to address gaps in core areas

Keeping girls in secondary school by addressing underlying issues, such as feminine hygiene and sanitary needs

Pioneering new ways to find adult men and link them to services, including HIV counseling and testing, treatment, and voluntary medical male circumcision

Supporting pre-exposure prophylaxis (PrEP) interventions by identifying adolescent girls and young women appropriate for PrEP and/or by supporting their adherence to PrEP

Leveraging community-based capacity and systems to deliver evidence-based programming at the grassroots level

Providing a post-secondary school bridge to employment for young women (ages 19-24)

Increasing the use of Data4DREAMS
Commitment to securing an AIDS-free future for young women

Young women face great risk for HIV infection

Every year: 380,000 new HIV infections
Every week: 7,300 new HIV infections
Every day: > 1,000 new HIV infections

This must change.

PEPFAR is now investing nearly half a billion dollars to support an AIDS-free future for adolescent girls and young women.
RIGHT PLACES: COUNTRY EXAMPLES

Using Data to Understand micro-epidemics and refine our response
Uganda

We can be agile as governments and pivots can be sustained
New HIV Infections & AIDS Deaths: Uganda

Source: UNAIDS, 2015
Uganda: Focus on Core (Treatment)

PEPFAR Uganda Budget and Adults & Children on ART, 2008-2014

Source: PEPFAR, 2015
**Uganda: Focus on Core (PMTCT) B+ Acceleration**

**PEPFAR Uganda PMTCT: Testing of Pregnant Women & Lifelong ART for Mothers**

<table>
<thead>
<tr>
<th>Year</th>
<th>PMTCT Test</th>
<th>PMTCT B+</th>
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<tbody>
<tr>
<td>2008</td>
<td>594,305</td>
<td>0</td>
</tr>
<tr>
<td>2009</td>
<td>849,638</td>
<td>0</td>
</tr>
<tr>
<td>2010</td>
<td>785,615</td>
<td>0</td>
</tr>
<tr>
<td>2011</td>
<td>1,136,884</td>
<td>10,083</td>
</tr>
<tr>
<td>2012</td>
<td>1,231,115</td>
<td>17,138</td>
</tr>
<tr>
<td>2013</td>
<td>1,508,404</td>
<td>75,566</td>
</tr>
<tr>
<td>2014</td>
<td>1,647,818</td>
<td>88,060</td>
</tr>
</tbody>
</table>

**Source:** PEPFAR, 2015
Uganda: Focus on Core (VMMC)

<table>
<thead>
<tr>
<th>Year</th>
<th>Budget</th>
<th>VMMC</th>
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<tbody>
<tr>
<td>2008</td>
<td>276,262,3</td>
<td>0</td>
</tr>
<tr>
<td>2009</td>
<td>287,113,7</td>
<td>0</td>
</tr>
<tr>
<td>2010</td>
<td>286,258,3</td>
<td>0</td>
</tr>
<tr>
<td>2011</td>
<td>323,388,3</td>
<td>9,052</td>
</tr>
<tr>
<td>2012</td>
<td>298,388,3</td>
<td>57,132</td>
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<tr>
<td>2013</td>
<td>323,388,3</td>
<td>352,039</td>
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<tr>
<td>2014</td>
<td>320,000,0</td>
<td>906,615</td>
</tr>
</tbody>
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Uganda Program Review
Uganda: Persons Living with HIV (PLHIV) Age 15-49, with PEPFAR support, by District (SNU1), 2014

Persons Living with HIV

- **12,001 - 58,000**
- **7,801 - 12,000**
- **4,101 - 7,800**
- **400 - 4,100**
- **No data**

**DRAFT**

UNCLASSIFIED
SNU1 = Districts (n=112)

Note:
Kiboga district split from Mubende in 1991.
No data provided for this district.

Source: UNAIDS, 2014
Uganda: Orphans & Vulnerable Children (OVC) Served, with PEPFAR support, by District (SNU1), 2014

# of OVC Served
- 9,642 - 27,263
- 5,459 - 9,641
- 2,946 - 5,458
- 1 - 2,945
- 0

Uganda: Voluntary Medical Male Circumcisions (VMMC), with PEPFAR support, by District (SNU1), 2014

# of VMMCs
- 14,366 - 37,069
- 8,177 - 14,365
- 4,640 - 8,176
- 1 - 4,639
- 0

Source: PEPFAR, 2014

SNU1 = Districts (n=112)

UNCLASSIFIED
Boundaries are not necessarily authoritative.
90:90:90 is within Uganda’s reach

![Diagram showing the progress towards 90:90:90 targets]

- Infected: 1,578,289
- Diagnosed: 1,420,260
- On ARVs: 1,278,414

Additional patients needed to reach 90-90-90 targets:
- Infected: 422,144
- Diagnosed: 485,359
- On ARVs: 243,000

PEPFAR FY16 Targets:
- Infected: 138,315
- Diagnosed: 172,381
- Linked to Care: 15,244
- Retained in Care: 933,805
- On ART: 918,453
- Virally Suppressed: 177,906

Additional patients needed to reach 90-90-90:
- Infected: 90,000
- Diagnosed: 485,359
- On ART: 243,000

PEPFAR U.S. President’s Emergency Plan for AIDS Relief
Haiti

There are still historically underserved populations geographically.
HIV Infections & AIDS Deaths in Haiti

Estimated Number of New HIV Infections and AIDS Deaths by Year

Haiti

Source: UNAIDS, 2015
Note
Montrouis included in Saint-Marc, 260 all and 6 children.
17 people did not have a commune-level designation.

Names and boundary representation are not necessarily authoritative
Source: PEPFAR APR14
March 18, 2015
Note
Montrouiss included in Saint-Marc, 19 women.
Two pregnant women did not have a commune-level designation.
USING GEOSPATIAL MAPPING FOR IMPACT
Using Geospatial Mapping to Define Site Density
Nairobi: HIV Prevalence at ANC/PMTCT Sites

Although PMTCT positivity in Nairobi is 6.9 percent, some sites found zero positives in a six-month period in 2014. Positivity at specific sites ranged from zero to 74 percent. Some sites needed to test large numbers of women to identify an HIV positive person, even in areas with high local positivity.
Site Prioritization: Priority Districts

Plan for detailed analysis to determine appropriate client referrals
ART sites volume / Scale-up and Maintenance districts

<table>
<thead>
<tr>
<th>Low – High volume ART sites</th>
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<tbody>
<tr>
<td>Total number of ART sites</td>
<td>636</td>
</tr>
<tr>
<td>Low volume ART sites</td>
<td>196</td>
</tr>
<tr>
<td>(&lt;= 25 patients)</td>
<td></td>
</tr>
<tr>
<td>High volume ART sites</td>
<td>28</td>
</tr>
<tr>
<td>(&gt; 1,000 patients)</td>
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Map created by Strategic Information Branch, PEPFAR CI - May 2015
EMPOWERING CIVIL SOCIETY & PLHIV

Supporting civil society groups is key
The World Was Slow to Recognize the Global AIDS Crisis
Advocates Driving the US HIV/AIDS Response

Advocates Demanded Change in US Domestic Response

- 1982: Gay Men's Health Crisis (GHMC) founded as first organized response to AIDS.
- 1988: ACT UP (AIDS Coalition to Unleash Power) demand FDA accelerate AIDS drug approval process
- 1990: ACT UP protests at NIH demanding more HIV treatments and the expansion of clinical trials to include more women and people of color
- 1991: Black Coalition on AIDS begins providing services targeted to people of color in San Francisco
Advocates Driving the Global HIV/AIDS Response

• 1983: Brazilian civil society successfully pushed government to adopt first government AIDS program

• 1987: AIDS Support Organization in Uganda developed model for community-based care & launched concept of “living positively”

• 1992: first global networks of people living with HIV are established for global action: GNP+ and ICW

• 2003: PMTCT & treatment roll-out in South Africa would have been delayed or non-existent if not for the Treatment Action Campaign & AIDS Law Project
Civil Society Plays Critical Role in HIV Response

• We would not have a global HIV response if not for civil society groups that demanded it
• People living with HIV should play a meaningful role in shaping HIV programs & have powerful voices within their countries
• Support from donors has been inadequate
• We can all do more to support efforts of networks of PLHIV and civil society groups
Strengthening Civil Society, including FBOs

- PEPFAR has committed $10 million to the Robert Carr Civil Society Networks Fund over the next three years to build the capacity of civil society
- $4 million two-year initiative PEPFAR/UNAIDS faith initiative
- PEPFAR with the Elton John AIDS Funds has committed $10 million to support key population advocacy
- DREAMS innovation Challenge Fund
SUMMARY

Key take-aways & top priorities
Do we have the collective will to focus?

- We have the opportunity to control the HIV/AIDS epidemic in countries by doing the right things in the right places, right now in partnership with host countries, UNAIDS, and GF.
- Do we have the collective will to make the hard choices to reach more in need by focusing resources and efforts?
- Can we increase impact with innovative service delivery models to expand ART & prevent new HIV infections?
- USG accountability will continue to be enhanced to ensure achievement of the targets and ensuring HIV/AIDS epidemic control; PEPFAR data will be available to everyone for analyses.
Our work is far from done. This week alone...

Over 4,230 babies were infected with HIV

Over 34,615 adults were infected of which more than 7000 were young women

Over 20,000 adults died this week from HIV

Over 2880 children died this week from HIV
THANK YOU