90-90-90 Targets Workshop

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90-90-90 and the AIDS Response: Making the Investment Case to National Governments in Uncertain Times

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Investments to stem the HIV/AIDS epidemic over the last 15 years have led to remarkable results

- **19.5 million people** living with the virus are receiving antiretroviral therapy, up from only 800,000 in 2003
- AIDS-related deaths **have almost halved** since the peak in 2005
- **50% fewer HIV infections among children** worldwide since 2010
- **77% of pregnant women** living with HIV now have access to ART
- **11.7 million cumulative VMMCs** were performed through 2015
While this progress has had impact, the response is at a turning point: accelerate and break the cycle of infection while the overall costs are manageable...

... or let the epidemic continue to grow and face far greater future costs in both funding and human lives

While Incidence rates are declining in high endemic regions

Rapidly growing youth and adolescents population a major factor to stagnating # of new infections

Increase in ART vs. Decline in Incidence

Annual Number of New Infections, Global
Epidemic control will require reaching the 90-90-90 targets, implemented in combination with non-ART prevention

- Global ART coverage only 53% - initiating and retaining 10.2 million additional people on treatment by 2020 to reach the 90-90-90 targets is critical

- But we will not get to epidemic control without targeted implementation of effective prevention interventions

- Treatment and prevention need to be implemented in combination to turn the tide of the epidemic

**Source of infections averted to reach Fast Track targets**

- Combination approach key to epidemic control

**New Infections**

**Infections Averted by Tx**

**Infections Averted by Px**

\[\text{Combination} \rightarrow \text{New Infections} \rightarrow \text{Infections Averted by Tx} \rightarrow \text{Infections Averted by Px}\]
We have the tools to move towards epidemic control, but we need to take a smarter, more targeted approach.

**Test Smart**
Scale-up testing services, utilizing data to target, ensuring we are rapidly finding the remaining PLHIV and linking them to care.

**Treat Right**
Extend high quality, patient-centered care to those who are positive with the goal of viral suppression, retention in care, and reduction in mortality.

**Stay Negative**
Rapidly deploy proven prevention tools, particularly to the areas and populations with the greatest impact on new infections.

Ensure strong linkage and retention across the cascade of services from testing to treatment (or prevention) through to viral suppression.
Identifying PLHIV is a primary limiting factor to treatment scale-up. What got us here will not get us to where we need to go.

- As treatment coverage increases, the # of remaining PLHIV not yet on treatment will decrease and become harder to find. **Data-driven, targeted testing becomes increasingly critical in terms of cost and resources.**

- Current testing strategies not reaching all those at risk – **nearly 70% of adults receiving HIV testing services are women**, largely taking place in ANC.

**Total tests required to find 100 PLHIV without targeting:**

- 50% ART Coverage: 1,900
- 95% ART Coverage: 18,100

\[ \sim 9.5X \]
We need to innovate to reach those currently being left behind, and make sure we do not lose those we find

- Scale up existing strategies that work, like POC EID that enabling faster treatment initiation for infected infants
- Utilize new delivery channels like the community and the private sector.
- Innovate testing strategies. HIV self-testing for example, can enable patient contact tracing and increase testing uptake particularly among men and key pops who prefer the discretion and privacy, BUT we have to make sure they are linked effectively to care or prevention services

90% of infants tested with POC EID initiated ART within 60 days vs. 13% whose samples were referred to conventional
Differentiating service delivery models to address patient needs can improve outcomes and enable further scale up of ART

Differentiated care and burden on facility
Hrs of facility visits per year

Differentiated care can:

• **Reduce burden on patients** – 67% decrease in average travel time to facilities per year

• **Improve retention** (overall retention rate of 95.7% observed in Mozambique CAGs) through reduced burden for stable patients and freeing up resources for patients that need greater follow up

• **Reduces burden on the health system**, enabling further scale-up of treatment within already strapped health systems and budgets
There are exciting opportunities for better and lower cost ARVs

Share of first-line adult NNRTI/INSTI market in GA LMICs

First-line Adult Patients (%)

- DTG is cheaper, less toxic and more effective than previous options, with faster viral suppression and fewer side effects

DTG uptake will free up resources for ART scale up, and should improve retention and adherence, helping to meet both treatment and prevention goals
Scaling up an effective VL program is key to providing differentiated care, managing treatment failure for all PLHIV, and motivating patients to retain in care.

- Scale-up of VL is occurring quickly and test volumes will reach 25m globally in 2020.

- But barriers still exist before VL is used as an effective tool:
  - Data management systems need to be implemented to identify hot spots for treatment failure and improve individual case management.
  - Improved sample transport and innovative solutions such as electronic result delivery and POC can ensure results are delivered on time.

Only 55% of patients who receive a VL test successfully receive the result.
Leakages across the cascade of testing, treatment, and prevention undermines investments and efforts.

- Leakages across the cascade of diagnosis, treatment, and suppression [or prevention] are leading to losses we cannot afford, both in terms of resources and human lives.
- Evidenced based best practices to address losses along the cascade need to be implemented.
- Data management systems that enable real-time response to losses are necessary to this effort, and key to understanding why we are losing patients at all points in the cascade.

Investments loss due to poor linkage

*Yield: 5%, Cost: $3.50/test*

- Money and effort invested to find PLWHIV and wasted due to poor linkage.

<table>
<thead>
<tr>
<th>Cost of testing</th>
<th>Linked to care</th>
<th>Not linked to care</th>
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</thead>
<tbody>
<tr>
<td>Total cost to initiate 100K</td>
<td>$11.7M</td>
<td>60% Linked to care</td>
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Non-ART prevention is key to turning the tide of the epidemic, but targeted and effective implementation is critical to maximize impact on the epidemic.

- Non-ART prevention implementation requires a clear understanding of the drivers of the epidemic in different geographies and populations, to enable targeted implementation.

- It is also key to address barriers that inhibit scale-up and cost-effectiveness to ensure successfully targeted implementation of existing (e.g. VMMC) and future prevention tools.

**Oral PrEP Cost Per Infection Averted:** 5% Incidence Setting

- **Scenario 1: Baseline**
  - Unit Cost: $150
  - Adherence: 30%
  - Cost: $11,111

- **Scenario 2: Additional Adherence Intervention(s)**
  - Unit Cost: $175
  - Adherence: 90%
  - Cost: $4,321

**~2.5X**
Continued investment in treatment and epidemic control will bring the HIV epidemic under control...

....and if we get smarter in targeting our response we do not have to double our budgets to do it.

- Reaching the 90-90-90 targets is a critical step towards epidemic control, but they need to be scaled up in combination with targeted, non-ART prevention.

- There are exciting tools in the testing, treatment and prevention space that will improve outcomes and reduce costs.

- To maximize impact on the epidemic as quickly as possible, targeting design and scale up of testing and prevention interventions is especially critical.

- To meet our goals within increasingly limited resources, we need to address leakage across the cascade of testing, care and prevention.
In addition to making investments today, we have to secure stable funding to sustain our gains...

...if we let up on our investments in HIV control, we can expect catastrophic results, as we have learned from our experience in malaria control.

Control is fragile: Historical evidence shows that when programs end, malaria can rapidly resurge.

A systematic review of resurgence events revealed that the “single most common suggested cause of resurgence involved a weakening of malaria programs following funding disruptions” and concluded:

“Finding ways to maintain the funding, political will, and strong operational capacity to continue to use those tools over the long term is imperative to ensure that the dramatic progress that has been achieved through international investment is sustained and extended” (Cohen et. al)