Ensuring Efforts to Scale up, Strengthen and Sustain HIV Responses:
The Potential Impact of Reduced Funding for HIV on Scale-up Strategies

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What's in this meeting report

Section 1 provides an **introduction of the overall initiative**, which will comprise at least three meetings, as well as the **objectives and underlying impetus behind the first meeting** (held in Amsterdam in early September 2017.)

Section 2 summarizes a series of main **challenges and threats to improved HIV responses for all**. Information and observations are grouped within the following categories:
- Failure to meet the levels of UNAIDS-estimated resource needs
- Poor uptake and retention among key populations and young people
- Strains and changes in human resources and health systems
- Weak links in drug supply chains
- Growing rates of drug resistance
- Dangerous, threatening and non-supportive environments (e.g., commitment to critical enablers and human rights)

Section 3 summarizes discussions around **topics and considerations highlighted by meeting participants for future analysis and decision-making**. Information and observations are grouped within the following categories:
- The need for more and more accurate data
- Quality
- Engagement and funding of communities
- Dolutegravir phase-in
- Doing more with less: new funders and cost efficiencies
- Communities of practice
- Integration and partnership
- Innovation

Section 4 provides concluding analysis, focusing in particular on **where, how and why priorities will need to be set i**n terms of what HIV services are made available, and to whom they are available. A central tension moving forward will be between speed and quality of scale-up.

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1. Introduction

Ensuring Efforts to Scale up, Strengthen and Sustain HIV Responses is an initiative launched in April 2017 by the Joep Lange Institute. The initiative's overall objectives are to describe challenges to meeting current HIV targets and articulate an approach for the HIV response that takes sharp aim at:

- reducing the number of new HIV infections with a focus on key populations, adolescents and young adults;
- streamlining and strengthening client-centered approaches to service delivery;
- efficiently targeting the use of resources; and
- building new and more sustainable approaches for funding.

Planning for this initiative began in April 2017. Data presented at the International AIDS Conference in Paris in July of that year confirmed many of the challenges raised through this JLI process including modeling reflecting the detrimental potential impact of reduced funding, the need for a greater emphasis on epidemic control and incidence reduction, the failure to reach young adults, adolescents and key populations with HIV prevention, testing and treatment services, the increase in drug resistance, and the importance of differentiated approaches in service delivery to improve linkage and retention in care. Therefore, this JLI initiative presents a timely opportunity for deeper discussion into these issues to ensure continued effectiveness of the global HIV response and preserve the progress made to date.

Three meetings will anchor the initiative's agenda. A comprehensive report and findings from those meetings, along with additional work products to highlight research, communications and advocacy needs and strategies, will be launched at a Pre-Conference at the International AIDS Conference in Amsterdam, July 2018.

The Potential Impact of Reduced Funding for HIV on Scale-up Strategies

This first meeting identified challenges in achieving current HIV targets and considered the need for and ways to prioritize funding allocations if resources are insufficient to adequately implement the Fast-Track initiative. Notable progress in recent years in many countries, some of which appear to be on the verge of achieving at least one of the 90-90-90 targets, could be stalled or reversed if funding and other resources remain limited or decrease further. Constrained resources require a reevaluation of spending priorities to ensure the continued quality of care, and to balance the need to both protect the health and well-being of those living with HIV and the need to prevent new infections and control the epidemic.

It is increasingly apparent that getting to 90-90-90 may not be sufficient to control or eventually 'end' AIDS. The 'missing 10%' in many contexts includes populations responsible for micro-epidemics that are poorly understood or responded to. Whether or not countries are able or willing to identify, recognize, focus on and reach them with comprehensive HIV prevention and treatment services could mean the difference between a subsiding overall epidemic and a persistently stable or growing one. An increased focus on reducing incidence through a targeted approach to engage those currently underserved by HIV prevention, testing and treatment services is essential if the vision of ending the epidemic is to be realized.

2. Main Challenges and Threats to Improved HIV Responses for All

Participants discussed various threats to sustaining and expanding success in HIV responses. This section summarizes several of the main challenges noted overall. Each is recognized as being the consequence of, or could be imperiled or hastened by, reduced funding for HIV responses.

- **Reduced and limited funding for HIV**

UNAIDS estimates that $26 billion of investment in HIV worldwide is needed by 2020 to meet the Fast-Track targets. Yet resources for HIV have not kept pace, and currently are as much as $6 billion below need estimates. That gap is partly the result of the trend of declining overall donor investments in HIV in recent years. This decline does not necessarily indicate a lack of money; but, instead, reflects shifting priorities among some development donors. Even as HIV financing showed a decline in 2016, for example, official development assistance (ODA) levels reported in early 2017 were at the highest level ever.

Donors are changing how they define and allocate aid as well as what they spend it on. And greater competition for funding support also exists, including just within the health sector. Investments for 'integrated' interventions across the Sustainable Development Goals (SDGs) more broadly could also reduce funding that directly influences HIV responses. Donor withdrawals from middle income countries also threaten HIV responses, as many of these countries will either not be able to afford the levels of domestic funding needed to make up the shortfalls and many others will not have the political will to do so, given the high numbers of marginalized populations affected by HIV there. And, although domestic investment levels have increased overall in the past five years, they are not reaching the levels of estimated need as described in the Fast Track initiative. All such reasons underscore why it will almost certainly be only harder over time to get the 'right' investments for HIV and the need to prioritize components of the HIV response for maximum impact and responsible implementation in an era of constricting resources.

- **Poor uptake and retention among key populations and young people**

In most countries, key populations and adolescents and young people are the most likely to be missing from HIV prevention, treatment and care programs. Uptake challenges are evident among these groups in regards to case identification, late diagnosis, lack of knowledge and other prevention failures, treatment initiation, retention and adherence.

Notable gaps can be seen in results from five ICAP-led PHIA (Population-based HIV Impact Assessments) surveys conducted in collaboration with ministries of health (funded by CDC/PEPFAR) through mid-2017. The findings indicate that, at least in the survey results released thus far, there is much to be optimistic about in general, as they show strong and positive impact from HIV responses in recent years. Yet significant age-related gaps in progress can be seen in all five countries.

> **'Hotspots' in Kenya: example of programmatic challenge every country faces**
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> Respondents from Kenya noted that intensified efforts in their country show how difficult it is "to do better with the money we have". Programmatic gaps reportedly persist due to the fact that there are "many different epidemics in different geographical areas in different populations". Country respondents stressed that it was essential to "identify hotspots and then figure out what to do with them. Many different places will need different interventions."

For example, prevalence of viral load suppression (VLS) among all people diagnosed with HIV (irrespective of knowledge of HIV status or ART status) is distinctly lower among younger adults (aged 15–24) in all countries. The *fundamental importance of testing*, both for prevention and treatment, is one key take-home message from such findings. Improving

access to and uptake of testing among young people is critical to ensure the quality of overall HIV programming.

Responding to the full suite of challenges faced by key populations and young people is made more difficult by the fact that in most contexts, baseline demographic information about such vulnerable populations is lacking or limited. Targeting effective services for them is difficult if not impossible when it is not clear where they are, their population size, or their specific risk factors.

- ◼ **Strains and changes in human resources and health systems**

Health systems in many lower- and middle-income countries are feeling the strain of providing comprehensive HIV services along with overall health services. Challenges include critical shortages of health care workers (HCWs), insufficiently trained or supported personnel, and slower-than-expected roll out and uptake of prevention services such as voluntary medical male circumcision (VMMC).

Effectively addressing all such challenges can be difficult. For example, would rapidly filling the staff shortages gap risk declines in the quality of services provided? And would these sharp increases in personnel be sustainable? Meeting all 90-90-90 and other targets requires both high quality and sustainability for both clients and providers alike.

One underlying obstacle is that many governments have little budgetary or policy space to increase HCW staffing. In Zimbabwe, for example, about 90% of the health budget goes to salaries, and the government considers this a liability. Advocating for more HCWs in such places is difficult. ***Task-shifting to the community is an often-considered solution to such pressures.*** For it to be useful, however, implementation must be faster and less unwieldy. One reason it has not advanced substantially in many places is that community cadres in countries such as Zimbabwe largely comprise volunteers, and thus they cannot be forced or easily encouraged to take on new roles and responsibilities. Also, some countries remain suspicious of or resistant to task-shifting, as can be seen by contexts where only nurses are allowed to hand out ARVs. Task-shifting can only be a viable solution to HCW shortages and training shortfalls when governments loosen restrictions.

One option suggested to help break such a logjam is to encourage sharing of examples and best practices across countries, or what was termed at the Amsterdam meeting as 'South to South' community of practice visits.

Even where staffing is sufficient, good outcomes may be lacking. One reason for this is that policy makers may not consider HIV a high priority; instead, for example, many are focused on non-communicable diseases, which can sometimes require different models for care and services than HIV. This takes the issue of HCW shortages and training outside the HIV area and into the realm of the SDGs and universal health care (UHC). One result from health systems integrating HIV into broader health and development structures could be weaker HIV care even though overall health care indicators are improving and more HCWs are hired and trained.

- ◼ **Weak links in drug supply chains**

Stock-outs of ARVs and other HIV service commodities are regularly reported around the world. In Latin America, for example, ARV stock-outs recently have been disclosed in Brazil, Panama and Argentina.

(The situation in Venezuela, where HIV services are in a catastrophic freefall, is a different story altogether.)

Stock-outs are often the result of badly designed or badly functioning supply chains, particular at the lowest level—the 'last mile' before the drugs and other commodities are in the hands of clients. Stock-outs erode clients' confidence in the system that encouraged them to initiate ART. The inconvenience of having to visit a clinic once a month becomes much greater if a clinic is only able to hand out three days' worth of pills, for example. Stock-outs raise the risk of weak adherence and retention, and they therefore also can be responsible for drug resistance.

Better data management is one potentially useful approach to strengthening supply chains. India, for example, recently has put in place a new **patient identification system** that makes it possible to see when and from where each individual client gets a standard ARV supply. Collecting data in real time in such ways is an efficient method to quickly monitor client retention/adherence and the availability of commodities, and to forecast needs.

Other possible solutions to some of these issues:
- To monitor stock-outs:
  - feedback systems for clients, such as a South Africa model based on toll-free client stock-out reporting
  - Early warning indicator (EWI)–type of feedbacks on pharmacy stock-outs, potentially linked to mobile phone data collection and support
- Cost-savings and efficiency mechanisms:
  - use systems for tracking and tracing drugs (e.g., bar-codes/readers)
  - move to 'fixed expiry' from 'pre-sale expiry'. The latter leads to unnecessary destruction of perfectly usable and effective pills and other expenses and processes that can hinder the smooth operation of supply chains.

■ **Growing rates of drug resistance**

Data show that HIV drug resistance (to NNRTIs, specifically efavirenz) is increasing in many parts of the world. One alarming sub-set of the overall problem is pre-treatment drug resistance (PDR), which now has reached levels of 10% or higher in 6 out of 11 studied several countries. PDR has been proven to significantly affect ART outcomes, like increased viral failure, discontinuation of ART, switching to 2nd line, accumulation of additional drug resistance, reduced CD4 recovery, etc. WHO recommends switching to different 1st line drug regimens when >10% PDR levels are reached. In particular vulnerable groups like children and adolescents reportedly have higher PDR. Such groups likely contribute to the 10-10-10 populations (those missed by the 90-90-90 efforts). Fortunately, rates of NRTI and PI resistance remain relatively low (below 5%). Although data on long-term ART patients are still scarce, reports on 2nd line failures due to extensive drug resistance and documented 'untreatable' HIV are emerging.

It can be reasonably assumed that drug resistance will decline by replacing efavirenz (EFV) with dolutegravir (DTG) in first-line regimens, as clinical trial data have indicated that resistance against DTG is very rare. Opportunities arise with the recent $75/year arrangement of TLD[1] (TDF, 3TC, DTG), see also below. Switching patients who are currently on EFV-containing 1st line regimens to TLD was recently recommended by WHO (July 2017). However, switching regimens will pose additional challenges to

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[1] http://www.unaids.org/en/resources/presscentre/pressreleaseandstatementarchive/2017/september/20170921_TLD

already constrained health systems in resource-limited settings. Therefore, the 'technical solution' of switching drugs should be supported by simultaneous increased efforts with respect to ART drug adherence, information provision to patients and providers, improved supply chain management, etc. The switch to DTG regimens will also take time. It is currently available in Botswana. Current timelines for South Africa estimate DTG availability between 6 – 18 months from now.

The key priority for avoiding HIV drug resistance remains supporting life-long adherence, which includes expanding on a broad range of activities, including improved supply chain management to avoid stock-outs and shortages and innovative adherence and appointment support systems, including those using mobile-phone communication. Moreover, new and more affordable technologies for drug resistance monitoring are urgently needed, particularly at the population level (representative surveys, detection of hotspots of resistance) and potentially also to support more complex individual patient switching decisions

- **Dangerous, threatening and non-supportive environments**

Creating a supportive environment for all clients requires sufficient financial and other programmatic commitment to critical enablers and human rights. Yet systems and environments are failing in this regard. Many people at great risk (and especially key populations) are unable to get the information, support and interventions they need to stay healthy and to help others in their lives and communities do the same. Barriers differ by context, with some of the more common ones listed below:
- lack of funding for critical enablers, from both governments and external sources
- tolerance of violence against women (including by intimate partners)
- cultural practices and influential religious groups/leaders
- discrimination by medical personnel, including 'structural violence' such as refusal of treatment and stigmatization
- food security
- legal environments (laws and practices)
- harassment and arrest of advocates
- self-disclosure reluctance and other aspects of stigma
- criminalization of non-profit groups, a huge and growing problem in environments including China, India, and Eastern Europe and Central Asia. Few solutions are evident as to how to confront this trend.

Since such barriers vary substantially by context, so do solutions to mitigate or overcome. Examples of solutions that have had beneficial impact were cited at the meeting, including the following:
- A parallel system in Russia through which a community group, ITPCru, imports drugs for hepatitis C. A similar approach has been used for certain HIV drugs, and could be a solution for clients who cannot obtain ARVs due to denial of service or fear of discrimination, harassment, violence or arrest.
- Use the "laws you actually have" as well as constitutional protection and rights. Legal challenges can take a long time, but they can work—e.g., overturning a law banning consensual male-male sex in Belize. Such efforts can be hastened by organized community monitoring on violence and rights.
- Crowdsourcing via social media to spread the word about friendly health care providers, as has been done in a project among MSM in China. Efforts are also being made to fund such work through social entrepreneurship among NGOs.

Modeling the impact of funding cuts: no good options

Models suggest that there are few good options as available HIV funds decline. One recent model presented at the Amsterdam meeting compared the implications of maintaining the current standard strategy (the benchmark) in two countries, South Africa and Côte d'Ivoire, with potential 'scale-back strategies' that could be necessitated by funding cuts. The benchmark itself would result in some 3.24 million new transmissions and 4.26 million new AIDS deaths over 10 years. Every scale-back strategy would result in even more HIV transmissions, more deaths, and fewer years of life over a 10-year horizon.

The exercise went further to consider what approach would cause the 'least harm' in terms of programmatic alternatives for national health authorities if funding does not increase or in fact decreases. It examined a range of different 'policy levers' regarding uptake and access to HIV medicines and various support services. One finding was that 'no new ART'—in other words, initiating no one else on ART but continuing to offer it to those who have already started—was the way to achieve 'maximal cuts' in both countries, if required.

However, the benefits of such budgetary steps would be small and mostly short-lived. Savings would dry up over time, owing to increased HIV transmission. The health harms would be large and lasting—or example, more than 500,000 additional HIV transmissions in South Africa over the next 10 years. One notable finding is that donors would save no more than $900 for each year of life lost due to proposed cutbacks.

Another modeling study considered what the consequences would be across sub-Saharan Africa should the US government adopt proposed steep cuts in external HIV funding. A top-level finding is that a likely consequence would be an epidemic that looks more like it did in the early 2000s than today. The modelers also noted that real or threatened reduced funding could prompt governments to make more short-sighted decisions, often due to what they consider necessity. This could mean, for example, that many prevention mechanisms that could show full benefit over the longer term would be de-prioritized as governments look to achieve shorter-term impact.

3. Highlighted Topics and Considerations for Future Analysis and Decision-making

The challenges summarized in Section 2 prompted the introduction and consideration of several topics that could have relevance in improving responses in a financially uncertain future. Some of the issues and concepts listed below are both challenges and solutions themselves. All received substantial attention at various times during the Amsterdam meeting. It is understood that although contexts differ, the topics noted below should be high priority for nearly all HIV responses.

- ■ **The need for more and more accurate data**

Accurate and timely data is essential to influence and direct policy, programming and resource-allocation decisions. The absence of data, conversely, can stymie efforts to obtain greater attention and funding and can reinforce ill-informed policy and program decisions.

The following are examples of where and how lack of data currently exists in important areas of HIV responses, including in regards to future approaches:

- • Lack of reasonable estimates on the size and needs of key populations and other highly vulnerable populations such as adolescents. Data currently used by policy makers and reported

to UN monitoring mechanisms (e.g., UNGASS) often is not disaggregated by sex, age or key population.

- Less 'traditional' and infrequently recognized marginalized populations are often not well identified and documented—e.g., prisoners, illegal migrants, and internally displaced people.
- Limited data exists on resources within communities or on their specific impact on HIV responses. One result is that the sector's engagement tends to be poorly understood or acknowledged. Persistent data gaps limit the ability to track *funding levels f*or community-based approaches or human rights/critical enablers across HIV responses.
- Lack of data as to the impact of specific programs for key populations and young people, including those designed and implemented by communities and/or key population groups themselves. Insufficient evidence of intervention effectiveness continues to be a major barrier to funding. (According to an alternative yet ultimately complementary view, there are numerous examples of effective programs and services to engage key populations and bring them into HIV care. The problem is that such work often is not "respected" and thus little effort is invested in evaluating them.)
- Lack of data showing whether, and to what extent, differentiated service delivery (DSD) saves money—which is a claim regularly made for which little evidence supports.
- Information about the frequency, location, extent and cause of stock-outs is often not available. Enhanced and organized community monitoring is one solution that might make sense in some contexts.
- Lack of representative data on (levels of) HIV drug resistance in specific geographic locales, both for adults and even more so for adolescents and children.

Community involvement in data collection and monitoring is one option for improving the extent and quality of data in HIV responses. In most contexts, this requires investing in national programs to gather community data, validating it, and then ensuring that it is fed back into the programs. The following are some suggested solutions for filling data gaps across the HIV prevention and treatment cascade for the critical issue of disaggregated, reliable data on key populations and others who are 'missing' in HIV responses:

- Special studies within the health care and prevention and treatment service delivery settings
- Empower and incentivize HCWs, communities and other civil society groups engaged in service delivery to ask about risk, vulnerability and 'membership' in or more key populations
- Surveys on demographics, anonimzed surveys on risk, key population membership after service delivery visit
- Data reporting from key population specific sites and clinics (e.g., where OST is provided and where targeted services are offered to MSM, sex workers and transgender individuals)
- Electronic medical records (EMRs) and secure patient level data
- Use of data from prison systems and multilateral institutions such as UNODC, ILO, etc.
- Use of 'big data' that are collected though existing systems and which could feed machine learning models (e.g. mobile phone usage data to identify vulnerable socio-economic groups).

A final important point about data collection is that it must be rigorous and thus broadly accepted. For example, many observers have expressed skepticism about the cost estimates developed for the Fast-Track agenda. Without adequate funding to support data collection and monitoring, these concerns will persist.

- **Quality**

The topic of 'quality', already a longstanding one in HIV responses, is a critical priority area moving forward. One scenario offers a worrying glimpse of a possible future: HIV policy and other guiding approaches for aggressive scale up will remain the same despite funding cuts, but the quality of services will erode. Negative impacts on clients' health and broader public health will follow, though may not be recognized until after the damage is done.

Serious efforts are needed to determine how quality is defined and measured. These efforts might include setting *quality metrics along the HIV care cascade*, as has been done to some extent in countries including Ethiopia. Indicators should be developed to more efficiently monitor in ways that make sense in different contexts. Among such indicators, for example, would be one that measures incidence reduction in targeted, highly specific populations that are considered 'hotspots'.

One key benefit from such efforts to measure quality in a financially constrained environment is that they can signal how to best deliver interventions and support in the most effective and cost-efficient ways. It might then be easier to successfully make a case for funding that specifically aims to boost quality and thus limit the negative impacts of poorly delivered or designed HIV services.

Quality is not only relevant along the treatment cascade. Greater attention also should be paid to indicators measuring the *quality of prevention* interventions, which are rarely subjected to adequate assessment along such lines. One reason is *that indicators around prevention themselves could be improved*. For example, few targets are clear and useful (if they exist at all) in most prevention-related areas—leaving aside VMMC and pre-exposure prophylaxis (PrEP) for the most part. In general, there may be evidence for prevention, but it is used selectively. This is partly due to *prevention being harder to implement, harder to monitor and attribute outcomes, and harder to determine how best to invest resources*. Further, it also not always apparent who holds responsibility for prioritizing prevention investments and approaches.

Several other markers of quality might deserve attention in efforts to comprehensively define it. They include:
- consistency of access to a service, which can signal and have an effect on adherence;
- changes (especially reductions) in human resources (e.g., staffing), which are often due to funding cuts;
- 'softer' issues around quality, such as the competence, acceptability and friendliness of a health care provider; and
- the extent to which communities are engaged in service delivery, and whether and to what extent that has an impact on quality. (This can be assessed through community scorecards, including by having small client groups rate the quality of service.)

■ **Engagement and funding of communities**

As suggested in the discussion above on data, the role and impact of communities in HIV responses are unsatisfactorily understood. Currently there is no simple or clear way of knowing how much money is going to communities, how to track it, and how to assess and evaluate its use. Therefore, although it is broadly assumed—including by UNAIDS and the Global Fund, among others—that communities are underfunded, it is not known by how much or why. Similarly, although it is assumed and specified in

investment cases that communities can and should be engaged more extensively, it is not evident whether the programming and services they provide are effective.

Finding answers to such questions is likely to be time-consuming and not a central priority (if one at all) among most governments and donors. In the meanwhile, communities' ability to obtain funding and provide targeted service delivery among the most vulnerable—who are often those driving epidemics—will likely continue to dwindle. So too will their ability to undertake essential yet difficult-to-measure advocacy work. ***These trends suggest another question to consider: what is the importance, value and worth of raising communities' profile, engagement and funding in future HIV responses when overall funding is limited and little baseline information or observations exist as to how much is already going to communities and what they contribute?***

One overall step that might help get some answers to such questions is to improve tracking of resource allocations for human rights support, critical enabling services, and community-based services. A mapping exercise could be one solution. It should focus on identifying potential allies and successful tactics, with the emphasis on identifying what is working, where and why. One goal should be to determine what joint action might look like as well as advocacy overlaps and commonalities. Potential allies for joint action could range from microfinance groups to women's movement to supportive religious leaders.

- **Dolutegravir phase-in**

The impending shift to DTG as a core component for first-line ARV regimens is widely considered an opportunity to improve clients' health and boost HIV treatment programming success. It has been demonstrated to be a 'better' drug than EFV, which a growing share of clients in some countries are resistant to and which is associated with more side effects and as a consequence, adherence challenges. As per recent statements DTG will be launched at a substantially lower price than TDF/EFV (this was announced just after the early September 2017 meeting with Gates Foundation guaranteeing minimum sales of a new DTG-containing combination with a price cap of just $75 per patient per year).

One possible scenario that would hasten the switch to DTG would include starting all naïve clients on a DTG-containing regimen and switching all clients on an NNRTI-containing first-line regimen to one containing DTG. The second component would include a viral load test prior to switching that depending on results could lead to enhanced adherence counseling.

Several factors are thought to be useful to consider in advance of taking such a step or others that involve extensive use of DTG. Many refer to effectively monitoring drug supply and treatment outcomes. They include the following questions:
- Will there be enough DTG available during large-scale transition from EFV, including simultaneous roll out in different countries?
- Does the potential exist for the development of heretofore unseen side effects, given the relatively small numbers of people who have taken the drug thus far and for a relatively short period of time?
- Is it possible to monitor how successfully DTG is phased in? To do so, countries need to have specific transition plans and the ability to collect national information and feed back into systems such as Project Optimize (funded by UNITAID).

- In July 2017, WHO issued guidance to countries on how to safely and rapidly transition to DTG-based antiretroviral treatment[2]; no specific guidance was provided with respect to the order of prioritization of target groups for TLD transition.
- Switching to DTG will prove beneficial for clients, HIV program managers and finance ministries (and other funding sources) only if it is used properly. As with any ARV regimen, ***the main priority should be to sustain adherence***.

The final bullet point above, about prioritizing adherence, should be taken seriously across all aspects of HIV responses moving forward. **Adherence is the lynchpin of successful HIV programming** in that it covers and links both prevention (e.g., adherence to PrEP, which will only be more vital in the future) and treatment (adherence to ART). It is also cost-effective, as enhanced adherence support—best provided by communities—is by far cheaper than treating the results of failed adherence.

■ **Doing more with less: new funders and cost efficiencies**

It is increasingly clear that making the case for more money for HIV will not work with many donor governments. In particular, development partners almost certainly will not be willing or able to provide adequate or increased funding for HIV interventions by any sector in middle-income countries such as Ukraine.

Other sources of funding will need to be found and be willing, perhaps including private foundations, private-sector companies, (national) health insurances and wealthy individuals. Covering the funding gaps might also be done through more pronounced shifts toward local ownership and local responsibility—although sufficient funding from domestic sources (including to the levels recommended by the UNAIDS Fast-Track estimates) is unlikely to be available in low-income, high-burden countries that are highly dependent now on external support for their HIV programs. Re-conceptualization of the global architecture on funding could be a useful strategy over time, but the commitment and ability to undertake such an effort is uncertain.

In the absence of more money, identifying and publicizing cost savings and efficiencies could be a more valuable and effective approach. Cost savings could be found by reducing redundancies and integrating more in a range of currently discrete areas of programming and service delivery. These and other openings for cost efficiencies conceivably could be found within broader health and development programming as well.

Some countries are taking steps in this direction. Zimbabwe is one example. Its new Global Fund grant reportedly highlights upcoming efforts to combine and coordinate programs to reduce duplication. The country is also trying to integrate health worker cadres so they can address many more different diseases and health priorities. In terms of funding, the government is considering ideas to better coordinate and link its AIDS trust fund and other income-generating structures and sources.

The Zimbabwean government also is considering other options and solutions for cost-efficiencies, such as pooling procurement, decentralization of services, and bundling. The first of these seems the most obvious, but it has been tricky to address—and local stakeholders in other countries in the region have stressed how difficult such pooling could be. (In Zimbabwe, the approach aims to bring together three

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[2] http://www.unaids.org/en/resources/presscentre/pressreleaseandstatementarchive/2017/september/20170921_TLD

different procurement systems. It was still a work in progress, reportedly with many challenges, as of September 2017.)

Caution is advised, however, when considering and putting into place efforts aimed at achieving cost savings and efficiencies. ***One major concern should be the impact on prevention programming***. In countries such as Kenya, it is incontrovertible that treatment is the first priority of the HIV program as no government will "let treatment fail". Prevention thus suffers the most as HIV financing is reduced or flatlined. ***These realities underscore a need to reframe issues and messaging around prevention to ensure more money is allocated to it***.

Another concern should be the impact of cost-efficiency efforts on the quality and reach of programs overall, and for treatment specifically. Preliminary analysis could be helpful to show the longer-term health, social and economic impact of such efforts if they erode quality substantially.

■ **Communities of practice**

Greater use and reliance on 'communities of practice' could be an effective way to improve and strengthen HIV responses. The concept is based on collaborative networks of individuals and organizations in one sector or industry working together to coordinate priorities, messaging and resources. The antithesis of top-down decision making, such networks can help to develop solutions that are more likely to work because of the overall 'human-centered' structure and need for cooperative engagement.

In practice, this could mean that different communities of practice might include people affected and living with HIV, nurses and other clinic-based personnel, policy makers, medical groups, and churches (among many other possibilities). The idea is to link these communities in dialogue because relying on a single community for change usually does not work. (Russia offers an example: it is also the medical sector, not necessarily only policy makers, that is blocking reforms on opioid substitution therapy.) Communities of practice are likely to be good sources of data as well. Collectively, members of a collaborative network may have caches of data that currently are not linked or analyzed. Collectively too, they are worth asking for ideas for improvements and reform.

Building and sustaining such connectivity costs money, however, and health systems do not pay for it. Money could potentially be available once a model is developed that can be adapted to establish communities of practice in different contexts.

■ **Integration and partnership**

The communities of practice concept discussed immediately above is just one of many ideas for future HIV responses that are centered on increased and enhanced integration. On a larger scale, the global development agenda driven by the SDGs aims to integrate HIV more extensively with other development priorities, some of which (e.g., education and gender) are crucial components of ensuring HIV prevention and treatment success. Continuing to talk about HIV as a vertical system, with solutions only available from the HIV world, does not make sense now. Even if this approach truly ever was effective, it certainly is no longer in a world of limited funding for HIV.

The future of HIV therefore relies on wider linkages and integrated work and approaches. Revitalizing an HIV-specific movement offers little hope of being effective or useful. ***A new partnership or model is***

needed for HIV, and it must look beyond HIV. Determining the building blocks of such a structure—and being clear about what a partnership would look like and what it could achieve—could represent a significant contribution to efforts to identify new ideas and support for programs and interventions relevant to HIV responses.

A new partnership also might have a positive effect by contributing to a reversal of funding declines for HIV programming. However, there would need to be changes in messaging, conceptualization, categorization and assessment. For example, a joint 'more health dollars' message could be more effective than 'more dollars for HIV'. And a new focus on fighting inequality might resonate more, and prompt donors to be more generous, than continued emphasis on longstanding concepts such as poverty reduction.

One notable caveat about partnership in general is that there is little evidence whether synergies across broader health and development work actually save money. Careful analysis therefore should be done to determine whether this approach could be sold to donors as a cost- and efficiency-saving approach.

■ **Innovation**

The need for greater innovation is implied throughout this document (as it was throughout the Amsterdam meeting). In addition to the possible changes and strategic and programmatic innovations already mentioned, ***digital technologies deserve special attention***.

Mobile phone coverage is extensive across sub-Saharan Africa and most other places where HIV is a severe health concern. Solutions associated with mobile phones therefore offer notable and numerous opportunities to 'democratize' health and improve HIV programming. Mobile phones and their users can be harnessed for encouraging people to get HIV tests, to monitor and report stock-outs, to send results of diagnostic tests, etc. Given their ubiquity among young people, mobile phones can be used to better reach them and incentivize them for services (e.g., reminders for picking up ARVs, adherence-support messages and getting viral load tests done). Moreover, mobile phones can provide digital decision support systems to community health workers and other non-medically educated differentiated case staff.

Efficiencies that could be beneficial in every context

Individual national patient IDs offer an opportunity to more efficiently trace dispensation of ARVs and other commodities along the supply chain, down to the client level. As a result, more nuanced information is available about loss to follow-up (LTFU), including specific clients who are out of care.

Enhanced systems to detail client history can help streamline HIV service provision by reducing redundancies and simplifying paperwork. Individual clients' records are more easily recordable and available from wherever they receive care, thus giving health systems a more accurate indication of LTFU. Better data of this sort can promote improved prioritization and targeting of resources.

Innovations of this sort can also have beneficial financial implications. Increased efficiencies could, for example, quicken the pace of results delivery and decision making among both clients and health systems personnel. In Kenya, for example, the rapid expansion and use of innovative digital technologies can help to eliminate the need for middlemen, allowing clients to engage directly and easily with

caregivers and other direct service providers. It makes sense in the current environment to recognize, assess and seize this potential as widely as possible.

4. Conclusion: The Difficult Dance of Setting Priorities

The consensus overall sentiment is that although what has happened in the global HIV response is "absolutely miraculous", in the words of one Amsterdam meeting participant, much more needs to be done to overcome the gaps that have been identified regarding specific regions and populations. It is as much about changing policies as it is about new money. Fresh thinking and innovations thus are needed in service design, M&E systems, approaches to reduce stigma, and ways to work with and engage with populations that are highly vulnerable and difficult to reach with the full suite of HIV services they need.

Targeted funding for HIV responses might be available if arguments can be made that although countries are on different paths toward dealing with their epidemics, some can get control (e.g., evidence from the PHIA surveys in Swaziland and Zimbabwe). A message could be along the lines of the following: we can get control of epidemics, it will take this amount of time, this is what we need to do, here is why we need to do it, and here are evidence and estimates indicating that when and where costs would decline over time, etc. Such a nuanced, and perhaps more sophisticated, approach might be what is necessary.

Whatever the approach, however, priorities will need to be set in terms of what HIV services and interventions are made available, and to whom they are available. Countries have already been setting agendas and priorities, and they will continue to do so regardless of the funding environment. Important questions remain as to whether it is possible to influence such priority-setting; who or what will be influential (and how); whether human rights and equity considerations are reflected in decisions' and whether decisions make sense objectively in terms of epidemiological, financing, and social realities.

An overarching consideration looms in an environment in which 90-90-90 targets are emphasized: ***speed versus quality***. This is at the heart of the proverbial question of 'how to get there'—with 'there' referring not to meeting the targets, but to truly controlling and reversing epidemics by reaching all in need. One school of thought is that since it is highly unlikely that the 2020 and other targets can be reached on a global scale, it makes more sense from the perspective of HIV responses in the long term to focus on quality rather than reaching the Fast-Track targets. Others believe, though, that there is sufficient capacity and ability in most countries to move quickly and urgently toward the targets because they represent a window of opportunity for dedicated attention that could eventually be closed. This view also is grounded in the belief that rapidly and continuously putting new clients on ART is the right thing to do from human and health rights perspectives, given the life-prolonging and preventive effects of the medicines.

Ultimately, the answer may be context-specific. For certain countries, rapidity of scale-up might be more important than proof of concept to donors or others of high, consistent quality of services. For others, the risks related to stock-outs, weak adherence and retention, and drug resistance are higher than those associated with not getting everyone eligible (i.e., all people living with HIV) on ART in the hope that they will stick with their regimens and remain healthy and less infectious.

Countries deserve and need objective, relevant and up-to-date advice and support about what seems appropriate for all people living with and vulnerable or otherwise affected by HIV. Regardless of what

they decide to do regarding scale-up and HIV programming overall, implementers at country level and all other HIV stakeholders should be aware of whether they are thinking about the needs of the systems instead of the needs of clients.

Messaging for success

Regardless of what steps or decisions are taken in the future, messaging will be progressively important. More funding for HIV programming is a key goal, whatever the source. A big question remains as to what type of messages and appeals could be effective in opening donors' wallets. And conversely, what messages might make them decide to reduce support even further?

In a sense this is a Catch-22 situation. HIV programmers and advocates emphasing their responsibility and the success of HIV programs might prompt policy-makers to wonder why they need more money. Yet these policy-makers and donors may not be willing to consider giving more money without evidence of success. Sophisticated and regularly re-evaluated analysis must be done to anticipate political consequences of messages from stakeholders across the HIV spectrum. This should be done with clear-eyed reality. One immediate reaction by some decision-makers to gaps in national HIV programs is that it's a local problem. Framing the problem better is needed to forestall and overcome such reactions.

One example of nuanced approach stems from the option of showing that some countries can get control of their epidemics (e.g., Swaziland). This would involve highlighting that countries are on different paths, but that steps toward success are possible. A message in this case should be accompanied by strong data, both regarding what led to the 'success' and what might take it even further. The message would be that it is possible to get control of epidemics, but it will take this long, this is what we need to do, this is why we need to do it, and this is when costs would decline over time.