

# ACHIEVING **THE END**

ONE YEAR  
AND  
COUNTING

The End?

AVAC  
REPORT 2011



REPORT 2012

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## Acknowledgements

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## In Memorium: Norman L. Letvin (1949–2012)

This year's AVAC Report is dedicated to **Norman L. Letvin**, Professor of Medicine, Harvard Medical School, and Chief of the Division of Viral Pathogenesis, Beth Israel Deaconess Medical Center. Dr. Letvin discovered simian immunodeficiency virus (SIV) and the disease it causes in rhesus macaques. He was one of the world's leading experts on the non-human primate model, applying and developing this knowledge through years of dedicated and ground-breaking research toward an AIDS vaccine. In the many remembrances and obituaries that have appeared about Dr. Letvin, his mentorship, collegiality and role as a "consummate collaborator", are warmly remembered. At AVAC, many of the team and board members had personal experience with Dr. Letvin's supreme generosity, patience and insights as an ally, educator and advocate. AVAC and its staff benefited time and again from his willingness to take the time to talk about current issues, to demystify complex science and consider priorities for the field. Conversations with Dr. Letvin left us enlightened and energized about the need and scientific rationale for pursuing the search for an AIDS vaccine. We will all miss him, and his hope and commitment will sustain us for many years to come.

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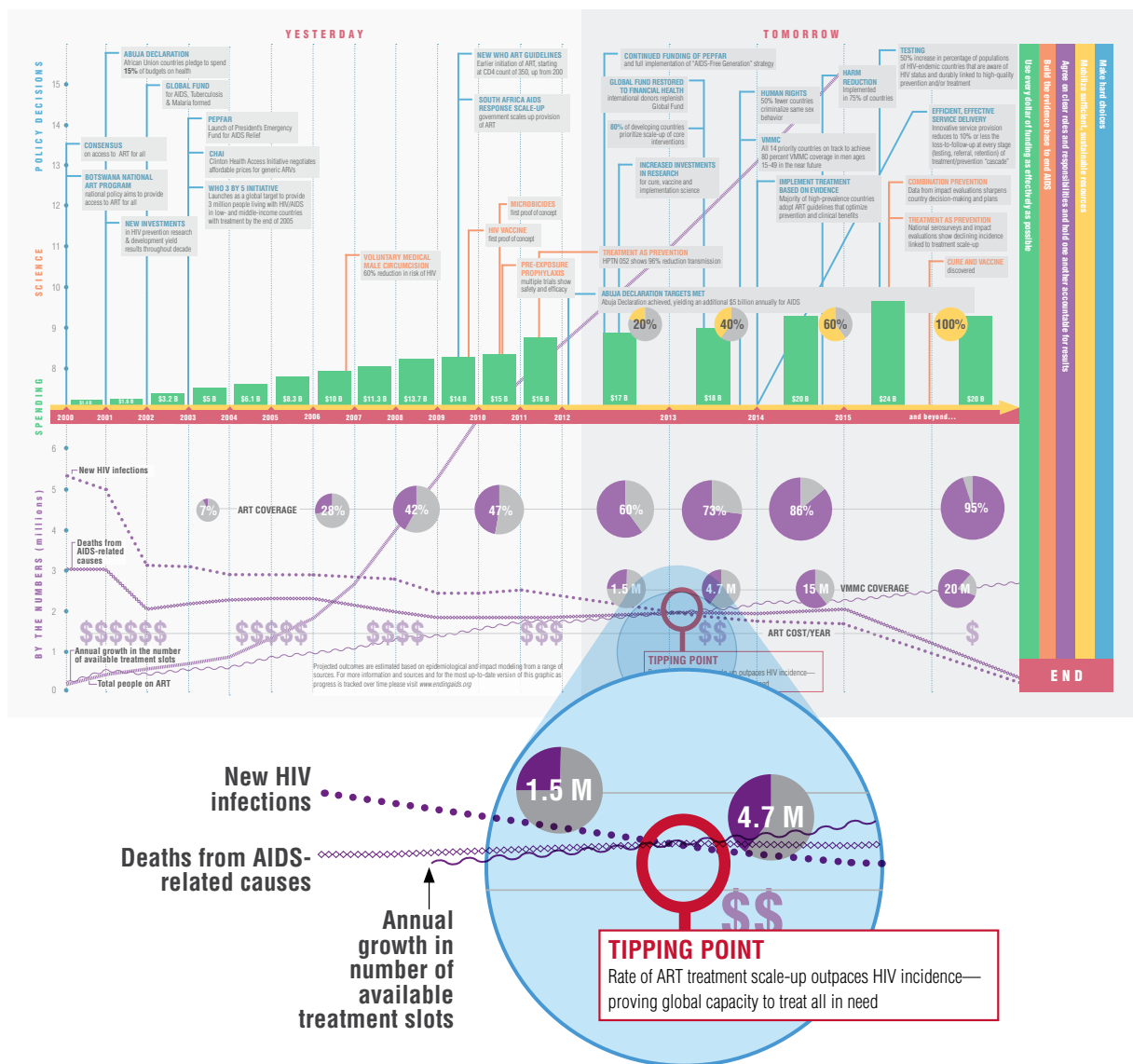
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## Reaching the Tipping Point: The time to act is now

It is possible that the world could soon reach a tipping point in the AIDS epidemic when the rate of AIDS treatment scale-up outpaces the rate of new infections. Success is not guaranteed. To reach this crucial milestone, the pace of ART scale-up must accelerate in the next 12 to 24 months. Continuing at current rates will not bring essential gains in lives saved, infections averted and reduced costs.



View the full infographic, download AVAC and amfAR's *An Action Agenda to End AIDS*, and subscribe to receive quarterly updates at [www.endingaids.org](http://www.endingaids.org).

# Let's Step Up the Pace

## *Letter from the Executive Director*

With this year's *AVAC Report*, we're setting the clock on the global drive to end the AIDS epidemic. It's a goal that nearly all now agree is attainable. But it can only be achieved if an ambitious pace of funding, implementation and research is set—and maintained—starting now. Current models tell us that the next 12 to 24 months are critical. As the graphic on page 2 illustrates, we are closing in on an epidemic “tipping point”, when the rate of antiretroviral therapy (ART) scale-up will outpace the rate of HIV infections—proving global capacity to treat all in need.

But the world will only reach this crucial milestone if we pick up the pace. Quite literally, this has to be the year that global HIV prevention efforts expand more quickly than ever before.

We've subtitled this Report “One Year and Counting” because it has been just about 12 months since the world started talking in earnest about beginning to end the AIDS epidemic. For a planet gripped with economic crises and funding shortfalls, the vision was big, and rightly so, since 2011 brought some of the most encouraging scientific news the HIV prevention field has seen.

We're not counting down; we're counting up. Which begs the question: *When is the end date?* Other than the push to eliminate pediatric HIV infection by 2015, there are few explicit public deadlines. Instead, every entry in the lexicon of ending AIDS comes with its own vague timeline, with overall time frames ranging from “in our lifetime” to “in a generation” and so on.

There are reasons for this. As we discuss in this Report, there just aren't a lot of data on the impact of scaling up highly effective combination prevention. Without this information, it's hard to predict outcomes. In order to get more specific, we need to start acting. Evidence of impact will help to fine-tune models that are, for now, powerful but largely based on estimates rather than evidence from the field.

Starting now, it is important to establish clear targets and check our pace. Consider the alternative: What will happen if, after a year of great hope, the global community doesn't set an accountability clock for achieving substantial progress toward ending AIDS? What possible explanation could we give members of the next generation when they ask, “Why did you say it was possible and then fail to come up with a plan and act on it?”

Now is the time to accelerate. For so many athletic events—swimming, sprinting, horse

### **AVAC on the Clock: Then and now**

Nearly 15 years ago, AVAC began framing its annual report around a decade-long countdown to an AIDS vaccine. The projection was based on a 1997 speech by then-US President Bill Clinton. We went from “nine years and counting ...” to “four years and counting ...” before we stopped the clock. We didn't—and haven't—abandoned our call for a well-coordinated and ambitious approach to the search for an AIDS vaccine. (See page 6 for this year's top priority.)

racing—the speed set “out of the blocks” or “out of the gate” is key. The AIDS response is, as many have said, a marathon and not a sprint. But even for such an endurance event, the start matters—a lot. Within the first five miles, or ten kilometers, of a marathon—when the vast majority of the distance has yet to be covered—an experienced runner can tell whether she has set the pace she needs to beat a record, whether the record is her own or the world’s.

We’re just a year into an era of incredibly high stakes for the global AIDS response, and we know that there are years to go before we can say that the epidemic is moving conclusively toward an end. Even so, what we can do is look at the pace we’ve set and say that while there’s still plenty of reason for optimism, there is already real cause for concern.

Which is why it is exactly the right time to start a clock and shift global efforts into a higher gear.

In *AVAC Report 2011*, titled *The End?*, we laid out a framework that incorporated short-, medium- and long-term goals for ending the epidemic (see graphic at right). To realize these goals, we argued that it would be critical to **deliver** the interventions we have today and to **demonstrate** the potential impact of emerging strategies that can be piloted now and might be introduced in the coming years. Also, it would be key to continue efforts to **develop** essential and truly novel interventions, such as an effective AIDS vaccine and a cure over the long term.

In last year’s Report, we also debuted *AVAC Playbook 2011*, which articulated global goals in nine key areas of the AIDS response (see graphic on page 6). These goals reflected what epidemiologists, modelers, advocates and other public health leaders have declared to be essential:

- Scale up ART coverage to maximize prevention and clinical benefits.

- Complete a “catch-up” phase of voluntary medical male circumcision (VMMC) in 14 priority countries as quickly as possible, and implement a sustained program on infant male circumcision.
- Use every means necessary to improve and innovate HIV testing and linkage to care.
- Act on the results of trials of promising new strategies, being mindful of the unique time frames for development and introduction of different tools.
- Adopt a new investment framework for HIV/AIDS that focuses on high-impact, evidence-based spending and programs.

The goals laid out in the Playbook and throughout *AVAC Report 2011* are as relevant today as they were a year ago. They are big, long-term objectives that we must keep squarely in sight. That’s why we’ve included the original Playbook—with notes on key developments—on page 6.

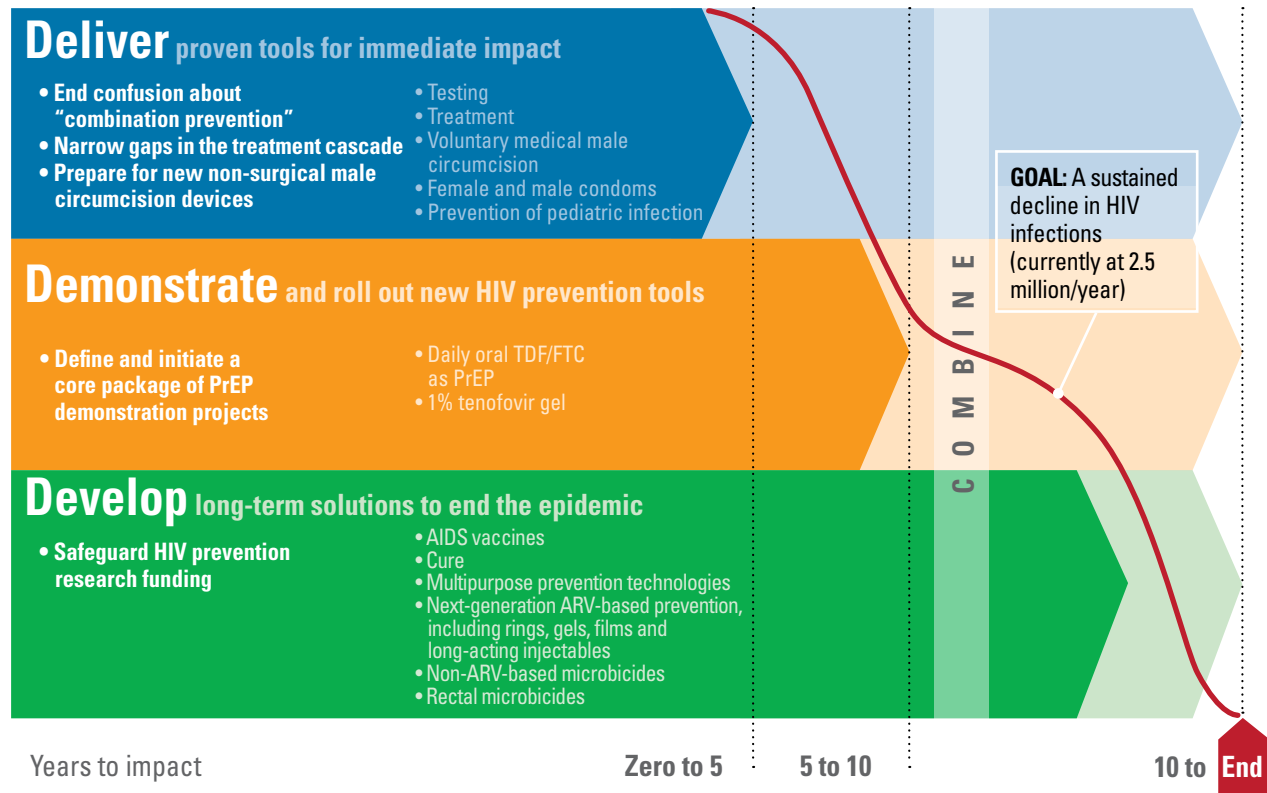
In 2013, we need to get far more specific. In this year’s Report, we briefly examine the progress made over the past year and provide necessary updates to the Playbook, and then we turn to the question: “What now?”

What are the top priorities for the next year? What actions will make the greatest possible difference?

Our top five list is summarized below and elaborated on throughout the Report, which concludes with an urgent call for amplified global and national leadership. In brief, the priorities are:

- 1) **End confusion about “combination prevention”.**
- 2) **Narrow the gaps in the treatment cascade.**
- 3) **Prepare for new non-surgical male circumcision devices.**
- 4) **Define and launch a core package of PrEP demonstration projects.**
- 5) **Safeguard HIV prevention research funding.**

## A Three-Part Agenda for Ending AIDS: 2012 and beyond



Throughout this Report, we hope one message is loud and clear: prevention is fundamental—and must be at the heart of the effort to begin to end AIDS. The past year’s notable quotes include “treatment is prevention”. This statement is well-supported by clinical research—and turning it into a reality will change the world. But the greatest benefits of treatment as prevention will only be realized if other effective prevention strategies are rolled out at the same time, and new ones are pursued.

Taking VMMC to scale in key countries could avert at least 20 percent of anticipated infections by 2025. This would change the trajectory of the epidemic and make the impact of treatment as prevention that much more powerful. And so one of our key messages must be: *prevention* is prevention too. This almost should go without saying. Yet, as we discuss

throughout the pages of this Report, there are many gaps in the current HIV prevention agenda that can and must be filled.

The future of prevention innovation is more precarious than it should be. This is, in part, because we’re not yet defining the struggle to begin to end the epidemic as a struggle, above all, to provide truly effective HIV prevention. In 2013, let’s pick up the pace of this historic race. It is—at one year and counting—ours to win.

**Mitchell Warren**  
Executive Director, AVAC



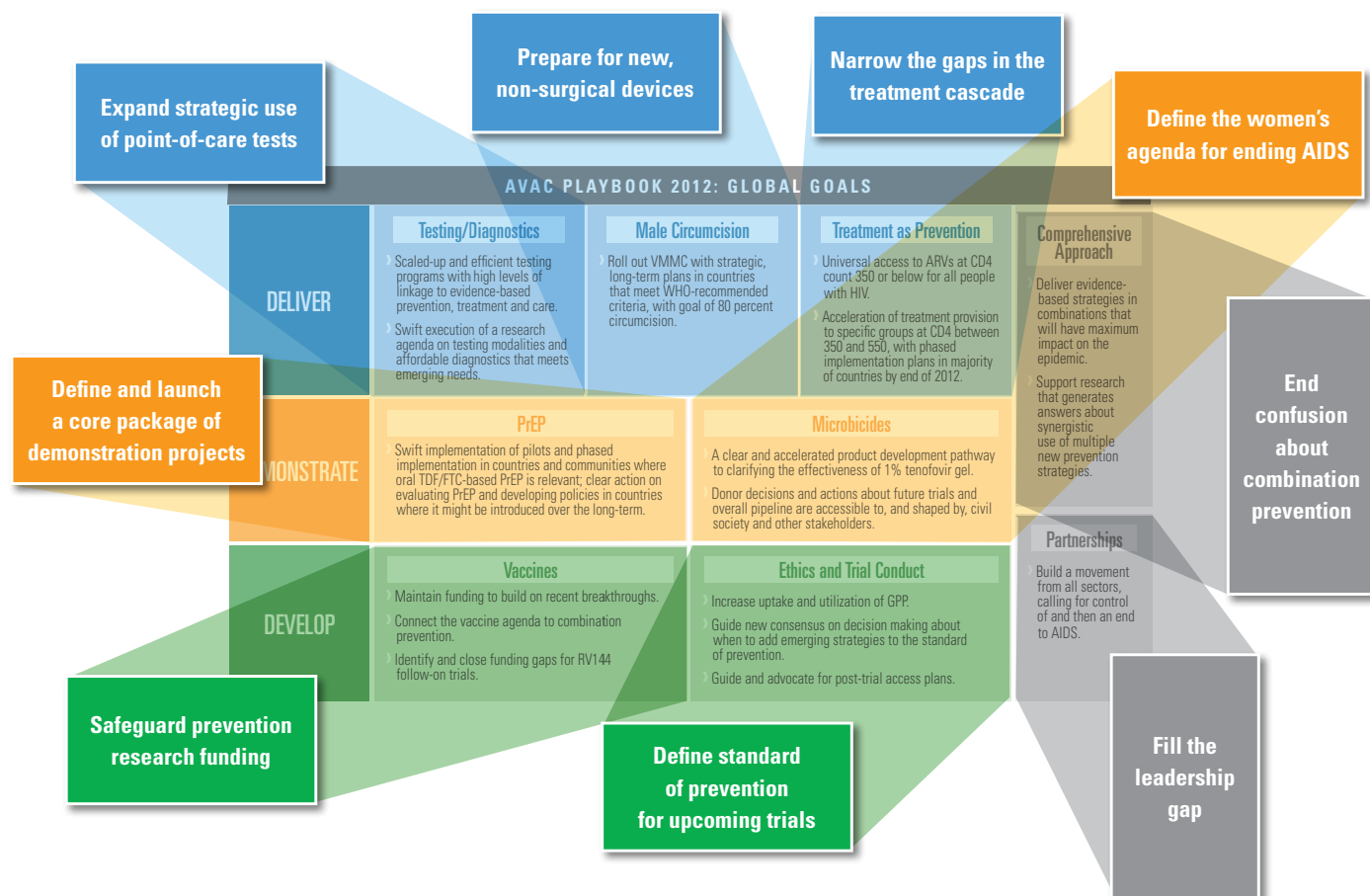
## The Global “Playbook” for Ending AIDS and Top Priorities for 2013

AVAC first published its Playbook of global goals for ending AIDS in late 2011. The objectives it laid out still stand today. But to achieve them, we have to get more specific in our short-term goals. To this end, we’ve identified five priorities for action in 2013. These are by no means the only steps that need to be taken in the coming year. It is critical to

sustain the many treatment and prevention efforts currently underway. But we think that success in these five areas is essential, if we’re to get on pace in one year’s time.

No action on the priority items is possible without action on one fundamental issue: **the leadership gap.**

### AVAC Playbook 2012–2013: Progress toward global goals



In addition to these global goals, the *2011 Playbook* also included priorities for AVAC and civil society. For updates on ongoing advocacy visit [www.avac.org/programs](http://www.avac.org/programs).



Action on the five priorities put forward in this Report depends on true leadership at global and country levels through word, dollar (and euro, shilling, rand and pound ...) and deed. Progress has been made in global leadership in terms of releasing guidance documents and blueprints for

action, but there are many areas in which more concrete action is needed. This includes a true expansion of ownership, leadership and financial commitment from the governments of low- and middle-income countries.

## PRIORITY

1.

**END CONFUSION ABOUT “COMBINATION PREVENTION”**

2012 saw a strong emphasis on combining prevention strategies for maximum impact. But even as the phrase “combination prevention” owned the day, it was clear that there is no single, one-size-fits-all combination package. We urgently need more clarity, particularly for country-level decision makers, about

what combination prevention truly is. Donors, implementers, policy makers and civil society should start working together, and must be held accountable for choosing, implementing and evaluating specific packages for specific circumstances.

## PRIORITY

2.

**NARROW THE GAPS IN THE TREATMENT CASCADE**

HIV treatment has clinical benefits for people living with HIV. It's also a powerful prevention tool that reduces an HIV-positive person's risk of transmitting the virus to an uninfected sexual partner. But to realize these benefits, we must close the gap between the large number of people diagnosed with HIV and the relatively small percentage who start and remain on ART, with low or undetectable viral loads. Approaches that promise to improve uptake and retention at every stage of the treatment cascade—from testing to diagnosis

to linkage to care to effective treatment—are being studied. These approaches will improve treatment programs that start ART based on current guidelines. Yet more intensive and innovative strategies will be needed if treatment as prevention programs begin to initiate people regardless of CD4 thresholds. In 2013, it's time to take action in research and service delivery to quickly close these gaps and ensure that what's proven to work is systematically implemented through national policies.

## PRIORITY

3.

**PREPARE FOR NEW NON-SURGICAL MALE CIRCUMCISION DEVICES**

The first new devices that could reduce the need for surgery associated with voluntary medical male circumcision (VMMC) are expected to receive World Health Organization (WHO) prequalification in 2013. Prequalification paves the way for the 14 African countries prioritized for VMMC rollout to add a new component to current programs. In some settings, the devices could be a revolutionary new tool. In others, it may make more sense to keep up the pace with existing surgical programs. If there isn't substantial preparatory work done ahead of time to establish decision-making criteria,

raise public awareness and encourage provider engagement, then the new devices could bring confusion rather than efficiency to an arena that is just starting to see real progress. The 14 priority countries should be prepared with situational analyses to determine the potential benefits, costs and appropriate role of these new devices in their specific contexts. This preparatory work should complement but not slow critical ongoing work in scaling up surgical programs for adult VMMC and implementing a sustainable infant male circumcision program.

## PRIORITY

4.

**DEFINE AND LAUNCH A CORE PACKAGE OF PREP DEMONSTRATION PROJECTS**

Global health agencies, including WHO and UNAIDS, and many national authorities have said that they are waiting for the results from real-world demonstration projects before they can provide guidance on the use of pre-exposure prophylaxis (PrEP) using daily oral tenofovir-based drugs in HIV-negative people. This strategy is complex and by no means a

silver bullet. But it could have a profound prevention impact in specific contexts, like among serodiscordant couples. Yet there is currently no clarity about the range of studies, demonstration projects and monitoring activities that are needed. This must be defined, so that a core set of demonstration projects is underway by the end of 2013.

## PRIORITY

5.

**SAFEGUARD HIV PREVENTION RESEARCH FUNDING**

New momentum in AIDS vaccines, antiretroviral-based (ARV-based) prevention, cure research and other new tools is threatened by the possibility of diminished research funding in the US and other countries. The

potential cuts could slow or halt progress on some of the most promising HIV prevention research in many years. Policy makers must act to sustain this vital research.



PRIORITY	
1.	<b>END CONFUSION ABOUT “COMBINATION PREVENTION”</b>

Over the past 12 months, several new buzz phrases have emerged in the AIDS world. Among them: “combination prevention”, “high-impact prevention”, “evidence-based prevention” and “highly active retroviral prevention”, a.k.a. “HARP”. At this year’s major events, especially at the International AIDS Conference in July, combination prevention—by whatever name—was a top priority. Many speakers spoke of the coordinated introduction or expansion of a range of core, highly effective strategies. Speaking about combination prevention in the sub-Saharan African context, for example, US Secretary of State Hillary Clinton has highlighted voluntary medical male circumcision (VMMC), antiretroviral therapy (ART) for HIV-positive adults, HIV testing and programs for prevention of pediatric infection.

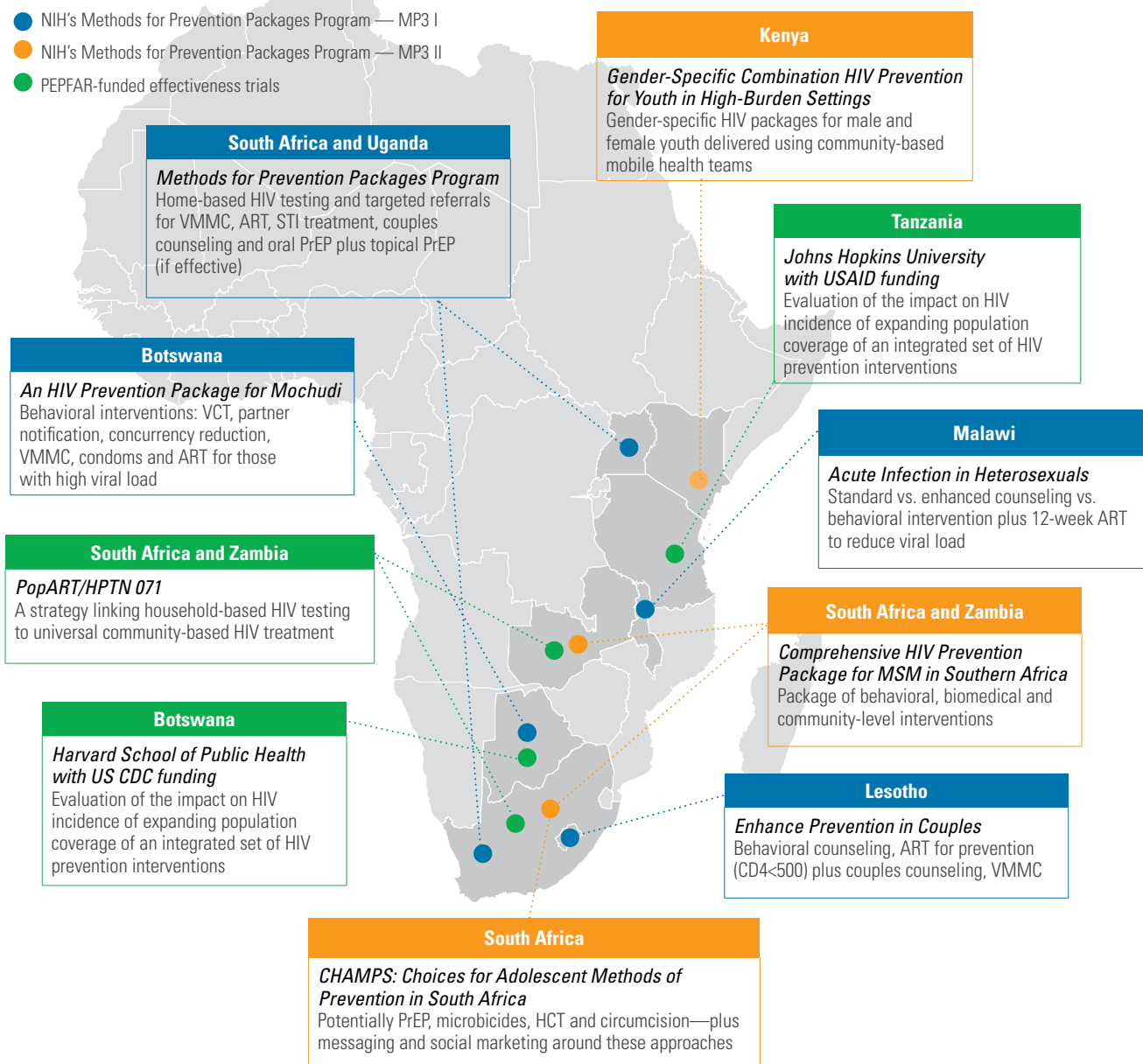
The emphasis on ambitious implementation of a suite of high-impact prevention strategies may represent the single biggest conceptual shift since the global embrace of “AIDS drugs for Africa”. It’s a welcome change.

However, the popularity of these phrases doesn’t mean there is global clarity about their meaning. One top priority over the next 12 months must be to vastly improve understanding and implementation of combination prevention. It may be difficult and unpopular, uncomfortable and even risky—but we have to do more of some things and less of others. If this doesn’t happen in the next year, we believe there is a real risk that the

phrases will lose the power of their promise, and become meaningless.

There are some key challenges. The science of combination prevention is still evolving, so it’s not yet possible to define, with precision, what an effective combination package should look like across contexts. Clinical trial data support the efficacy of specific strategies. Key trials include the HPTN 052 evaluation of ART in serodiscordant couples; the three randomized, controlled trials of VMMC; the PrEP trials of daily oral TDF/FTC in HIV-negative individuals. But there are scant data on how these interventions will work when applied together. Epidemiological models can predict

## Defining Combination Prevention: Ongoing trials in sub-Saharan Africa



In addition to the trials listed here, there are also ongoing evaluations in Europe and North and South America. For a complete list, visit [avac.org/pxrd](http://avac.org/pxrd).

what will happen when x and y and z are taken to scale in a given population. But these models can't address all questions about the relative impact of scaling up strategies via integrated versus stand-alone programs—or about the cost and impact of phasing in different elements of a combination over time.

Over a dozen trials are currently underway to study various combinations of strategies. These

will expand the evidence base for impact, especially of treatment as prevention-based combinations. But we already know that impact depends on achieving high levels of coverage with those interventions that work. Efforts to boost coverage and increase synergies between programs can start now.

It is also important to remember that there will never be a single definition of combination

prevention. Countries and communities will prioritize different combinations of high-impact strategies. The key is to clearly define the package, implement, evaluate and modify as necessary.

While there must be a diversity of approaches, there are some core elements. High levels of ART coverage are needed as are high levels of VMMC among men ages 15 to 49 in 14 priority countries (see p. 15 for more on VMMC). ART coverage targets can't be reached without substantial, successful testing programs. And by "coverage", we don't just mean the number of people who start ART. Coverage data should reflect the number of people who are retained in ART programs and maintain low or undetectable viral loads over the years (see p. 12 for more on ART).

There are other essential components, too. Male and female condoms must be widely and freely available. Comprehensive harm reduction, including syringe exchange and substitution therapy, is key in the context of epidemics driven by injection drug use. Key groups—including gay men and transgender women, sex workers and prisoners—should be involved in designing and implementing prevention programs tailored for their communities. And the epidemic will not come to a decisive end without cessation of the structural violence that takes many forms, including gender-based violence and policies and practices that expand, rather than narrow, growing gaps between the rich and poor in every country on the planet.

As public health experts and advocates Linda-Gail Bekker, Chris Beyrer and Thomas Quinn wrote in an in-depth discussion of combination prevention in an article,<sup>1</sup> "expanded HIV prevention must be grounded in a systematic analysis of the epidemic's dynamics in local contexts." Advocates can help guide focused

### Ending AIDS: A complex lexicon

These are just a few of the many nuanced terms and phrases being used—sometimes interchangeably—as we set ambitious future goals. Moving forward, even more precision is needed.

**AIDS-free generation:** Sometimes used in reference to the specific goal of eliminating new pediatric infections by 2015, allowing a generation of children to be born without HIV. Also used in the context of "ending AIDS"—i.e., eliminating HIV-related disease (see below).

**Cure:** A strategy or strategies that would eliminate HIV from a person's body. A cure would be a revolutionary breakthrough—but is not a requisite for ending the epidemic. (See "functional cure" below.)

**Ending AIDS:** HIV is the virus that causes the syndrome of diseases known as AIDS. A goal of "ending AIDS" can be understood as effectively treating all people with HIV and ensuring them long, healthy lives.

**Ending the epidemic:** An "epidemic" is the occurrence of more cases of a disease than would normally be expected in a specific place or community over a period of time. Ending the epidemic would drastically lower the rate of new HIV infections—and even eliminate new cases in some populations. Ending the epidemic can only be achieved through effective prevention—and will take time. Hence AVAC's frequent use of the phrase "beginning to end the epidemic".

**Functional cure:** A strategy or strategies that would suppress HIV viral load keeping it below the level of detection without the use of ART. The virus would not be eliminated from the body but would be effectively controlled.

**Preventive vaccine:** A vaccine that, when used in HIV-negative individuals, would prevent or dramatically reduce the risk of HIV infection. Many public health experts believe that the long-term goal of ending the epidemic—and preventing a surge of new infections—depends on identification of a vaccine.

discussions about what combination prevention is—and is not.

### Combination prevention involves tough, risky choices.

Combination prevention won't take hold if its champions aren't willing to identify the strategies that should be scaled back.

Just days before *AVAC Report* went to press, UNAIDS released its World AIDS Day report,<sup>2</sup> which had many strengths but also defined combination prevention as: VMMC, behavior change, condom distribution and programs

<sup>1</sup> LG Bekker, C Beyrer and T Quinn. "Behavioral and biomedical combination strategies for HIV prevention," *Cold Spring Harbor Perspectives in Medicine* (2012), 2(8): 22908192.

<sup>2</sup> UNAIDS (2012): "World AIDS Day Report 2012 — Results," [http://www.unaids.org/en/resources/campaigns/20121120\\_globalreport2012/results/](http://www.unaids.org/en/resources/campaigns/20121120_globalreport2012/results/). Accessed November 21, 2012.

for key populations. The world will not make progress without these components. But effective ART, elimination of pediatric infection and testing cannot be left off the list. The global AIDS response must include these elements in every document and plan.

**Combination prevention isn't one or two high-impact strategies plus business as usual.**

One of the problems with the phrase “combination prevention” is that it has been used for quite a while. In some contexts, the phrase has long been used to describe a combination of behavioral, biomedical and/or structural strategies. Currently, combination prevention often seems to mean the piecemeal addition of new programs—such as expanded ART or VMMC—to existing offerings. New programs have to build on the foundations of what has worked so far. But truly effective combination prevention packages will emerge by taking the best of what's available and jettisoning what hasn't been effective.

**Combination prevention requires a holistic approach to planning, implementation and evaluation.** In many settings, testing, VMMC, ART, condom distribution and other services

all need to expand. Each service has unique logistics, staffing and delivery components—and each impacts the other. Integrated planning for implementation of high-impact prevention is still a nascent field. Since each strategy will have its own cascade of testing, uptake, demand stimulation and other steps, it will likely be important to target fewer interventions and focus on achieving high coverage. But more tools are needed to guide comprehensive plans. Only a few of the necessary tools exist today. There are models to help countries understand the impact of scaling up various strategies—and of the cost, in terms of lives saved or infections averted, of *not* expanding key services. But more decision-making tools are needed to guide comprehensive plans.

**Combination prevention is a work in progress.**

There is no single or rigid definition of combination prevention. In a year's time, we'd expect to see some countries, donors and implementing partners revising their plans based on early data from combination prevention trials as well as rapid impact evaluation of scaled-up national programs. Definitions of combination prevention should be sharper—yet still evolving.

PRIORITY

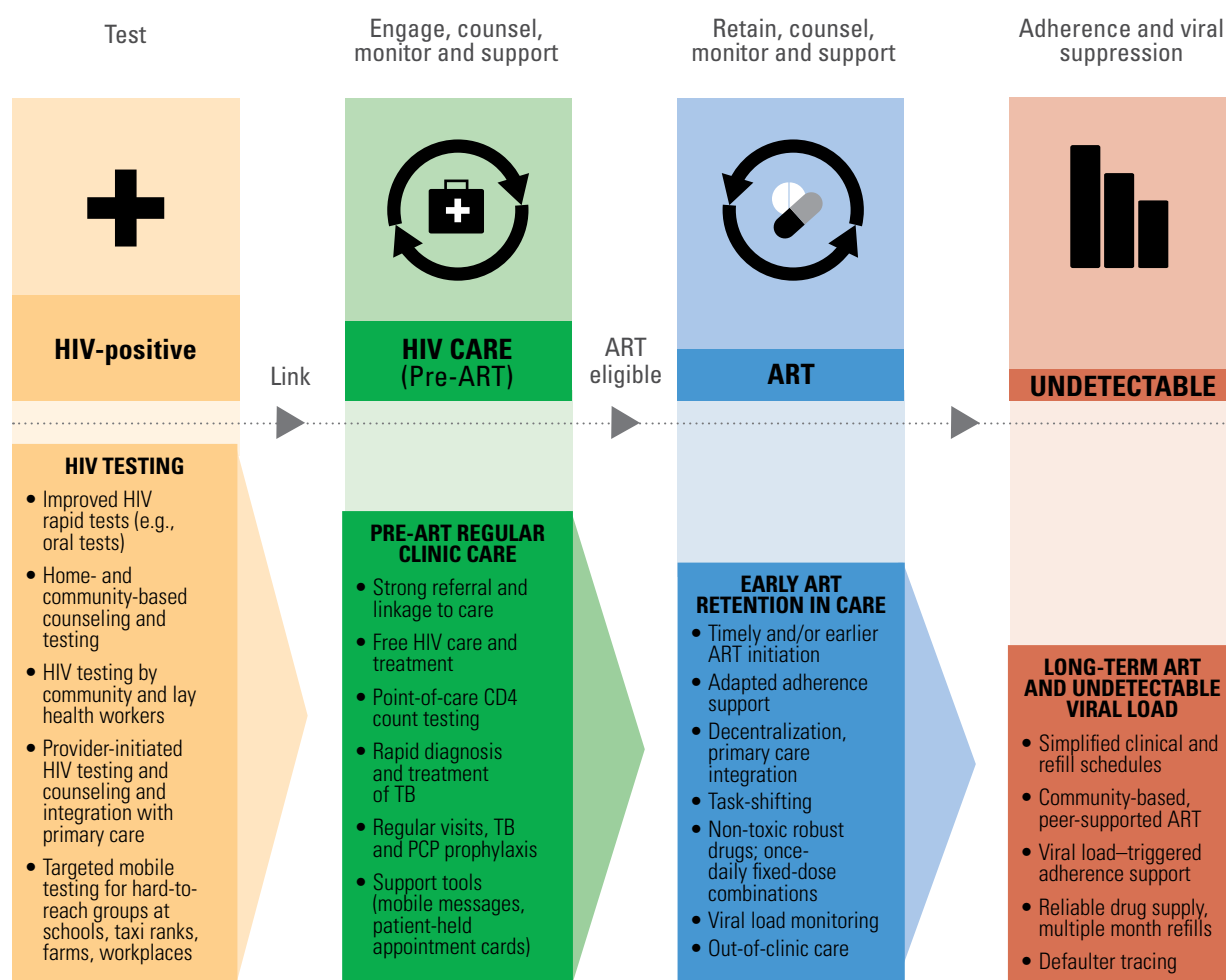
2.

## NARROW THE GAPS IN THE TREATMENT CASCADE

Virtually every substantive discussion of the potential impact of treatment as prevention makes reference to a graphic illustration depicting fall-off at each stage of the treatment cascade—as people move from testing HIV-positive to entering care to starting ART and so on. While the specifics—the rate of fall-off, the stages where fall-off is greatest, the stages themselves and the absolute numbers—differ across populations, the fact that there is attrition at every stage is a constant. And, as the graphic on page 14, which depicts fall-off in the US, illustrates, the numbers are sobering. The current state of affairs must change if the world is going to make effective use of treatment as prevention as a tool for ending the epidemic. Therefore, in this arena, one priority for 2013 is to articulate and fund a retention science agenda that narrows the gaps in the treatment cascade.



## Key Strategies for Narrowing Gaps in the HIV Treatment Cascade



Sources: Top: adapted from: ML McNairy and W. El-Sadr. "The HIV care continuum: no partial credit given," *AIDS* (2012), 26: 1735-1738. Bottom: Médecins sans Frontières/Doctors without Borders and UNAIDS (2012). "Speed scale-up: strategies, tools and policies to get the best HIV treatment to more people, sooner," [www.msfaccess.org/content/speed-scale-strategies-tools-and-policies-get-best-hiv-treatment-more-people-sooner](http://www.msfaccess.org/content/speed-scale-strategies-tools-and-policies-get-best-hiv-treatment-more-people-sooner), Accessed November 13, 2012.

Such an agenda should segment and systematically address issues that arise at each step of the cascade since, as Wafaa el-Sadr and colleagues noted earlier this year, there is no single step that has emerged as the main issue, either in developed nations or resource-limited settings.<sup>3</sup>

There is no shortage of research on improving testing uptake, linkage to care and retention. The key strategies for resource-poor settings described above can and should be adopted without delay—with impact and best

practices documented over time. But more of a coordinated, concerted effort is needed. It is critical that the array of investigations proposed—and those that are underway—be viewed with an eye to what is missing and what is redundant. The evaluation metrics for new strategies should measure direct impact—such as the proportion of patients who achieve sustained viral suppression over time.

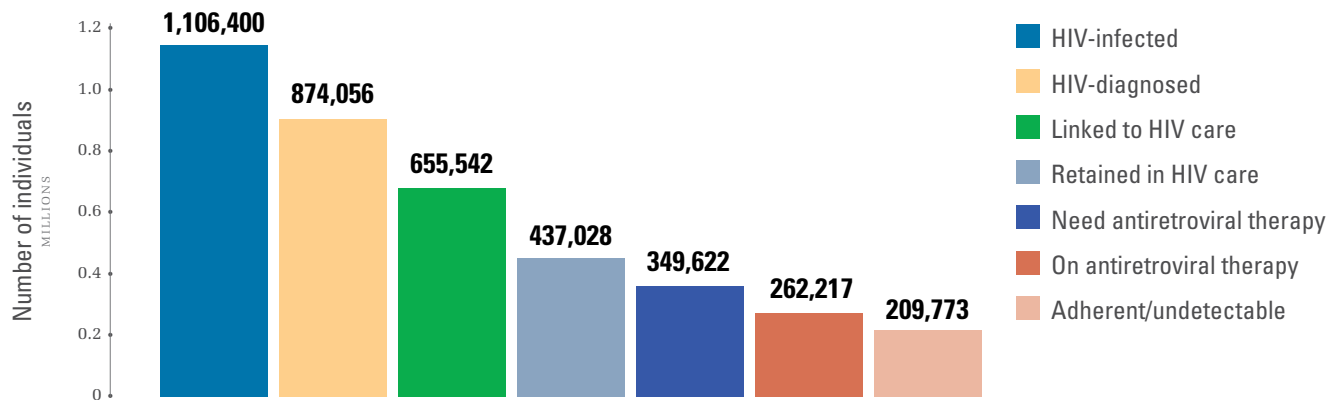
There must be a focus on population-specific issues. As just one example, there are critical questions regarding treatment in HIV-positive

<sup>3</sup> ML McNairy and W El-Sadr. "The HIV care continuum: no partial credit given," *AIDS* (2012), 26: 1735-1738.



## Estimated Engagement in the HIV Care Cascade in the US

It is estimated that only 19 percent of HIV-positive people in the US have an undetectable viral load. Similar patterns in the care cascade exist around the world.



Source: EM Gardner et al. "The Spectrum of Engagement in HIV Care and its Relevance to Test-and-Treat Strategies for Prevention of HIV Infection," Clin Infect Dis. (2011) 52 (6): 793-800.

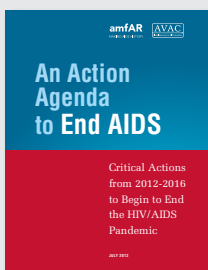
pregnant and post-partum women. In a pooled analysis of 51 studies, involving over 20,000 pregnant women from Kenya, South Africa, the United States and Zambia, only 73.5 percent of pregnant women with HIV maintained adequate adherence to ART (defined as equal to or greater than 80 percent) during and after pregnancy.<sup>4</sup> There's an urgent need to improve understanding of how to support women's adherence throughout pregnancy and after delivery especially given the ongoing push to

expansion of the prevention strategy known as Option B-plus (lifelong therapy for HIV-positive pregnant and lactating women).

Pregnant and lactating women are just one example. Youth, HIV-positive adults with high CD4 cell counts, marginalized populations and many other groups will have key issues that need to be addressed through smart implementation science.

Modelers, national health officials, implementers and funders of research should map and cost out the retention science agenda(s) for various contexts and communities. Ideally, this work would lay out the knowledge that is currently available, the data that are anticipated from current research, and the areas that have yet to be funded. If this is done in the next 12 months it will bring significant clarity to ART's role in combination prevention at the precise moment that countries begin to implement the forthcoming WHO comprehensive guidance on ARVs for treatment and prevention (see p. 29 for more on this issue).

## ADVOCACY RESOURCES



### An Action Agenda to End AIDS

Published by amfAR and AVAC in July 2012, this document identifies milestones and actions for progress between 2012 and 2015. To download a copy and subscribe to receive quarterly updates visit [endingaids.org](http://endingaids.org)

[www.avac.org](http://www.avac.org)

<sup>4</sup> JB Nachega et al. "Adherence to antiretroviral therapy during and after pregnancy in low-income, middle-income, and high-income countries: A systematic review and meta-analysis." AIDS (2012), 26;16: 2039-2052.

## PRIORITY

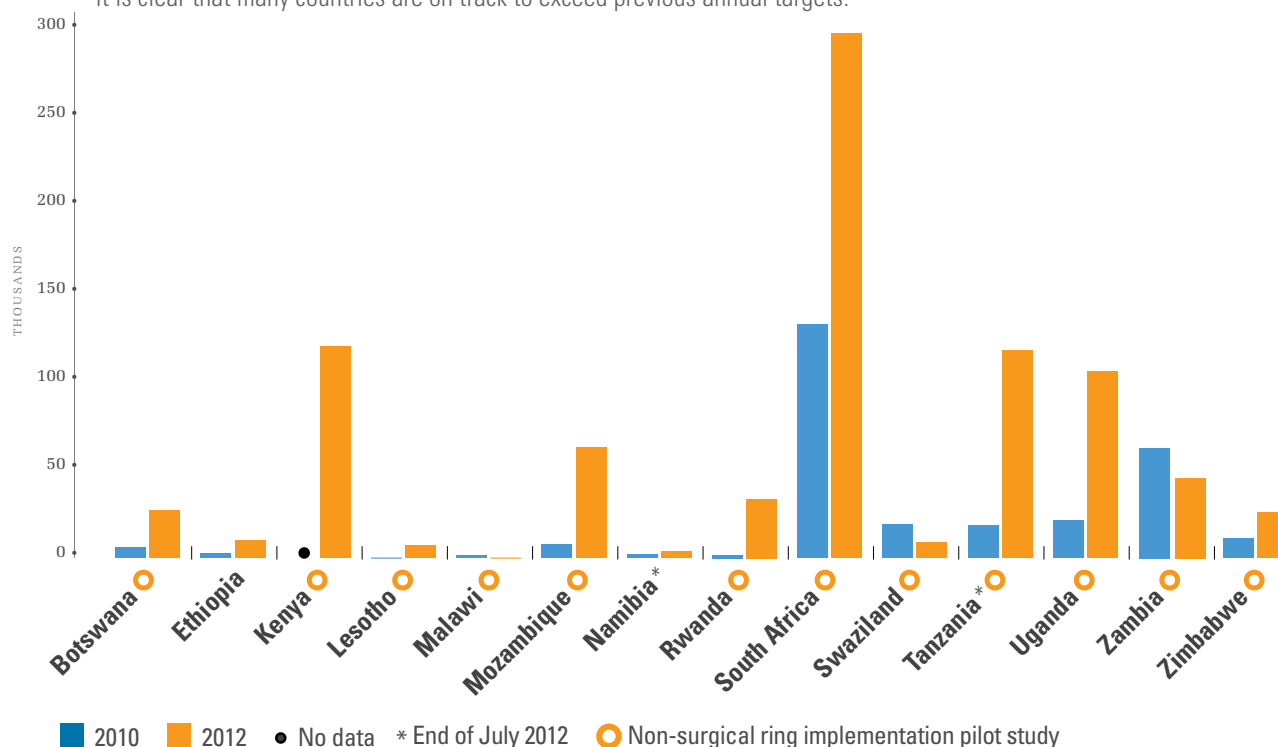
3.

## PREPARE FOR NEW NON-SURGICAL MALE CIRCUMCISION DEVICES

Over the past 12 months, the state of voluntary medical male circumcision (VMMC) for HIV prevention started to change for the better. Rollout efforts in many of the 14 countries prioritized by PEPFAR and UNAIDS accelerated or got underway in earnest, and WHO/UNAIDS launched the *Joint Strategic Action Framework* on VMMC, a document that is designed to provide ministries of health and other key stakeholders with a common approach to rapid implementation of a “catch-up” phase of adult VMMC.<sup>5</sup> For key countries, the target is 80 percent of adult men undergoing the procedure over a finite period of time—amounting to a total of 20 million procedures in sub-Saharan Africa. Prior to 2012, progress had been relatively slow (see figure below). But the pace of implementation has now begun to pick up quite dramatically. Zambia, which had had a relatively lackluster national program since its launch in year 2009, published a detailed national plan in mid-2012 and exceeded its targets for a July/August campaign, performing 45,000 procedures in six weeks.

### Stepping Up the Pace: VMMC accelerates in priority countries

At press time, final 2012 totals were not available. However, based on estimated totals through July or August 2012, it is clear that many countries are on track to exceed previous annual targets.



Sources: PEPFAR, WHO, UNAIDS, Country Implementers

<sup>5</sup> UNAIDS and WHO. “Joint Strategic Action Framework to Accelerate the Scale-up of Voluntary Medical Male Circumcision for HIV Prevention in East and Southern Africa.” [http://www.unaids.org/en/media/unaids/contentassets/documents/unaidspublication/2011/JC2251\\_Action\\_Framework\\_circumcision\\_en.pdf](http://www.unaids.org/en/media/unaids/contentassets/documents/unaidspublication/2011/JC2251_Action_Framework_circumcision_en.pdf). Accessed November 21, 2012.



## Make VMMC Essential to the “Ending AIDS” Movement

Hillary Clinton gets it, former Botswana President Festus Mogae gets it, Chief Jonathan Mumena XI of Zambia and 65 brave Zimbabwean parliamentarians get it: you can't begin to end the epidemic if you don't meet VMMC targets in a timely fashion. But all too often both global discourse and local advocacy regarding the possibility of ending the epidemic have focused almost entirely on achieving treatment targets. The sign-on statement issued by the organizers of the International AIDS Conference this year made bold declarations about the possibility of beginning to end the epidemic, and mentioned PrEP, microbicides, ART and many other interventions. VMMC, however, was not specifically identified as a tool for ending the epidemic. It isn't a matter of either/or: ART coverage does need to expand. Nor is it a matter of “me too”. The best modeling tells us that in key countries, VMMC taken to scale can have a profound impact on rates of new infections in men and women for years to come. This is a strategy that the world cannot afford to ignore.

One reason that there isn't more VMMC-focused advocacy may be the perception that this strategy is relatively well-resourced. Both the Bill & Melinda Gates Foundation and PEPFAR have committed significant resources to evaluation and implementation. However, it is a mistake to think that this strategy is fully funded or that advocacy for resources is unnecessary. Currently, government funding for the intervention is negligible in developing countries, and so far relatively little Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM) funding has been requested for or allocated

to VMMC programs. This could change, as the Geneva-based GFATM secretariat is urging VMMC priority countries to consider reallocating resources from existing grants to VMMC, as part of its shift to high-impact interventions.

Another obstacle is that some observers critique VMMC as a “foreign” strategy—an imposition of Western culture and policy on Africa. Oddly enough, this critique is leveled most frequently by a largely Western group of VMMC opponents. In contrast, there is a vibrant chorus of African advocates, including popular performers, parliamentarians and traditional leaders, who are taking ownership and leadership at a country level. There is also a growing pan-African movement—Africans Telling the Truth About VMMC—that is using social media and grassroots organizing to claim this intervention as their own. (For links to the “Truth Campaign” and other advocacy tools, see p. 17.)

Over the next 12 months, VMMC should become a global and local AIDS activist and advocacy priority. Not in the sense of demand creation, which is also essential, but in the sense of eagle-eyed tracking of national progress toward meeting targets—since it's only by circumcising substantial proportions of adult men that countries can reap the future benefits at a population level. Advocates also need to provide an informed critique of the effectiveness of coordination between national governments, international donors and implementing partners. Another key issue is country-level spending. Many countries that are expected to “own” their programs often commit scant or no resources to the scale-up efforts. This must change.

Now is the time to redouble advocacy, since all countries—even those making progress—need additional resources and mobilization to reach their targets in adult men and to ensure sustained progress in infant male circumcision programs. This is key, since if infant programs are not up and running in the next five years, there will continue to be males who require surgery as adolescents and adults.

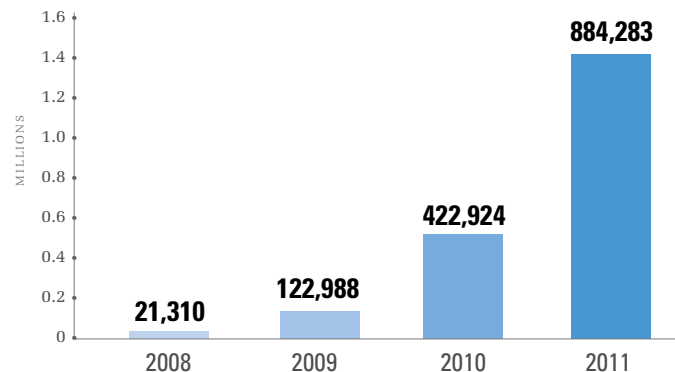
It is also key to continue analyzing data coming in about the average age of men seeking VMMC. There have been challenges in reaching the older men in the target population—and serious consideration should be given to the level of effort invested in outreach to various age groups, so that finite resources are channeled to the activities with the greatest impact, including establishment of infant programs.

These and other overarching issues, as seen from a civil society perspective, are laid out in *A Call to Action* (see box below). But overall, it's been a year of long-awaited, promising activity.

While there is more to celebrate than ever before, it is no time for complacency. The key tasks described in last year's *A Call to Action on VMMC* and the WHO/UNAIDS *Joint Strategic Action Framework* all remain priorities. The most important *new* priority for VMMC in the next 12 months is to ensure country preparedness for programmatic innovation, with a particular focus on non-surgical devices.

WHO prequalification of the first non-surgical devices, known as PrePex and Shang Ring, is expected in 2013. Prequalification paves the way for procurement by countries and international donors. A number of feasibility and acceptability trials of the PrePex device are also planned over the next 12 months. Countries piloting the device are identified in the graphic on page 15. Media coverage of these trials has already started.

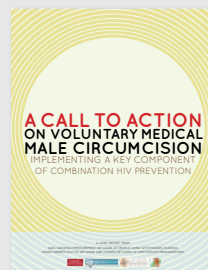
### Cumulative Number of Male Circumcisions Performed from 2008 to 2011



Sources: PEPFAR, WHO, UNAIDS

It is critical that key stakeholders at country and international levels prepare for prequalification of non-surgical devices by developing clear communications about the pros and cons of each given device in terms of acceptability, cost, logistics and other factors. Importantly, the initial prequalification will be for use in men 18 and older. Until there are data on the use in younger men and adolescents (who comprise over half of those seeking VMMC in many places), it is difficult to evaluate their true impact.

## ADVOCACY RESOURCES



### Mobilizing for VMMC

Visit [avac.org/malecircumcision](http://avac.org/malecircumcision) to download civil society publications including *A Call to Action on Voluntary Medical Male Circumcision* and the Ugandan report, *Too Little, Too Slow*. Don't miss *Africans Telling the Truth About VMMC* ([truthaboutvmmc.org](http://truthaboutvmmc.org)) and the VMMC Clearinghouse ([malecircumcision.org](http://malecircumcision.org))

[www.avac.org](http://www.avac.org)

## Non-surgical Devices for VMMC

The PrePex device (bottom) and Shang Ring (top) are two of the non-surgical devices in development.



Since these devices don't involve surgery, it may be tempting to assume that implementation will be easier and even cheaper than surgical VMMC. However, this needs to be determined in the context of programmatic implementation. There may also be initial negative reactions—for instance, to the length of time that the device must stay on (five to seven days)—that hamper strategic introduction. There is no “right” decision at this stage. Countries will make their own determinations based on data from trials, stage of rollout of surgical procedures, cost and other factors. What *is* essential is that the product introduction preparedness efforts begin as soon as possible at the country level in order to ensure that accurate information is widely disseminated thus managing expectations and facilitating swift, thoughtful decision making.

It will also be critical to map and meet social marketing needs in potential early-adopter

countries. One commercial manufacturer has made a commitment to finance the marketing efforts. This is necessary but not sufficient in itself. Care must be taken to ensure that promotional messages do not inadvertently undermine interest in surgery-based programs. Public sector and civil society stakeholders must take part in early conversations about how to position devices in countries where they may be introduced—and how to support the creation of effective social marketing campaigns.

For many countries, price is going to be a deciding factor. The manufacturer of PrePex has set an initial price of US\$20 per device. Based on this figure, some early comparative models show only a slight savings for non-surgical, device-based programs over surgical ones. But, in addition to price itself, there are other, more nuanced factors to consider: for instance, a device-based program that helps a country meet VMMC catch-up-phase targets more quickly may ultimately prove far more cost-effective than a cheaper program that must run for longer to reach the same goal. In order to guide decision making, work needs to be done not only to ensure that non-surgical devices are affordable, but that countries, donors and implementing partners have access to accurate models that examine both cost *and* impact.

## ADVOCACY RESOURCES



### HIV Resource Tracking

Track investments in research on and implementation of the full range of HIV prevention options, including PrEP, vaccines, microbicides, voluntary medical male circumcision, treatment as prevention and more at [hivresourcetracking.org](http://hivresourcetracking.org).

[www.avac.org](http://www.avac.org)



## PRIORITY

4.

## DEFINE AND LAUNCH A CORE PACKAGE OF PREP DEMONSTRATION PROJECTS

**This past year brought major developments in pre-exposure prophylaxis (PrEP) research. In July, the US Food and Drug Administration (FDA) approved Gilead Sciences, Inc.'s application for a label change for TDF/FTC (marketed by Gilead as Truvada), indicating that the drug could be used for HIV prevention in HIV-negative adults. Less than a week later, WHO issued a document to guide low- and middle-income countries in their decision making about PrEP demonstration projects.**

There are inherent drawbacks to daily oral TDF/FTC for PrEP, including but not limited to the potential side effects, the adherence burden, and the fact that TDF/FTC is the cornerstone of many first-line treatment regimens. These characteristics are precisely why this PrEP strategy is described, even by supportive advocates, as a “niche” intervention, likely to have greatest benefit in specific circumstances or during particular periods of time.

The regulatory developments in 2012 could pave the way for thoughtful exploration as to whether and how PrEP using daily oral TDF/FTC might be used as HIV prevention in various countries and specific communities. To date, though, in many settings there seems to be more confusion than deliberation about what to do next. While caution is important, so is commitment to seizing the opportunity

to introduce a new prevention strategy. Daily oral TDF/FTC can likely help reduce HIV in key at-risk populations. It will also lay the groundwork for introduction of next-generation strategies, including a microbicide. It is therefore critical to identify the situations in which this first-generation PrEP strategy could be used with greatest impact. The top priority for PrEP is to define what needs to happen, and where, in order to pave the way for optimal use and impact across a diversity of settings.

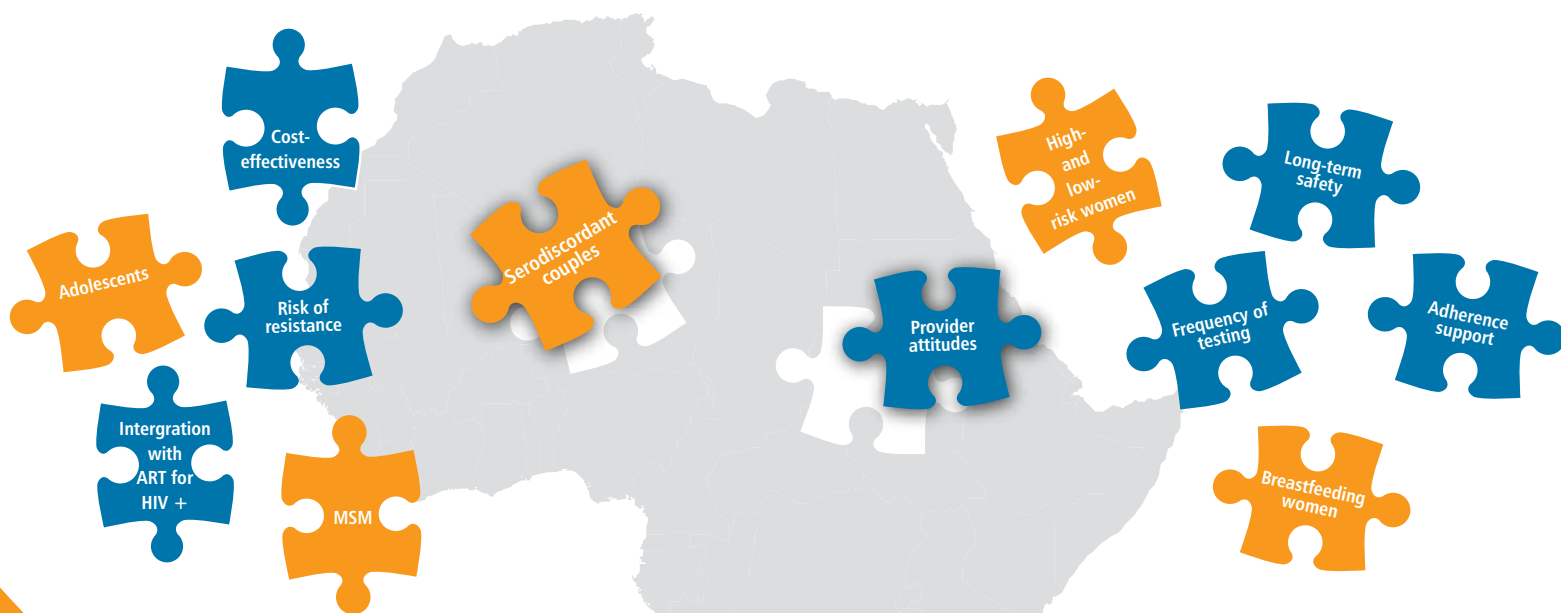
Specifically, it is necessary to:

**Define and launch a core package of PrEP demonstration projects in order to assess PrEP's relevance in low- and middle-income countries.** The WHO guidance document on demonstration projects states that the outcome of such projects will be used in three to



## Plans and Missing Pieces in PrEP Demonstration Projects: Africa

There are a handful of PrEP demonstration projects planned or underway in sub-Saharan Africa. But many questions about service delivery and key populations will remain unanswered without stronger demand, coordination and investment.



Country	Name, sponsor, funder	Design / Key questions	Status
<b>Kenya, Uganda</b>	<b>Partners PrEP Demonstration Project</b> , led by a team of scientists from Kenya, Uganda and the US; funded by National Institute of Mental Health of NIH, USAID and Bill & Melinda Gates Foundation	To evaluate HIV prevention preferences among approximately 1,000 HIV serodiscordant couples, adherence to PrEP and ART, and interface of reproductive health priorities and antiretroviral-based prevention. Project will implement PrEP as "bridge" to ART, providing PrEP to HIV-negative partner when HIV-positive partner is not yet on ART due to ineligibility based on country guidelines or personal decision. To be conducted in Thika and Kisumu, Kenya, as well as in Kampala and Kabwohe, Uganda.	One of four sites open and enrolling as of November 2012; results expected in 2016.
<b>Kenya</b>	Projects in Kenya, Nigeria and South Africa will be implemented by national partners in each country in collaboration with O'Neill Institute of Georgetown University, London School of Hygiene and Tropical Medicine, Imperial College London, UNAIDS and WHO; funded by Bill & Melinda Gates Foundation	Proposed Kenyan demonstration project under design. Final project will be shaped by formative research to assess consumer perceptions and identify potential barriers and opportunities related to PrEP introduction.	Formative research in planning phase. No start date for demonstration project.
<b>Nigeria</b>		Proposed Nigerian demonstration project under discussion, with focus on treating HIV-negative male partners identified via couples testing in antenatal clinics offering prevention of vertical transmission to HIV-positive pregnant women.	Formative discussions underway. No start date for demonstration project.
<b>South Africa</b>		Early discussions underway; no specifics on the design.	Early planning stages.



five years' time to develop a new, expanded guidance for the implementation and scale-up of PrEP. WHO and UNAIDS are also creating a template for developing demonstration projects and are discussing this template with key stakeholders. But, in spite of this activity, there is no clear sense of what the core set of PrEP demonstration projects should look like, either at a country level or in specific populations, such as young women or gay men. Various efforts are underway to launch demonstration projects in countries that include Kenya, Nigeria, South Africa, Uganda and the US. But it is not at all clear that these projects together will provide the scope of information needed to help other countries determine whether and how daily oral TDF/FTC might be used as an effective niche prevention strategy.

All of this work is needed in the effort to create clear messaging about how this PrEP strategy is likely to be used. As Kenyan PrEP investigator and prevention advocate Nelly Mugo said in her plenary at the International AIDS Conference, "PrEP is for a season." Niche products may seem to be of limited use in the context of the enormous need for HIV prevention. But as the "Know Your Epidemic, Know Your Response" approach championed by UNAIDS clearly states, success depends on targeted responses to specific challenges. Daily oral PrEP using TDF/FTC could be an effective prevention tool, even as the search for next-generation ARV-based products and delivery systems goes on.

But without champions who balance caution with enthusiasm—and articulate a clear vision for how to fill in gaps in information—the strategy is in danger of gathering dust on the proverbial shelf of underutilized tools, like the female condom, which were dubbed infeasible early on and so remain inaccessible to those who want to use them.

In addition to the efforts of WHO and UNAIDS, it's vital that country-level policy makers, implementers and advocates develop—and

fund their support—a robust suite of activities to gather information across age groups and at-risk populations and through a wide range of health delivery programs. If done well, these initial product-introduction activities will enable HIV prevention planners to address unanswered questions, such as who can benefit most from PrEP; how can it be provided safely and efficiently; how can PrEP be integrated with other essential prevention methods, such as male and female condoms, testing and treatment; and what kind of health system support is needed to ensure successful implementation.

### **Launch genuine provider education efforts in the United States.**

In the US, the only country to deliver regulatory approval on TDF/FTC for PrEP, Gilead Sciences' provider education initiative to date has centered on a mailing of several hundred thousand letters providing information about daily oral TDF/FTC for HIV prevention to doctors' offices around the country. Many civil society groups, however, are concerned about the lack of a structured, well-funded outreach and education campaign—one that reaches not only doctors but nurses, counselors, outreach workers at AIDS service organizations and the full range of civil society leaders, who are trusted resources in the community.

Gilead has committed to making grants to civil society groups to address some of the community education needs. But, as in

## **ADVOCACY RESOURCES**

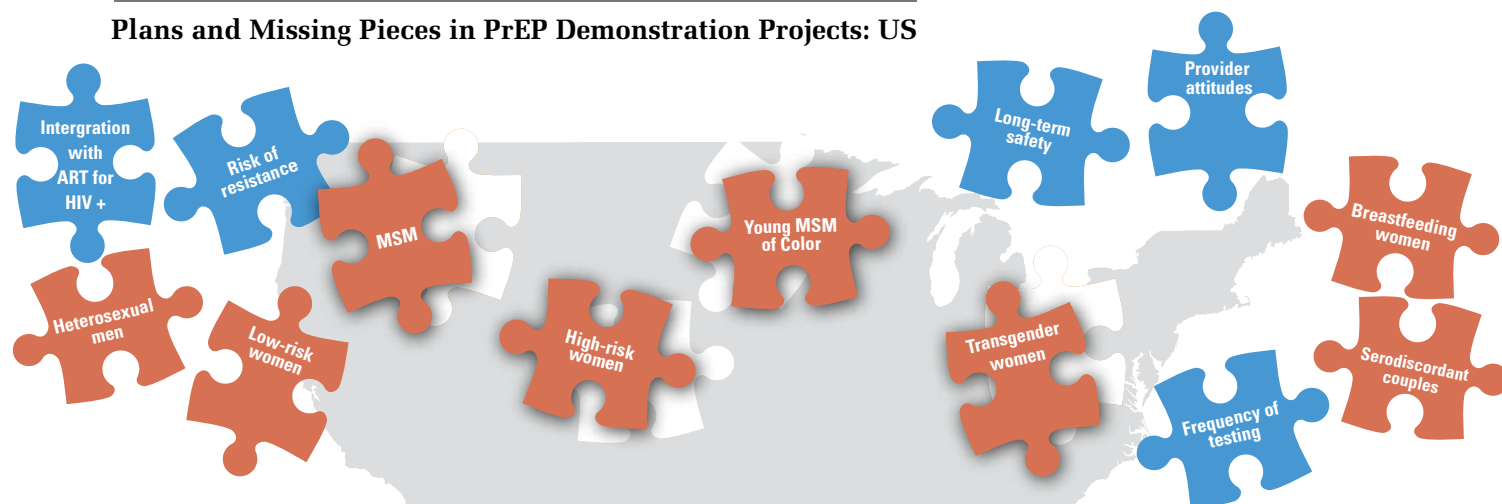


### **Tracking PrEP Research**

Track developments, find resources and learn about advocacy priorities at: [prepwatch.org](http://prepwatch.org), [avac.org/prep](http://avac.org/prep), [avac.org/researchliteracy](http://avac.org/researchliteracy) and [avac.org/pxrd](http://avac.org/pxrd)

[www.avac.org](http://www.avac.org)

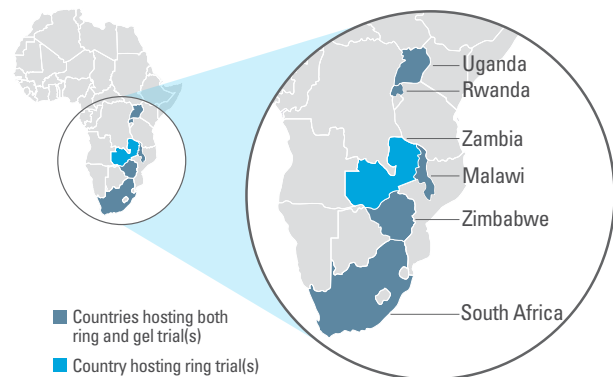
## Plans and Missing Pieces in PrEP Demonstration Projects: US



Location	Name, sponsor; funder	Design / Key questions	Status
<b>Miami, Florida; San Francisco, California; and Washington, DC</b>	<b>The Demo Project</b> , the San Francisco Department of Public Health and the Florida Department of Health; funded by the National Institute of Allergy and Infectious Diseases of the NIH	The goals include determining the level of community interest in PrEP, evaluating how well people adhere to a daily prevention regimen, seeing how long they stay on PrEP and assessing whether sexual practices change. Aims to enroll 300 HIV-negative MSM and transgender women at City Clinic, while a sister project in Miami will enroll 200 participants. Whitman Walker Clinic in Washington, DC, will also be a site, aiming to enroll approximately 100 participants.	San Francisco sites started September 2012. Miami site status pending. Washington, DC, site aims to begin enrolling in February 2013.
<b>East Bay, California</b> (Oakland, Richmond, Berkeley and other locations)	<b>East Bay Consortium</b> , East Bay AIDS Center at Alta Bates Summit Medical Center in Oakland and Berkeley, the Center for AIDS Prevention Studies at UCSF; funded by the California HIV/AIDS Research Program of the University of California	The group will conduct a pilot study of clinic-based social network testing and self-testing for HIV, in the context of an innovative sexual health services program. The East Bay consortium also will plan and pilot strategies to offer PrEP to about 20 high-risk HIV-negative young MSM of color.	Planned.
<b>Los Angeles, California</b>	Division of HIV and STD Programs at the Los Angeles County Department of Public Health, UCLA, the Los Angeles Gay and Lesbian Center, AIDS Project Los Angeles, and the OASIS Clinic at Charles Drew University; funded by the California HIV/AIDS Research Program of the University of California	Plans to enroll 375 high-risk MSM and transgender women who will receive a customized prevention package that may include PrEP. Of these, about 300 persons will receive daily TDF/FTC-based PrEP, and will be assessed for safety, feasibility, adherence, risk behavior and HIV seroconversions over a 48-week period. The TLC+ strategy plans a social network testing intervention among high-risk MSM, with linkage to care for newly diagnosed HIV-positive persons.	Planned.
<b>Long Beach, Los Angeles and San Diego, California</b>	University of California at San Diego, UCSD Antiviral Research Center and Owen Clinic, the LA County–University of Southern California Rand Schrader Clinic, the Harbor-UCLA Medical Center, the San Diego County HIV, STD, and Hepatitis Branch, and the Long Beach Health and Human Services Agency; funded by the California HIV/AIDS Research Program of the University of California	Plans to enroll 400 eligible high-risk MSM, who will receive daily TDF/FTC-based PrEP, into a randomized study that evaluates whether a text messaging–based adherence intervention can improve adherence to the PrEP medication. The study will follow participants for safety, feasibility, adherence, risk behavior and HIV seroconversion over approximately two years. Will also assess the impact of Active Linkage and Engagement specialists, who will work to ensure linkage to treatment and to PrEP.	Planned.
<b>TBD</b> (four sites in the US)	<b>CDC Foundation Demonstration Project</b> , funding pending	Proposed to evaluate real-world PrEP use in MSM and heterosexual women at risk of HIV infection in health clinic settings, potentially in 1,200 participants.	Start date pending funding.

the international arena described above, piecemeal efforts are unlikely to achieve the needed results—and if they do, it will be with unnecessary delay. Leadership and coordination is called for at the state and city levels via initiatives that link providers, community-based organizations, NIH-funded Centers for AIDS Research and city health departments. These entities should work together to launch effective education campaigns linked to well-monitored programs. Uptake may still be low—PrEP is by no means for everyone—but

## The Geography of Microbicide Research in Sub-Saharan Africa



AVAC PLAYBOOK 2012: GLOBAL GOALS			
DELIVER	Testing/Diagnostics	Male Circumcision	Treatment as Prevention
	Scaled-up and efficient testing programs with high levels of linkage to evidence-based prevention, treatment and care. Swift execution of a research agenda on testing modalities and affordable diagnostics that meets emerging needs.	Roll out VMMC with strategic, long-term plans in countries that meet WHO-recommended criteria, with goal of 80 percent circumcised.	Universal access to ARVs at CD4 count 350 or below for all people with HIV. Acceleration of treatment provision to specific groups at CD4 between 350 and 500, with phased implementation plans in majority of countries by end of 2012.
DEMONSTRATE	PrEP	Microbicides	Comprehensive Approach
	Swift implementation of pilots and phased implementation in countries and communities where oral TDF/FTC-based PrEP is relevant; clear action on	A clear and accelerated product development pathway to clarify the effectiveness of 1% tenofovir gel	Deliver evidence-based strategies in combinations that will have maximum impact on the epidemic. Support research that generates answers about synergistic use of multiple new prevention strategies.

## Fight for the Women's HIV Prevention Revolution

Recent breakthroughs in HIV prevention research have created unprecedented opportunities to curb new HIV infections, save lives and reduce the global price tag for the AIDS response. Global optimism about scientific breakthroughs is warranted, but success is by no means guaranteed. One of the deciding factors will be whether the new and emerging prevention options meet the needs of women at risk of and living with HIV worldwide. This is a special challenge in sub-Saharan Africa, where women continue to bear the brunt of the epidemic. AIDS remains the leading cause of death for African women of reproductive age, and there are persistent gender gaps in HIV incidence and prevalence, with young women disproportionately affected compared to their male counterparts. Each of the existing tools discussed as a component of combination prevention can and must be seen through a clear and balanced gender lens. Whether it is VMMC, treatment as prevention or daily oral TDF/FTC for PrEP—each of these tools requires, for most women, a level of discussion with their spouse or stable partner.

Simply put, there continues to be a lack of female-controlled and -initiated HIV prevention options—and we cannot end the epidemic without them. Microbicides as a category are essential to any effective response to HIV. Introduction of microbicides and other female-initiated methods must be anticipated and planned for. Introduction of

daily oral TDF/FTC for PrEP—another woman-initiated method, available now—will supply key lessons.

Microbicide research is itself at a critical juncture. The 2010 result from the CAPRISA 004 trial provided a proof of concept that coitally related dosing of 1% tenofovir gel can reduce HIV risk. Subsequently, an arm of the VOICE trial evaluating daily dosing of the same product was stopped due to futility. A confirmatory trial, FACTS 001, is underway using the CAPRISA 004 dosing schedule, as is an open-label follow-on to CAPRISA 004, known as CAPRISA 008. Results from FACTS 001 could come in 2014, with possible product licensure sometime in 2015. At the same time, two ongoing efficacy trials of the dapivirine ring (ASPIRE and The Ring Study) are evaluating a potential next-generation product, and results for these trials are expected in 2015. It is therefore possible that the microbicide field will be making multiple decisions about product introduction in the next two to three years (see timeline on p. 24).

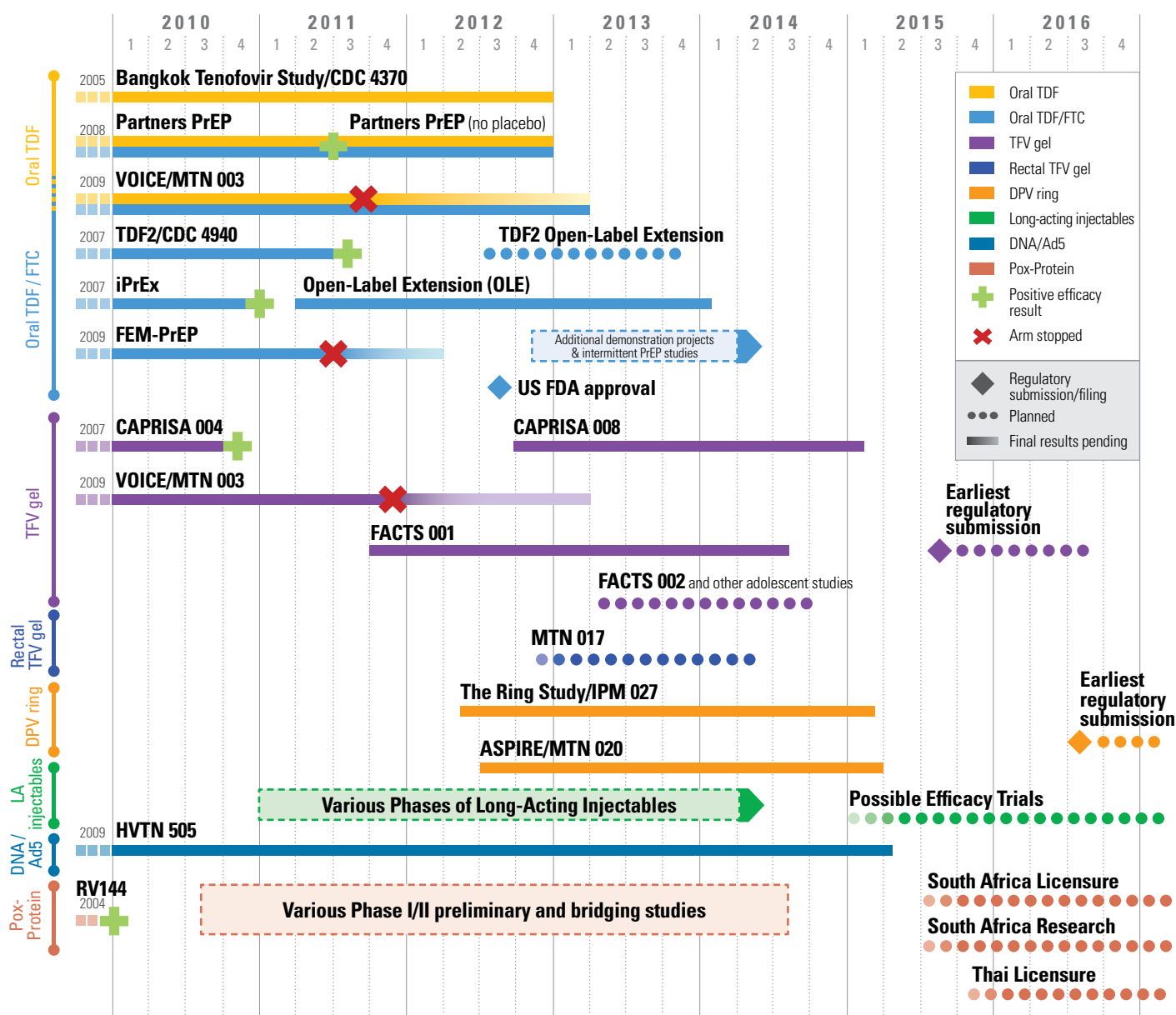
It is of the utmost importance that the microbicide field is prepared for any and all scenarios that might arise—and particularly for the specific decisions and processes related to product introduction. Waiting for confirmatory data and possible product licensure to begin deliberations will mean waiting too long. It is also essential that research, planning and implementation accounts for gender implications at every stage. Biomedical tools do not work in a vacuum—but rather in the complex realities of women's and girl's lives.

the current approach doesn't tell us whether the lack of interest reported by many advocates and providers so far is due to ineffective rollout, provider resistance, lack of interest among potential users, cost or other factors.

Over the long term, the extraordinary feat of proving PrEP's efficacy may turn out to be easier than ensuring that it is used well. But it is possible to establish the feasibility and utility of "real world" PrEP using daily

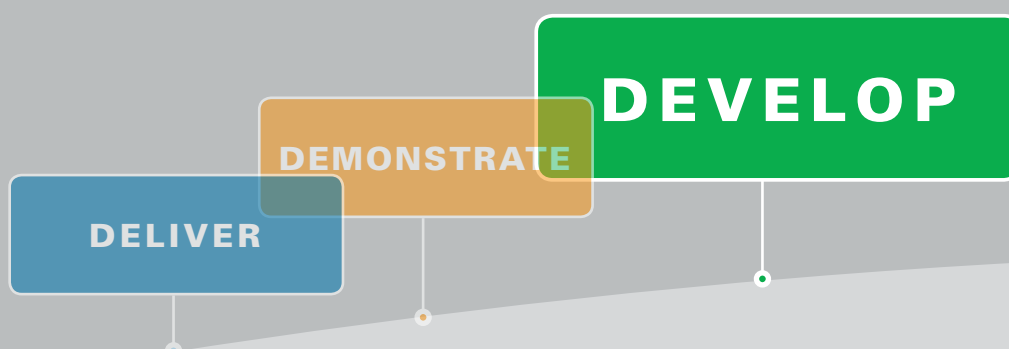
oral TDF/FTC. We've overcome far greater challenges in the response to AIDS. State-of-the-art HIV prevention is a right and a public health imperative. Two years after the first trial released data showing efficacy of daily oral TDF/FTC for PrEP, the world is behind in establishing the additional evidence, education, support services and resources to ensure that this PrEP strategy fulfills its potential in helping to begin to end AIDS.

### HIV Prevention Research Timeline, December 2012 \* \*\*



\* Trial end dates are estimates; due to the unpredictability of clinical trials the actual dates may change. For full trial details, see [www.avac.org/pxr](http://www.avac.org/pxr).

\*\* While not all trials included are effectiveness trials, those included are mainly phase II/IIb, III/IIIb and IV trials.



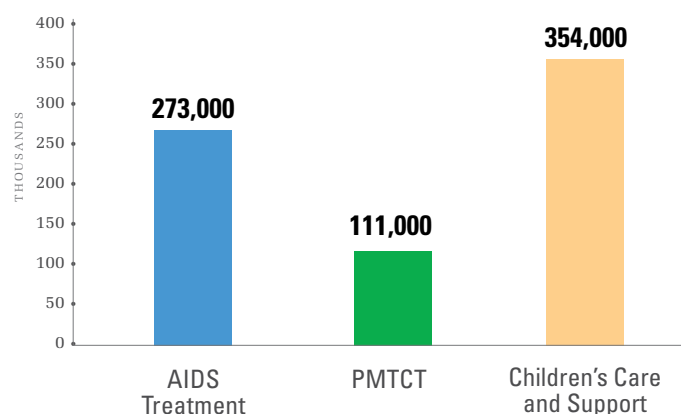
PRIORITY	
<b>5.</b>	<b>SAFEGUARD HIV PREVENTION RESEARCH FUNDING</b>

To say that we can begin to end AIDS does not mean that we have all the tools we need to actually end it. Today's tools are powerful enough to make a start at ending the epidemic. Implementation of what we have today will “buy time”—reducing infections and saving lives on an unprecedented scale—until additional tools, like a vaccine and a cure, are developed. Progress toward a vaccine and a cure has been exciting. But it cannot continue without sustained funding for research. The top priority in terms of AIDS vaccine and cure research in 2013 is to safeguard funding.

As *AVAC Report 2012* went to press, it was still unclear whether US federal budget sequestration would go into effect. Sequestration would mean across-the-board cuts in US defense and non-defense spending, beginning in January 2013. This proposal emerged after the appointed US congressional committee failed to reach agreement on a plan for deficit reduction. The proposed cuts could have a devastating impact on HIV prevention and treatment implementation, hampering the expansion of ART funded by the PEPFAR program (see graphic at right). The impact of these cuts would have global implications for research, innovation and implementation—hence our focus on such a US-centered development. Even if the cuts do not go forward, a crisis of confidence with lasting effects is in the making.

Budget sequestration would cut roughly US\$2.5 billion from the National Institutes of Health (NIH), translating into an estimated 2,400 fewer

**People Not Receiving Antiretrovirals and Treatment and Services in One Year Through Bilateral FY 2013 Sequestration**



Source: amfAR (2012) “The Effect of Budget Sequestration on Global Health: Projecting the Human Impact in Fiscal Year 2013,” [http://www.amfar.org/uploadedFiles/\\_amfarorg/In\\_The\\_Community/SequestrationJuly2012.pdf](http://www.amfar.org/uploadedFiles/_amfarorg/In_The_Community/SequestrationJuly2012.pdf). Accessed November 13, 2012.



research project grants. This means fewer new ideas, less innovation and yet another blow to the next generation of AIDS researchers. With less government funding for investigator-initiated research, young scientists may switch disciplines or choose other career paths in the private sector.

In addition to shrinking the number of NIH grants to individual investigators, sequestration would also have a direct impact on core funding for the major HIV-focused research networks—including the HIV Vaccine Trials Network and the Microbicide Trials Network—at precisely the time that these networks need full support. As the graphic on page 27 shows, several vaccine trials are planned to build on the result of the RV144 AIDS vaccine trial. Robust capacity is also needed for ongoing efficacy trials of the dapivirine ring and other next-generation microbicide and multipurpose technologies.

The absolute cost savings associated with a cut to NIH research funding would have a negligible impact on overall deficit reduction—a fact that should be borne in mind by the US Congress whether sequestration or other deficit reduction measures are ultimately enacted.

There should be no reduction in funding for the overall NIH budget or for specific work in HIV prevention research and development. AVAC and many other groups tracking US government

investments in research support the Office of AIDS Research's call for US\$35 billion for the NIH. This is 13.6 percent above the US\$30.8 billion approved for the NIH under the 2013 continuing resolution (which temporarily funds government operations when an official budget has not been agreed upon). This funding level will ensure that all sectors, not just HIV research, are sufficiently resourced, allowing for synergies between discoveries in different fields.

Other governments must fund HIV-related research and development, too. In roughly 12 months, at the end of 2013, the European Union Framework Programme for Research and Innovation's Horizon 2020 plan will be officially launched. This new initiative aims to use international cooperation, including collaborations with non-European partners, to strengthen European research and innovation. HIV and other poverty-related diseases should be a research priority for this initiative and should be the subject of a specific request for proposals.

Low- and middle-income countries should also continue to expand their support through both in-kind and direct financial contributions to HIV research. AVAC and its partners in the HIV Resource Tracking collaborative ([www.hivresourcetracking.org](http://www.hivresourcetracking.org)) are working to improve methodologies for documenting these key inputs.

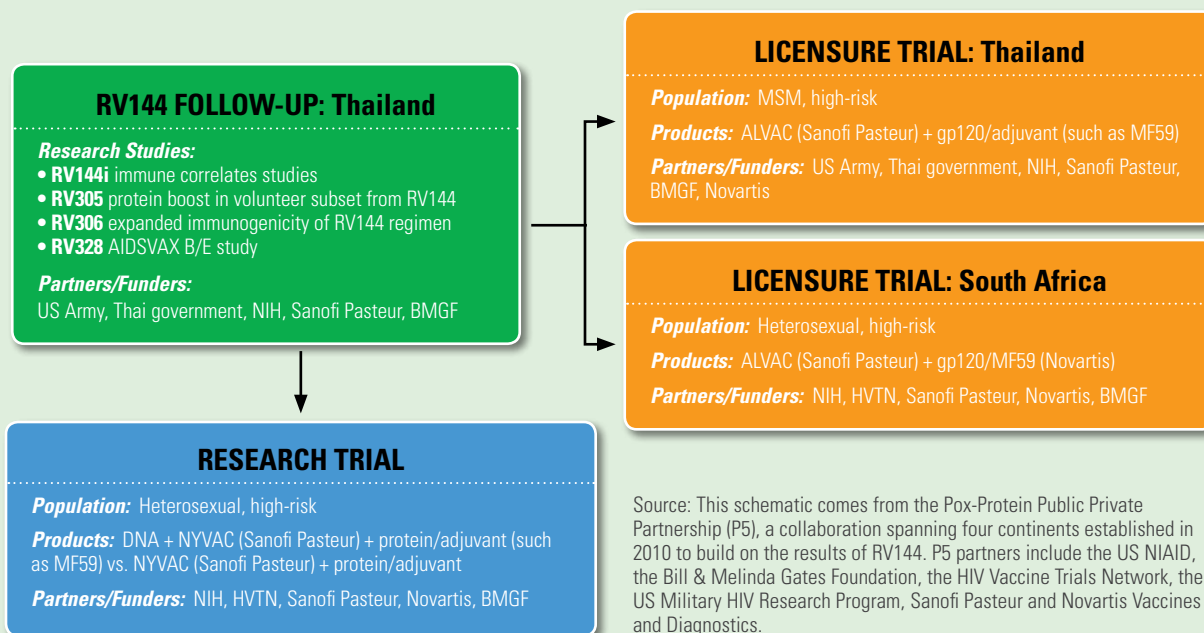
AVAC PLAYBOOK 2012: GLOBAL GOALS				
DELIVER	<b>Testing/Diagnostics</b> Scaled-up and efficient testing programs with high levels of linkage to evidence-based prevention, treatment and care. Swift execution of a research agenda on testing modalities and affordable diagnostics that meets emerging needs.	<b>Male Circumcision</b> Roll out VMMC with strategic, long-term plans in countries that meet WHO-recommended criteria, with goal of 80 percent circumcision.	<b>Treatment as Prevention</b> Universal access to ARTs at CD4 count 350 or below for all people with HIV. Acceleration of treatment provision to specific groups at CD4 between 350 and 500, with phased implementation plans in majority of countries by end of 2012.	<b>Comprehensive Approach</b> Deliver evidence-based strategies in combinations that will have maximum impact on this epidemic. Support research that generates answers about synergistic use of multiple new prevention strategies.
	<b>PEP</b> Swift implementation of pilots and phased implementation in countries and communities where oral TDF/FTC-based PEP is relevant; clear action on evaluating PEP and developing policies in countries where it might be introduced over the long term.	<b>Microbicides</b> A clear and accelerated product development pathway to clarify the effectiveness of 1% benzocaine gel. Donor decisions and actions about future trials and overall pipeline are accessible to, and shaped by, civil society and other stakeholders.		
DEMONSTRATE				
DEVELOP	<b>Vaccines</b> Maintain funding to build on recent breakthroughs. Connect the vaccine agenda to combination prevention.	<b>Ethics and Trial Conduct</b> Increase uptake and utilization of GPP. Guide new consensus on decision making about when to add emerging strategies to the standard of care.	<b>Partnerships</b> Build a movement from all sectors, calling for control of and then an end to AIDS.	

## Do What It Takes to Ensure that AIDS Vaccine Trials Can Be Conducted—in the Real World

The AIDS vaccine field has had more breakthroughs and more reason for hope in the past few years than ever before, and in the next 12 months it will take important steps toward launching clinical trials needed to confirm, clarify and expand on recent findings. It is essential to sustain and safeguard funding for vaccine research and

development, and to continue to tell the story of the AIDS vaccine effort in order to rally support at every level, from the grassroots to the halls of political power. In addition, in the next year, it's pressing for the field to address, head-on, some of the most thorny issues that are arising around the proposed clinical trials.

## Follow-on Trials Based on RV144: Strategy includes development and research tracks



Source: This schematic comes from the Pox-Protein Public Private Partnership (P5), a collaboration spanning four continents established in 2010 to build on the results of RV144. P5 partners include the US NIAID, the Bill & Melinda Gates Foundation, the HIV Vaccine Trials Network, the US Military HIV Research Program, Sanofi Pasteur and Novartis Vaccines and Diagnostics.

**Reach (or approach) consensus on standards of prevention in trials.** “We’re coming close to a place where everything is going to come to a screeching halt, because we can’t agree on what to do.” That’s the candid assessment of a longtime trialist working in the AIDS vaccine field. There are ambitious plans taking shape for follow-on trials to confirm and add detail to the RV144 Thai vaccine trial result.

These trials would take place in southern Africa and Thailand—two parts of the world that have also hosted trials of daily oral TDF/FTC for PrEP and that have well-established ART programs, which will likely expand to optimize on the promise of treatment as prevention. South Africa is well on its way to a cumulative one million adult male circumcisions by 2013. Which elements of this emerging high-impact combination prevention package should be delivered to AIDS vaccine trial participants—and how? With some strategies, like VMMC and ART, a robust referral network may be sufficient. For daily oral PrEP using TDF/FTC—or tenofovir gel or the dapivirine ring—the answer is less obvious. It is essential to define the trial obligations and best practices for daily oral PrEP using TDF/FTC or, eventually, a microbicide, which may have confirmed efficacy and even regulatory approval—but that probably won’t be widely available.

**Establish the feasibility of passive immunization trials through stakeholder engagement guided by the Good Participatory Practice (GPP) principles.**

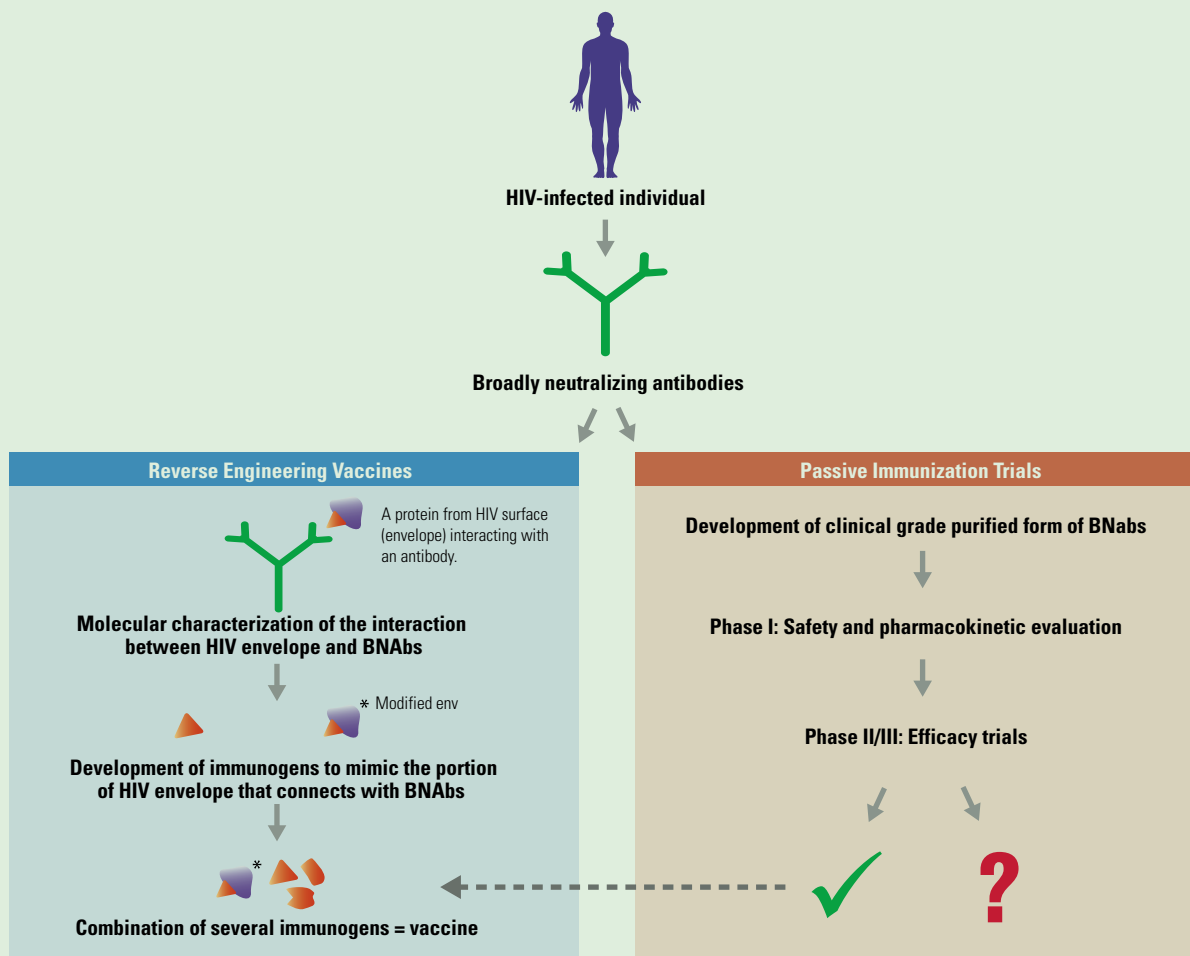
Passive immunization is a process by which an individual receives a potentially protective immune response, such as a purified antibody, via direct, external delivery (e.g., an injection). It is different from a vaccine, which teaches the body how to generate an immune response on its own. While passive immunization has applications in some fields (e.g., treatment of some immunodeficiency diseases and cases of poisoning), it is not likely to be a viable HIV prevention strategy for widespread implementation. It is, however, widely discussed as a step along the research and development pathway for developing vaccine strategies that induce potent broadly neutralizing antibodies. These pathways (see graphic on p. 28) stem from the relatively recent discovery of many potent, broadly neutralizing antibodies (BNABs) in serum samples from HIV-positive individuals. Passive immunization trials could provide proof-of-concept that purified forms of these potent BNABs protect against HIV in HIV-negative individuals. (Related evidence has been emerging from animal model studies. For example, a recently published experiment involving a humanized mouse model showed evidence that these BNABs can effectively control HIV.<sup>6</sup>)

<sup>6</sup> Klein et al. “HIV therapy by a combination of broadly neutralizing antibodies in humanized mice.” *Nature* (2012): doi:10.1038/nature11604.



## Neutralizing Antibodies: Research pathways in 2013 and beyond

There are multiple lines of inquiry stemming from the discovery of potent, broadly neutralizing antibodies that have been isolated from HIV-infected individuals. These antibodies are not effective against the types of HIV found in the same samples of the individuals' blood. Instead these BNABs are one step behind the evolving virus. But a vaccine or other strategy that ensured BNABs were present before exposure to HIV could be a powerful prevention tool. Two pathways to this goal are described below. Those not pictured include delivery of antibody-producing genes and topical microbicide formulations of BNABs.



Source: Adapted from: Burton, "Antibodies, viruses and vaccines," *Nature Reviews Immunology* (2002) 2: 706-713.

The Elizabeth Glaser Pediatric AIDS Foundation, the IMPAACT Network and the NIH Vaccine Research Center are planning a passive immunization trial in Uganda that would deliver BNABs to HIV-negative breastfeeding infants born to HIV-positive mothers. There is also discussion about possible evaluation in HIV-negative adults at high risk of infection.

A consultation on the feasibility of pediatric passive immunization trials is scheduled to be convened by the Global HIV Vaccine Enterprise in early 2013. This dialogue is timely and critical. In an era in which highly active, lifelong ART for pregnant women (Option B-plus) is one of the preferred strategies for prevention of vertical pediatric

transmission, any alternative approach must be carefully vetted by a full range of stakeholders—and it will be key for the Enterprise and collaborators to disseminate and discuss conclusions after the in-person meeting.

The GPP guidelines provide a roadmap for discussing whether passive immunization trials might move forward in adult and/or pediatric populations. Consultations such as the one planned by the Global HIV Vaccine Enterprise should be a priority for 2013, and should also include a clear explanation of the other approaches being explored (see graphic above) that could yield similar or complementary information about the potential of BNABs in the prevention of HIV infection.

## Conclusion: Fill the leadership gap

**No action on the priority items described in the preceding pages will be possible without action on one fundamental issue: *the leadership gap*. Execution of each of the five priorities put forward in this Report depends on true leadership through word, dollar (and euro, pound, rand and shilling ...) and deed.**

By World AIDS Day 2012 there were new documents and new commitments from PEPFAR, Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM) and UNAIDS, among others. As the Report went to press, PEPFAR had released a promised blueprint for an AIDS-free generation. GFATM has appointed a new director, overhauled its grant-making structure and says it is focusing on high-impact interventions. UNAIDS has released its World AIDS Day Report. WHO is developing a comprehensive guidance document on using ARVs for treatment and prevention, which is expected in 2013.

But leadership isn't solely about documents. It is about commitments of financial resources and consistency from top-line messages through to country-level implementation.

UNAIDS must finally ensure that its investment framework approach is having a demonstrable impact on country-level AIDS programs and plans. This means moving from the principles of the original 2011 article, "Towards an improved investment approach for an effective response to HIV/AIDS"<sup>7</sup>, to actual specifics. There must be global leadership that specifies which high-impact activities should be considered in particular epidemic settings—and identifies those activities and interventions that do not merit prioritization. Today, movement in this direction is discernible, but the pace is far

too slow. Tough decisions about what not to fund will inevitably need to be made; yet the global leadership has been reticent, to say the least.

There is an urgent need for an investment framework that is flexible enough to accommodate the complex realities of the epidemic—and firm enough to ensure that resources are funneled to high-impact strategies. GFATM is in the process of dramatically overhauling its funding structure to put a greater emphasis on country-level national plans, along with other changes. The new approach calls for a mechanism by which submitted grant proposals that don't align with an investment framework approach will be returned to the applicant for revision. This is an important step, but it will not accomplish the intended goals if the approach in question remains vaguely defined. Distinctions between high- and low-impact interventions should be clearly drawn—despite the debate and discussion that doing so will, and should, generate.

In addition to the processes and actors listed above, we will look for the inclusion of HIV/AIDS indicators in the priorities for Millennium Development Goals 2015, which will be determined in 2013.

There is also a need for decision-making tools at a country level. Right now, there is a barrage of sometimes-conflicting information about the impact of key strategies, such as the expansion

<sup>7</sup> B Schwartländer et al. "Towards an Improved Investment Approach for an Effective Response to HIV/AIDS," *Lancet* (June 11, 2011) 377(9782):2031-41.

of ART, scale-up of VMMC, rollout of Option B-plus for pregnant and lactating women and so on. For example, calls to expand Option B-plus can lead countries with limited resources to focus on expanding services to pregnant women—while maintaining or even reducing the rate of rollout for male and non-pregnant female patients. Yet a call to expand ART regardless of CD4 cell count does not qualify as a specific push to treat pregnant women. This is just one example of the complexities involved in acting on multiple recommendations simultaneously.

The information will always be complex and will frequently change. But right now there is too much noise in the system, and not enough clarity on key priorities. At the International AIDS Conference in July, some developing country leaders expressed hesitation about pursuing strategies—such as expanding ART regardless of CD4 cell count—that don't have a precedent in existing international frameworks and guidance documents. The WHO guidance on ART for prevention and treatment could address this concern—but other such needs will surely arise, and should be met more quickly than in the past.

It is critical that the AIDS response reflect that we will have to do less of some things and abandon some programs that have not worked. However, this isn't an excuse to eliminate often unpopular, yet utterly necessary, programs, such as those that take a rights-based approach to reaching key populations—including gay men and other MSM, transgender people and sex workers. It is also essential to prioritize programs that focus on women and girls. As discussed on page 23, virtually every emerging and available prevention strategy has a gendered component to it. There can be no true progress toward ending the epidemic without an approach that embeds biomedical options within a broader response to women's health and rights.

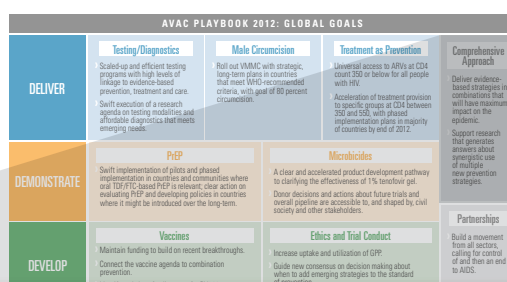
The PEPFAR/US government blueprint for an AIDS-free generation is a welcome document that promises to provide a much-needed

framework for evaluating whether the US program is aligning its resources and targets at the country level with the lofty goals set forth by US Secretary of State Hillary Clinton and US President Barack Obama at the end of 2011.

This is just one document whose value will be proved not on the pages but in the real world. We recognize that this Report is another document with plenty of recommendations that require pragmatic action. AVAC's ongoing partnerships with organizations and individuals worldwide (see map on p. 35) put this talk into practice. We hope you will visit [www.avac.org](http://www.avac.org) to learn more—and, more importantly, work alongside us, and our partners in civil society, as we seek to “walk the walk” and ensure that global and national leaders do the same.

One key aim of AVAC's collaborative work is to catalyze country-level ownership and funding of national AIDS responses. In order to begin to end the epidemic, there must be strong leadership, vision and financial commitments from heads of state in low- and middle-income countries. In PEPFAR focus countries, expansion of US government funding and targets for key interventions depends on national-level plans and future funding commitments. GFATM, too, is looking to countries to develop ambitious, evidence-driven applications for funding. And at the same time it is clear that these funding streams will not provide all the necessary resources for the effort that lies ahead. Innovative financing mechanisms, such as a financial transaction tax, must be implemented. And countries themselves must continue to increase national budgetary allocations to health and HIV/AIDS as some have begun to do in recent years. Some countries—notably South Africa and Rwanda—have set a high standard with their innovative and ambitious national plans.

Without global and national-level action, there is no chance that the AIDS response will proceed at the needed, race-winning pace. On the other hand, if leadership does emerge, then in one year's time, there will be greater clarity at every



## Leadership Gap: Hormonal contraceptives, family planning and HIV

2012 brought a major global “Family Planning Summit” and the International AIDS Conference. In an ideal world, these meetings—plus a range of smaller WHO/UNAIDS/UNFPA-convened meetings—would have yielded a coherent and transparent plan of action for addressing major gaps in women’s access to reproductive health and HIV services. Such an integration of agendas is particularly urgent given the inconclusive evidence regarding the link between long-acting, injectable, progestogen-only contraceptives (e.g., Depo-Provera) and increased risk of HIV infection among HIV-negative women. An expert meeting convened to review available data yielded a WHO technical guidance note, which recommended that women at risk of HIV be strongly advised to use condoms while using Depo-Provera and similar methods. A robust chorus of women’s groups pointed out how difficult this

recommendation is to put into practice. Many family-planning providers do not assess HIV risk, do not have regular condom supplies for clients, and do not have training to convey the open question about injectable hormonal contraceptives and HIV. Many meetings, and a handful of documents later, there is still no clarity on how to communicate these issues at the country or clinic level—and there is evidence that many service providers are not changing their messages at all. Resource documents on long-acting methods developed by the same team that convened the consultations on hormonal contraceptives and HIV risk do not mention the evidence regarding HIV risk at all. Truly, this is a priority issue for leadership from WHO, UNAIDS, UNFPA, donors and national governments. 2013 must be the year that HIV and family-planning agendas, messages and programs mesh in concrete, transparent initiatives that reflect the realities of women’s lives.

level regarding how to design, implement and evaluate high-impact HIV prevention strategies—and ensure that there will be funding to match.

WHO’s comprehensive guidance on the strategic use of ARVs for treatment and prevention, promised for June 2013, will be an important test case. We hope to see it prompt a swift re-examination of the structure and targets of ART programs to ensure that both prevention and treatment impact are optimized. Historically, treatment programs have given short shrift to prevention. These new guidelines could encourage the development of programs that have both treatment *and* prevention goals. But this will only happen if there is a true show of leadership at every level, from WHO and the international community to national policy makers to local clinics.

Looking more broadly, leadership at every level must emphasize that prevention is essential to ending the epidemic. This emphasis should guide decision making today and articulate a vision for what expanded, innovative prevention will or should look like in the future, as a microbicide, a vaccine and a cure come within reach—and ultimately become available.

The world’s leaders—with AIDS activists and advocates at the forefront—have the power to define the next year of the response in a way that will have impact far beyond the next 12 months. We can begin to articulate, together, the contours of a prevention revolution—and to ensure that there is funding, monitoring, ongoing research and continuous improvement. It is necessary work, and work that will serve us well in the years to come.

# ACHIEVING THE END

For the first time, the end of the global AIDS epidemic is opportunities to curb new HIV infections, save lives and

## DELIVER

### PROVEN TOOLS FOR IMMEDIATE IMPACT

FUNDAMENTALS	TREATMENT AS PREVENTION			VOLUNTARY MEDICAL MALE CIRCUMCISION
<ul style="list-style-type: none"> <li>Male and female condoms</li> <li>Programs that reach, and are led by, key populations including sex workers and MSM</li> <li>Harm reduction programs for injection drug users</li> <li>Targeted behavior change programs</li> </ul>	<b>DATA</b>  <b>96%</b>  reduction in HIV transmission within serodiscordant couples	<b>CONCEPT</b>  <b>[PRESENT]</b> Treatment is prevention—preserving health and providing highly effective prevention.  <b>[PAST]</b> Treatment preserves health.	<b>TREATMENT GAP</b>  6.6 million people on treatment  15 million people in need of treatment  34 million people living with HIV	<b>Goal: 20 M in 14 priority countries</b>  <b>1,535,577</b> total medical male circumcisions completed as of early 2012

## DEMONSTRATE

### AND ROLL OUT NEW HIV PREVENTION OPTIONS


#### PRE-EXPOSURE PROPHYLAXIS

DATA	REGULATORY PATH	DEMONSTRATION PROJECTS
<b>ON DAILY ORAL TDF/FTC</b>   <b>42%</b> reduced risk in MSM and transgender women   <b>75%</b> reduced risk in heterosexual couples  Effectiveness of PrEP is dependent on adherence.	<b>July 2012</b> – US FDA approves TDF/FTC for HIV prevention in HIV-negative adults  <b>July 2012</b> – WHO issues rapid advice on TDF/FTC as PrEP  <b>2013 and beyond</b> – WHO guidance on use of ARVs for prevention and treatment; regulatory review of TDF/FTC as PrEP in additional countries  Regulatory review processes are either needed or are underway in many other countries worldwide.	  <b>Real-World Effectiveness</b>  Demonstration projects ongoing and planned for Kenya, Nigeria, South Africa, Uganda and the US. Additional projects are needed.

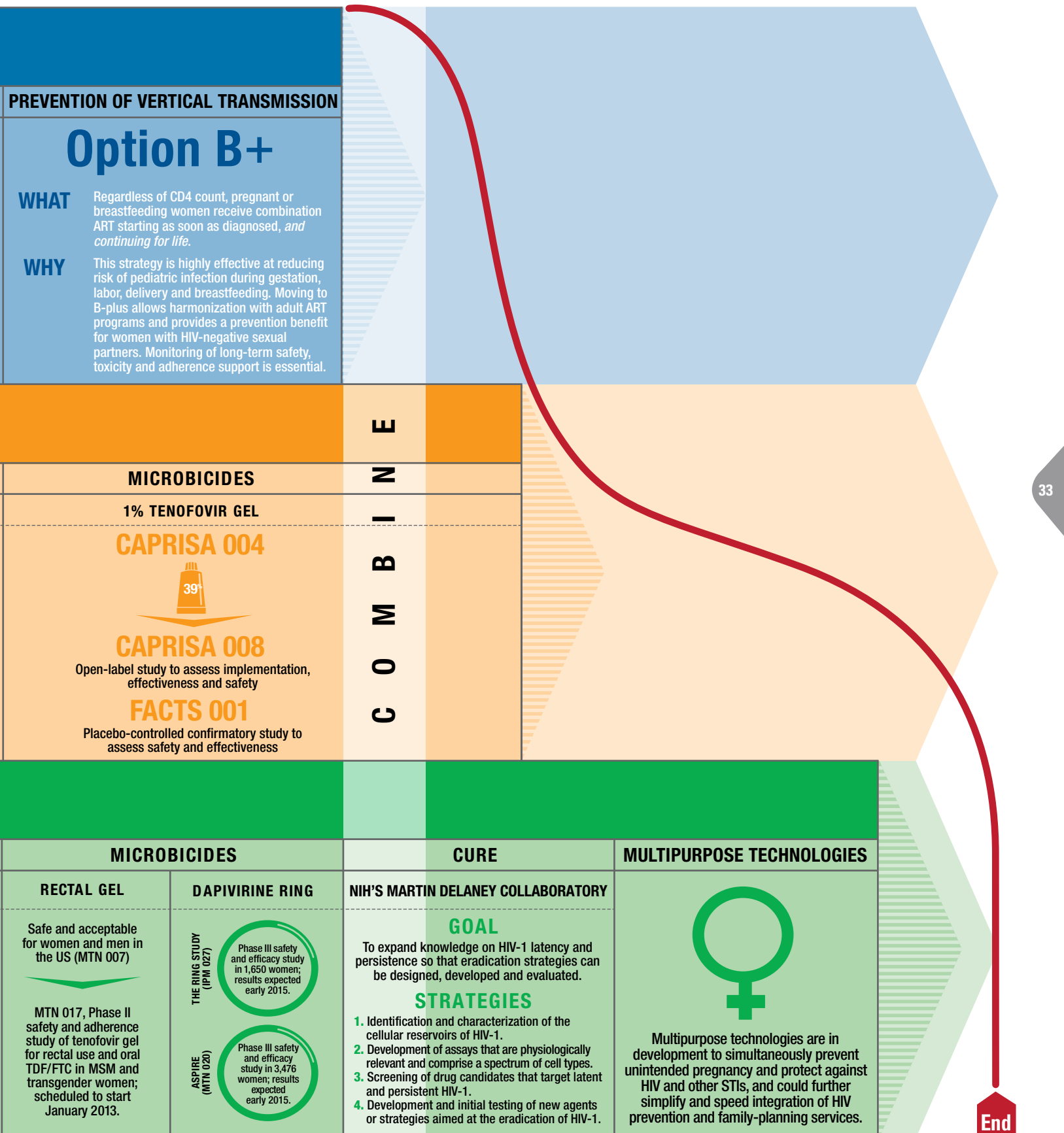
## DEVELOP

### LONG-TERM SOLUTIONS NEEDED TO END THE EPIDEMIC

#### VACCINES

RV144 AND THE P5	HVTN 505	ANTIBODY RESEARCH
<b>31.2%</b> efficacy overall, with higher efficacy at 12 months after immunization  First vaccine trial to show protection against HIV in humans	<b>DOES A DNA/AD5 VACCINE PROTECT AGAINST HIV?</b>   <b>2,200</b>  Efficacy data are expected in early 2015.	<b>100s OF ANTI-HIV ANTIBODIES DISCOVERED SINCE 2009</b>  Scientists have studied blood samples from people living with HIV and identified potent broadly neutralizing antibodies (BNABs). Studying the structure of these BNABs and the way that they attach to the virus has provided clues to guide vaccine design. Right now it is not clear how to design a vaccine that generates mature, potent BNABs. This important work is ongoing.

within reach. Recent breakthroughs in HIV prevention research have created unprecedented set the world on a path toward eliminating HIV transmission.





## About AVAC

Founded in 1995, AVAC is an international non-profit organization that uses education, policy analysis, advocacy and community mobilization to accelerate the ethical development and global delivery of biomedical HIV prevention options as part of a comprehensive response to the pandemic. AVAC is dedicated to:

- Translating complex scientific ideas to communities and translating community needs and perceptions to the scientific community.
- Managing expectations about the process of product research and development, testing and delivery.
- Holding agencies accountable for accelerating ethical research, development and delivery of HIV prevention options.
- Expanding international partnerships to ensure local relevance and a global movement.
- Ensuring that policy and advocacy are based on evidence.
- Convening coalitions, partnerships, working groups and think tanks for specific issues.

- Developing and widely disseminating high-quality user-friendly materials.

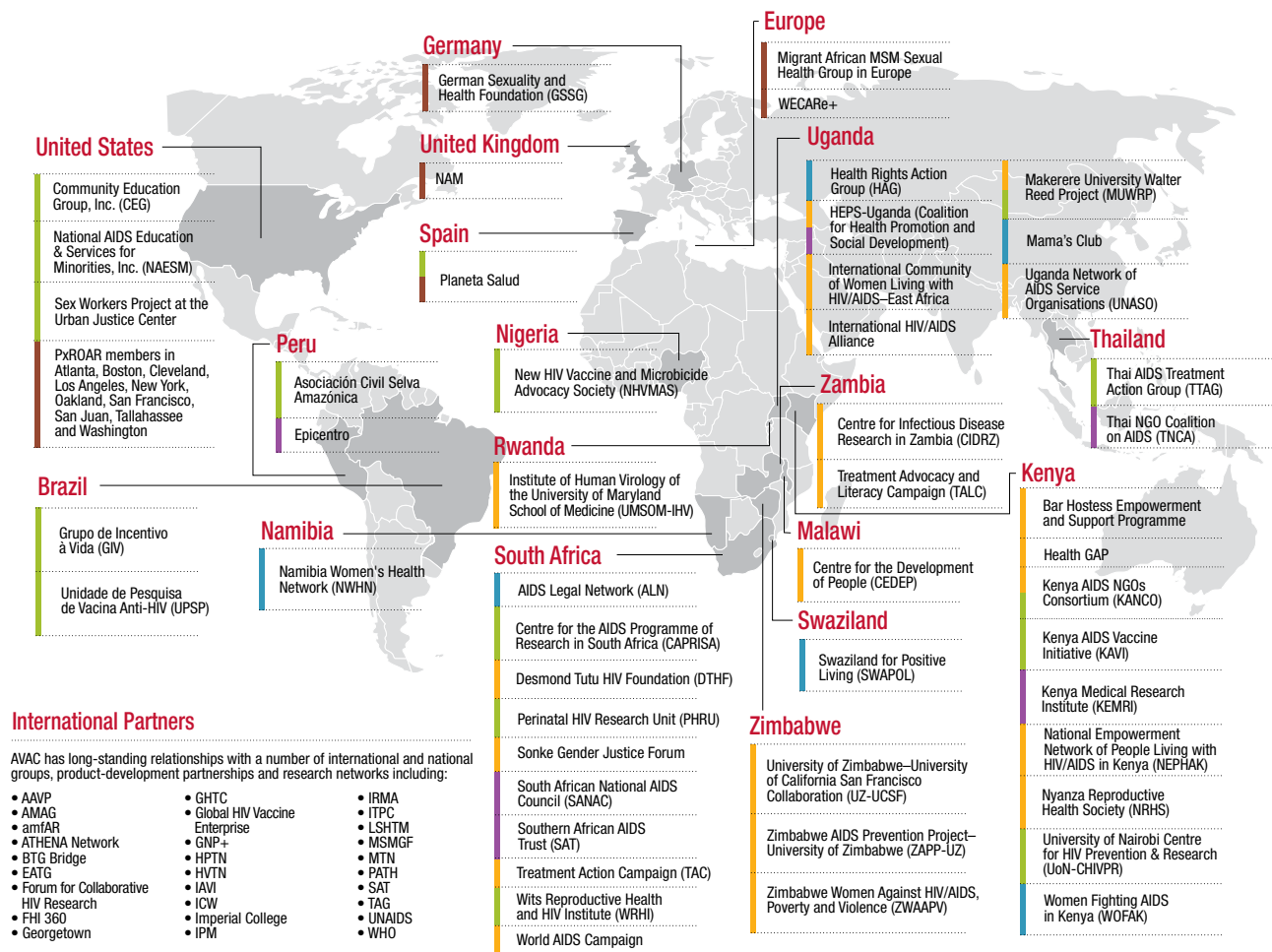
AVAC focuses in four priority areas:

- Develop and advocate for policy options to facilitate the implementation of available biomedical HIV prevention options as well as the expeditious and ethical development and evaluation of new ones.
- Ensure that rights and interests of trial participants, eventual users and communities are fully represented and respected in the scientific, product development, clinical trial and access processes.
- Monitor HIV prevention research and development and mobilize political, financial and community support for sustained research as part of a comprehensive response.
- Build an informed, action-oriented global coalition of civil society and community-based organizations that exchange information and experiences.

For more information on AVAC's work and how to support it, please visit [www.avac.org](http://www.avac.org).



## Global Prevention Research Advocacy Partnerships



### Good Participatory Practice Initiative

In November 2007, UNAIDS and AVAC published *Good Participatory Practice (GPP) Guidelines for Biomedical HIV Prevention Trials*, which set global standards for stakeholder engagement in HIV prevention research. The updated 2011 version provides the first systematic framework for trial funders, sponsors and implementers to effectively engage a broad range of stakeholders throughout the research process—from trial design and planning, through conduct, results dissemination and post-trial access. Since 2008, AVAC has supported research and stakeholder groups in Africa, the Americas, Asia and Europe in various GPP efforts, such as: critical review and feedback on the first edition, trial site rollout and evaluation of practices, implementation in trials and implementation through ethics and regulatory bodies at national levels. AVAC has also developed a growing set of supplementary tools, including a participatory training manual, a trial site self-assessment toolkit and planning templates. The guidelines, including translated versions, and all tools are available at [www.avac.org/gpp](http://www.avac.org/gpp).

### HIV Prevention Research Advocacy Fellowship Program

The HIV Prevention Research Advocacy Fellowship Program provides support to emerging and mid-career advocates to implement projects related to biomedical HIV prevention research activities in their countries and communities. The program is designed to expand the capacity of civil society advocates and their host organizations to monitor, support and help shape biomedical HIV prevention research worldwide. The Advocacy Fellowship is guided by the belief that effective, sustainable advocacy grows out of work that reflects organizational and individual interests and priorities.

### National Stakeholder Engagement

National stakeholder engagement is different from the types of activities undertaken to prepare for and conduct a study in specific locations—although some groups may be involved in both trial-specific outreach and broader stakeholder engagement. One of the main differences is that, in this process, stakeholders are asked to provide input and guidance on steps that can happen in the short, medium and long term to prepare for the results from an ongoing study and/or to take action on implementing new research findings or prevention strategies, such as combination prevention.

### Prevention Research, Outreach, Advocacy and Representation (PxROAR)

The PxROAR program has two goals: to educate its members in HIV prevention research science, implementation and advocacy; and to provide a platform for specific prevention research advocacy campaigns. There are two cadres of PxROAR advocates: one based in the US and one based in Europe. Both groups represent the range of HIV-affected communities.

### Women's HIV Prevention Tracking Project (WHiPT)

WHiPT was launched in 2008 to support women's community-based efforts to monitor, evaluate and develop or expand advocacy around new and emerging HIV prevention strategies. The pilot phase, a collaboration with the ATHENA Network, focused on monitoring women's views of and concerns about implementation of voluntary medical male circumcision in five African countries. New WHiPT initiatives focus on tracking issues around hormonal contraceptives and HIV risk, oral PrEP using TDF/FTC for women, and efficacy trials of woman-controlled HIV prevention methods.

## AVAC Resources

### WEBSITE

[www.avac.org](http://www.avac.org)



For the latest updates in HIV prevention, visit the **AVAC website**. It includes our publications as well as comprehensive coverage of the full range of biomedical HIV prevention interventions in an easy-to-use format that is searchable by intervention and by topic.

### PUBLICATIONS

[www.avac.org/publications](http://www.avac.org/publications)



**AVAC publications** aim to translate the complex issues of biomedical HIV prevention research for a range of audiences. We have materials that explain current scientific issues in simple language and other documents that explore the issues of trial participants and affected communities.

### DATABASES

[www.avac.org/pxrd](http://www.avac.org/pxrd) and [www.avac.org/researchliteracy](http://www.avac.org/researchliteracy)



The AVAC website hosts **two searchable databases**: one on biomedical HIV prevention research clinical trials, products and sites, and one that includes research literacy resources for understanding HIV prevention research.

### MAILING LISTS

[www.avac.org/maillinglists](http://www.avac.org/maillinglists)



The **Advocates' Network** is an electronic network for anyone interested in receiving timely updates about developments in the biomedical HIV prevention field.



**P-Values** is AVAC's monthly bulletin highlighting advocacy work by our partners and stakeholders around the world.



The **Weekly NewsDigest** is a compilation of media coverage, published research, policy news and materials on HIV prevention options.

### SOCIAL MEDIA



[www.facebook.com/hivpxresearch](http://www.facebook.com/hivpxresearch)

[www.twitter.com/hivpxresearch](http://www.twitter.com/hivpxresearch)

[www.youtube.com/hivpxresearch](http://www.youtube.com/hivpxresearch)

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Advocacy to accelerate ethical research  
and global delivery of AIDS vaccines and  
other HIV prevention options



December 2012

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