

TARGET SETTING OF HIV SERVICES

This document is designed to answer frequently asked questions on HIV program priority and service delivery target setting. It can be particularly useful for developing strategies, operational plans, and funding proposals. The reader can read the document as a whole, or use the table of contents to navigate to the section that will address their specific questions.

HAPSAT 2.0, a software for setting and costing targets corresponding to the content here, can be located on <https://www.hfgproject.org/hivaids-program-sustainability-analysis-tool-hapsat-2-0/>, together with a brief and a hands-on exercise on the software.

Summaries and further reading can be found in the blue boxes.

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DISCLAIMER

The author's views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development (USAID) or the United States Government

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I. INTRODUCTION

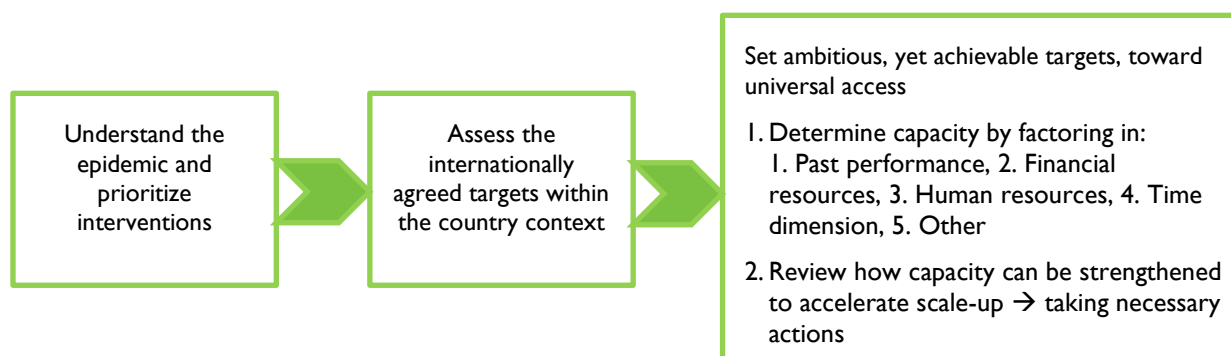
Planning an HIV program requires determining its goals, developing activities to implement in order to reach the goals, and setting targets for the activities, which the program’s capacity can reach. Clear national targets for HIV programs will promote partner alignment to national priorities and hold countries directly accountable for reaching the targets they set themselves. However, there is tension between the need to reach international targets that aim for universal coverage of health services versus the need to set targets for which the nation can attain. This dilemma is especially true in cases where funding is tied to programmatic performance, as is the case with grants from the Global Fund to Fight AIDS, Tuberculosis and Malaria (the Global Fund). **This document aims to provide policymakers with insight on how to set ambitious yet achievable targets.**

The Joint United Nations Programme for HIV/AIDS (UNAIDS) outlines several important characteristics of target setting in its working document “Setting National Targets for Moving Towards Universal Access: A working document” (UNAIDS 2006):

1. Targets need to be ambitious in order to achieve universal access goals. They should reflect the basic principles for universal access, namely, that services should be equitable, accessible, affordable, comprehensive, and sustainable over the long term.
2. Targets should have political and social legitimacy. The consultative process should be multisectoral, include full civil society participation, and lead to consensus and formal approval of the targets.
3. National target setting and tracking should be standardized through global guidance, but determination of the levels of coverage achievable within the timeframe must be a country-level process that takes into account the specific country context.

The process of setting targets is summarized in Figure 1. First step is to understand the epidemic to set priorities most appropriate to the country’s context. Then, internationally agreed upon targets in relation to the country’s priority must be assessed. The third step sets the ambitious yet achievable targets towards universal access based upon the previous two steps while factoring in the current program capacity and the resources and activities necessary to strengthen the capacity to accelerate scale-up. Key factors for consideration in scaling up program capacity include past performance, financial resources, human resources, and time.

FIGURE 1: TARGET-SETTING PROCESS



Importantly, target setting will vary from one service delivery area to another, and the targets of each activity in a country will need to be examined individually. However, the general guidelines presented in this document were successfully implemented as part of the HIV/AIDS Program Sustainability Analysis Tool (HAPSAT) and are used in HAPSAT 2.0 software for setting targets and costing them.

2. UNDERSTANDING THE EPIDEMIC

2.1 WHICH TARGET POPULATIONS SHOULD BE PRIORITIZED IN HIV INTERVENTIONS?

One of the first steps in setting targets is to understand the epidemic. Various tools exist to assess HIV-related knowledge, attitudes, and behaviors, as well as HIV prevalence and incidence of the target population concerning an HIV epidemic. The growing behavioral and epidemiological data are summarized by Modes of Transmission (MoT) studies.¹ These studies include the following:

1. Review of the status and transmission dynamics of the HIV epidemic.
2. Definition and prioritization of the interventions to be included in the national response.
3. Estimation of the size of populations in need.

Figure 2 shows the distribution of HIV incidence in Swaziland, with a generalized HIV epidemic, by population (Mngadi, Fraser et al. 2009). According to this figure, 63 percent of the infections occur through low-risk heterosexual sex, another 18 percent from casual heterosexual sex, and 18.5 percent occur from key populations at higher risk, their clients, and partners. In contrast, distribution of HIV incidence by population group in Thailand, with a substantially lower HIV prevalence than Swaziland, shows that more than half of the HIV incidence derives from key populations at higher risk (Figure 3). The AIDS program in each of these countries will have to tailor its program accordingly.

These types of epidemiological data should guide programs in planning their activities and budget. In Sierra Leone, for example, a sustainability analysis of the AIDS program recommended the allocation of 61 to 67 percent of HIV prevention funding to key populations at higher risk (Katz, Wong et al. 2011). This funding allocation is in line with the share of HIV incidence of key populations at higher risk in that country: 61 percent (Kenya, Roberts et al. 2010). Some populations, such as those marginalized, discriminated, or taking part in illegal activities could be harder to reach, so they may require greater investment to make the same impact compared to populations with well-established networks. Thus, the proportion of AIDS program funding (including the public and private sectors) for a given population is unlikely to be precisely the same as the HIV incidence this population represents. However, the investment in HIV prevention in different groups overall should roughly be proportional to their share of the HIV incidence.

¹ MoT manual, presentations, a tool, and reports can be located at: <http://www.unaids.org/en/dataanalysis/tools/incidencebymodesoftransmission/>

FIGURE 2: DISTRIBUTION OF HIV INCIDENCE BY POPULATION GROUP, SWAZILAND (MNGADI, FRASER ET AL. 2009)

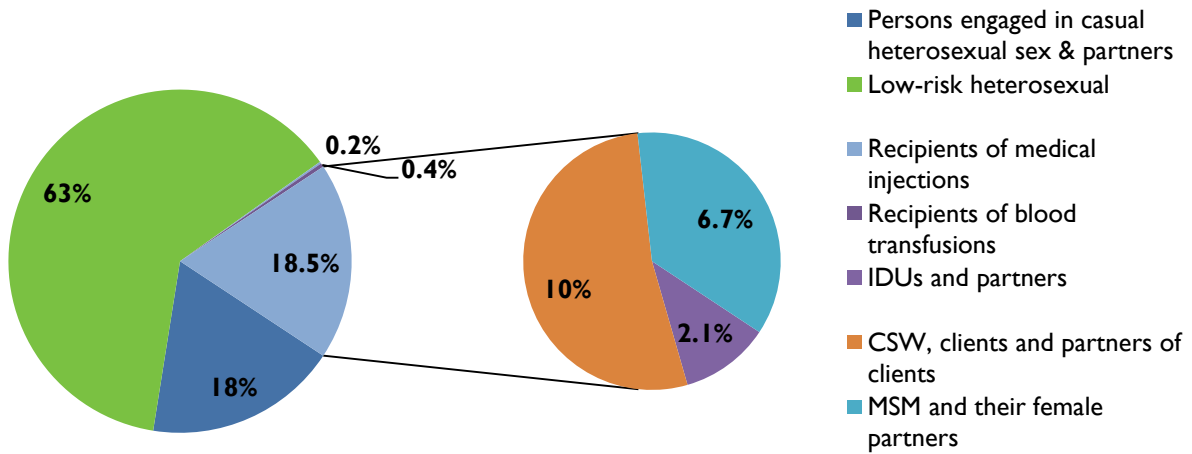
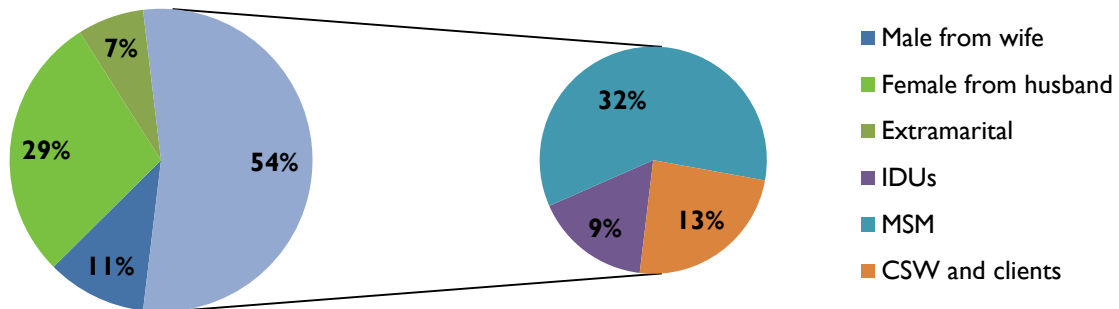


FIGURE 3: DISTRIBUTION OF HIV INCIDENCE BY POPULATION GROUP, THAILAND (WORLD HEALTH ORGANIZATION (WHO) 2010C)



2.2 PRIORITIZED TARGETING OF HIV PREVENTION

What are the key factors in prioritization?

In the process of scaling up HIV services, the program planner will need to consider epidemiological, programmatic, social, and ethical factors to determine who should be prioritized. Here we focus on three major factors that should be considered:

The incidence rate: key populations at higher risk will have the highest incidence rate. Given that provision of antiretroviral therapy (ART) reduces the infectiousness of people living with HIV (PLHIV) (Donnell, Baeten et al. 2010), these groups should be prioritized, as shown in Box 1, which provides an example of the epidemiological benefit of focusing on most-at-risk groups in Swaziland.

Accessibility: Reaching rural populations or populations that are either highly stigmatized [e.g., men having sex with men (MSM)] and/or illegal [e.g., injecting drug users (IDUs)] might require additional resources. For example, it is unlikely that a substantial number of MSM can be reached through the MSM network in countries where such activity is illegal. In formulating the targets, policymakers could first plan to target key populations at higher risk that could be reached through networks and, in parallel, work on mechanisms to expand the efforts to reach key populations at higher risk that are not part of a well-established network. In South Sudan, where key populations at higher risk are organized by nationality (e.g. Kenyan CSW network, Ugandan CSW network), it was suggested to tap into these networks rather than create HIV prevention centers, which in other settings have shown to be problematic (Epstein 2007).

Cost-effectiveness: There is increasing information on the cost-effectiveness of HIV services, though it is focused on clinically based services such as ART (Bishai, Colchero et al. 2007), prevention of mother-to-child transmission (PMTCT) (Johri and Ako-Arrey 2011), and male circumcision (Kahn, Marseille et al. 2006). The cost-effectiveness research on behavioral prevention is limited, and policymakers need to examine various methods and consider looking at a range of factors. For example, in South Sudan, the use of radio was recommended over billboard for HIV awareness because it was found that this communication medium is cheaper per exposure and because the nation has a low literacy rate, making the radio accessible to a wider population compared to written material (Katz, Baruwa et al. 2011).

As for ART, 2010 World Health Organization (WHO) guidelines (World Health Organization (WHO) 2010b; World Health Organization (WHO) 2010a) advise providing ART to all PLHIV with a CD4 count equal to or below 350 or those individuals clinically diagnosed to be in stage 3 or 4 of the disease (see http://www.who.int/hiv/pub/arv/rapid_advice_art.pdf, p. 10). If resources are available, ART can be expanded further, to PLHIV with CD4 counts between 350 and 500, per the guideline of U.S. Department of Health and Human Services (Panel on Antiretroviral Guidelines for Adults and Adolescents 2011). There is increasing evidence to implement ART as a prevention strategy: a large multinational clinical study, HPTN 052 conducted by HIV Prevention Trials Network (HPTN), showed that initiation of ART by PLHIV substantially protected their HIV-uninfected sexual partners from acquiring HIV

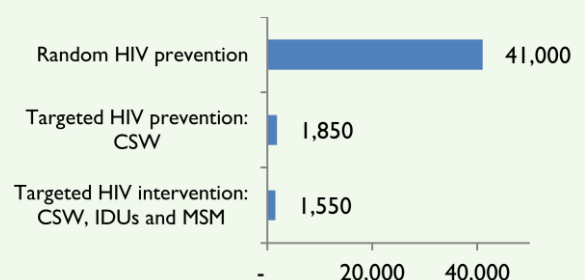
Box 1: Example of the epidemiological benefit in focusing on key populations at higher risk

An estimated 2,300 commercial sex workers (CSWs) live in Swaziland (Mngadi, Fraser et al. 2009), and, together with their clients and partners of clients, they make up 10 percent of the HIV incidence. If 80 percent of the 2,300 CSWs (1,850) are effectively targeted with HIV prevention, then the incidence rate will have the potential to decrease by 8 percent. If the targeted HIV intervention also includes MSM and IDUs, both of which have higher incidence rates than CSWs, then the number required to be reached with HIV prevention to reduce HIV incidence by 8 percent is even lower: 1,550. In comparison, if an HIV prevention intervention were applied randomly, 41,000 people would need to be reached with effective HIV prevention to obtain a similar decline in HIV incidence (Figure 4). In other words, in Swaziland, targeting a single CSW is 22 times more effective than a random HIV prevention. Targeted interventions, in particular CSWs, were one of the key factors in Thailand's success against the HIV epidemic (Phoolcharoen 1998).

Targeting key populations at higher risk is likely to be more cost-effective than targeting the wider population, and HIV prevention among these populations could be prioritized. Importantly, in Swaziland, with its high HIV-prevalence among the adult population, intensive HIV prevention efforts are required beyond key populations at higher risk.

A mode of transmission study for Sierra Leone (Kenya, Roberts et al. 2010) led the National AIDS Secretariat to prioritize interventions for key populations at higher risk over interventions for the general population (Katz, Wong et al. 2011).

FIGURE 4: COMPARISON OF NUMBER OF PEOPLE REACHED WITH THREE EFFECTIVE HIV-PREVENTION ACTIVITIES TO REDUCE INCIDENCE BY 8 PERCENT



Note: By reaching CSWs, incidence decreases among their clients and the clients' partners as well; by reaching

infection, with a 96-percent reduction in risk of HIV transmission.

In settings where resources are limited, policymakers are inevitably facing the difficult decision of how to prioritize ART provision. Principles on which allocation could be based include (Persad, Wertheimer et al. 2009): (1) treating people equally; (2) favoring those who are worst off, for example, prioritizing children over adults or prioritizing those with specific health conditions such as TB and HIV co-infection (Abdool Karim, Naidoo et al. 2010); (3) maximizing total benefits, for example, prioritizing populations with highest HIV incidence; and (4) promoting and rewarding social usefulness, for example, prioritizing patients according to their professions (Bennett and Chanfreau 2005; McGough, Reynolds et al. 2005).

Prioritization involves programmatic and ethical issues, including reasoning why a certain population and not another is prioritized. In such a process, the stakeholders of the HIV response, including local communities, should be consulted (Daniels 2004), in order to respect the people's right to participate in health policy decision making, to help policymakers fully understand constraints and how to overcome them, and to secure the broadest possible buy-in and support for the interventions and targets. These may include existing inclusive mechanisms such as national AIDS councils and country coordinating mechanisms, and they may be supplemented by other processes, such as public meetings and hearings, and opportunities to provide input through the Internet.

Summary

1. Who should be prioritized in HIV interventions?
2. Modes of transmission studies or equivalent studies should be carried out to
 - a. Review the status and transmission dynamics of the HIV epidemic
 - b. Define and prioritize the interventions to be included in the national response
 - c. Estimate the size of populations in need
3. What are the key factors in prioritization? A wide range of factors should be considered. This document highlights three of them: (1) incidence rate, (2) accessibility to target populations, and (3) cost-effectiveness of different interventions within the country context. Prioritization of health services would benefit from stakeholder engagement.

For further reading:

1. **WHO planning guide:** World Health Organization (WHO) (2011). Planning guide for the health sector response to HIV. Geneva, WHO. Available from: http://whqlibdoc.who.int/publications/2011/9789241502535_eng.pdf.
2. **Mode of Transmission manual**, presentations, a tool, and reports can be located at: <http://www.unaids.org/en/dataanalysis/tools/incidencebymodesoft ransmission/>
3. **Use of Mode of Transmission for prioritizing behavioral interventions in Sierra Leone HAPSAT:** Katz, I., W. Wong, et al. 2011. Sustainability analysis of HIV/AIDS services HAPSAT Sierra Leone. Bethesda, MD, Health Systems 20/20 project, Abt Associates Inc.
4. **A methodology for prioritization of interventions used in South Sudan HAPSAT:** Katz, I., E. Baruwa, et al. 2011. Sustainability Analysis of HIV/AIDS Services: HAPSAT South Sudan. Bethesda, MD, Health Systems 20/20 project, Abt Associates Inc. Available from: <http://www.healthsystems2020.org/content/resource/detail/82440/>
5. Approaches to ART allocation:
 - a. Bennett, S., and C. Chanfreau. 2005. Approaches to rationing antiretroviral treatment: Ethical and equity implications. Bulletin of the World Health Organization 83(541-547). Available from: <http://www.who.int/bulletin/volumes/83/7/541arabic.pdf>
 - b. Daniels, N. 2004. How to achieve fair distribution of ARTs in 3 by 5: Fair process and legitimacy in patient selection. Geneva, World Health Organization. Available from: <http://www.who.int/ethics/en/background-daniels.pdf>
 - c. McGough, L., S. Reynolds, et al. 2005. Which patients first? Setting priorities for antiretroviral therapy where resources are limited. American Journal of Public Health 95: 1173-1180. Available from: <http://ajph.aphapublications.org/cgi/reprint/95/7/1173>

3. INTERNATIONALLY AGREED-UPON PROGRAMMATIC TARGETS FOR HIV SERVICES (UNIVERSAL ACCESS)

3.1 WHAT ARE THE CURRENT INTERNATIONALLY AGREED-UPON TARGETS? HOW IS UNIVERSAL ACCESS DEFINED?

Various HIV-related international targets were established in the past decade, with the most recent were agreed-upon at the United Nations (UN) General Assembly High-Level Meeting on AIDS in June 2011 (United Nations 2011). Further targets can be found in The Global Plan toward the Elimination of New HIV Infections among Children by 2015 and Keeping Their Mothers Alive, 2011–2015 (UNAIDS 2011b) and the UNAIDS 2011–2015 strategy (UNAIDS 2010), and can be summarized as follows:

1. Reduce by half sexual transmission of HIV by 2015.
2. Provide ART to 15 million people living with HIV – an estimated number for those eligible per WHO guidelines – by 2015.
3. Reach children and mothers:
 - a. Ensure that by 2015 no child will be born with HIV.
 - b. Reduce the number of AIDS-related maternal deaths by 50 percent.
 - c. Reduce HIV incidence in women age 15–49 by 50 percent.
 - d. Eliminate the unmet need for family planning among women.
 - e. Ensure 90 percent of mothers receive perinatal ART or prophylaxis.
 - f. Ensure 90 percent of breastfeeding infant-mother pairs receive ART or prophylaxis.
 - g. Provide lifelong ART to 90 percent of pregnant women in need of ART for their own health.
4. Address HIV-specific needs of women and girls in at least half of all national HIV responses.
5. Establish zero tolerance for gender-based violence.
6. Reduce HIV transmission among people who inject drugs by 50 percent by 2015.
7. Halve tuberculosis (TB) deaths in PLHIV by 50 percent by 2015.
8. Address PLHIV and households affected by HIV in all national social protection strategies and ensure they have access to essential care and support.
9. Reduce by half countries with punitive laws and practices around HIV transmission – sex work, drug use, or homosexuality – that block effective responses.
10. Eliminate HIV-related restrictions on entry, stay, and residence in half of the countries that have such restrictions.

To meet many of the international goals listed above, national HIV programs will need to scale up HIV services with the goal of achieving universal access, defined as “concrete, sustained advances toward a high level of coverage for the most effective interventions needed to manage diverse epidemics in all regions” (UNAIDS 2007). In generalized epidemics this would require reaching the general population

with HIV prevention; in epidemics where HIV is found mainly among the most-at-risk groups (concentrated epidemics), HIV services would be focused on these groups. Internationally agreed-upon targets of desired coverage further varies by service and target population (UNAIDS 2007):

1. ART treatment – 80 percent of those eligible per national ART guidelines.
2. Blood transfusions – 100 percent screened for HIV.
3. Prevention services – 80 percent of key populations at higher risk.
4. IDUs
 - a. Opiate substitution therapy – 40 percent of IDUs.
 - b. Needle – syringe exchange programs – 60 percent of IDUs.

A program's level of coverage should depend on the HIV epidemic it needs to address and the program's capacity (Schwartländer, Stover et al. 2011). These considerations are discussed in the suggested literature below.

For further reading:

1. UNAIDS. 2011b. Global plan towards the elimination of new HIV infections among children by 2015 and keeping their mothers alive, 2011-2015. Geneva, UNAIDS. Available from: http://www.unaids.org/en/media/unaids/contentassets/documents/unaidspublication/2011/20110609_JC2137_Global-Plan-Elimination-HIV-Children_en.pdf
2. United Nations. 2011. Political declaration on HIV/AIDS: Intensifying our efforts to eliminate HIV/AIDS, United Nations. Available from: http://www.unaids.org/en/media/unaids/contentassets/documents/document/2011/06/20110610_UN_A-RES-65-277_en.pdf
3. UNAIDS. 2007. Financial resources required to achieve universal access to HIV prevention, treatment, care and support. Geneva, UNAIDS. Available from: http://data.unaids.org/pub/Report/2007/JC1678_Fin_Res_Req_en.pdf

4. SETTING AMBITIOUS YET ACHIEVABLE PROGRAMMATIC TARGETS

4.1 WHY SHOULD PROGRAMMATIC TARGETS BE AMBITIOUS, YET ACHIEVABLE?

Most of the HIV programs in low- and middle-income countries receive funding from one or more external donors. Many of them, like the Global Fund, link funding decisions to program performance, with emphasis on the programmatic achievement, namely the number of people in need that are reached with HIV services (Low-Beer, Afkhami et al. 2007). This process requires careful planning of the program's targets.

These targets should be ambitious while still being achievable. Ambition is required to achieve whenever possible the internationally agreed goal of universal access by 2015 and to save as many lives as possible. At the same time, setting targets that cannot be achieved even with strong political commitment and scaled-up resources undermines the credibility of the targets and may lead to programmatic decisions that have unintended negative consequences (e.g., poor quality programs, unmet expectations of the population, harm to other health programs). More particularly, risks in target setting include the following:

1. **Overestimating the target the program can reach might result in reduction in donor funding.** A large number of Global Fund recipients made this mistake in their early years, with several countries in Africa, Latin America, and Asia submitting proposals with targets that, in the first year of the grant, were expected to be 10 to 20 times higher than their coverage at the time they submitted their proposals.
2. **Underestimating the target will cost lives.** Where funding decisions are tied to program performance, as is the case in Global Fund grants, the program will not be able to expand beyond the targets and save lives, even if it has the capacity to do so.
3. **Underestimating the target might result in reduction in donor funding.** Like targets that are deemed unrealistically high, low targets in a funding proposal might result in the proposal not being approved due to perceived lack of effectiveness of the program.

The following section will provide guidance on setting ambitious, yet achievable, programmatic targets.

Summary

Why should programmatic targets be ambitious, yet achievable?

1. Overestimating the target the program can reach might result in reduction in donor funding.
2. Underestimating the target will cost lives.
3. Underestimating the target might result in reduction in donor funding.

5. ESTABLISHING SCALE-UP SCENARIOS FOR THE PROGRAMMATIC TARGETS

Two possible scale-up scenarios for establishing programmatic targets are (1) scaling-up based on past performance and (2) scaling-up towards internationally agreed targets. As Figure 5 illustrates, these two scale-up scenarios can be far apart, making the choice of a scale-up scenario a consequential one. As explained below, universal access by 2015 is a more appropriate scale-up scenario, even as various capacity considerations may require the target to be adjusted to be either more or less ambitious.

5.1 PAST PERFORMANCE

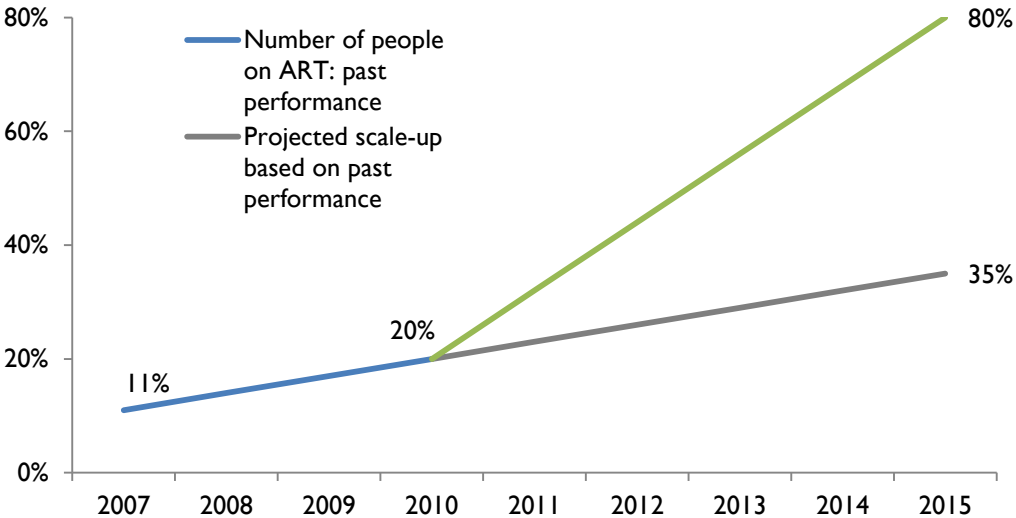
5.1.1 WHAT ARE THE PROS AND CONS IN SETTING TARGETS BASED ON PAST PERFORMANCE?

A common method to project future targets is to base it on past scale-up of a given activity (Katz, Komatsu et al. 2011). If, for example, between 2007 and 2009 the number of people on ART increased by 200 annually, one might assume that this trend would continue and would set targets accordingly (i.e., annual increase of 200 people on ART).

Advantages: There are two major advantages to using this method:

1. **Simplicity.** By using past data, which almost always exist, it is easy to formulate future targets.
2. **A proxy to the capacity of the program.** As illustrated in Figure 5, a fictional program with an ART coverage of 20 percent as of 2010 and an average annual increase of 3 percent in the past three years may conclude that if the current scale-up continues at the same level, it will add 15 percent by 2015, reaching 35 percent of ART coverage, far less than 80 percent of universal coverage.

FIGURE 5: SCALE-UP BASED ON PAST PERFORMANCE AND SCALE-UP TOWARD UNIVERSAL ACCESS



Disadvantages

Past performance might not reflect future trends or reachable aspirations. Therefore, using past performance to set future targets may have major disadvantages, such as the following:

1. **Past performance may fail to encompass ambitious yet achievable aspirations.** Not setting and achieving ambitious targets, such as universal access, will cost lives.
2. **Past performance might not reflect future trends.** Possible reasons include:
 - a. **Accelerated scale-up:** Past performance might reflect accelerated scale-up that might not continue during the projected period. For example, in an examined past period the program expanded services within urban areas, yet for the projected period the program is planning to expand services in rural areas, which frequently is more complex.
 - b. **Staggering scale-up:** Past performance might reflect a program at its early stages, with weak capacity, or capacity that was strengthened in previous years, yet its full impact will be seen in the projected period.
 - c. **Absent or incomparable data:** Data on past performance might exist only for a very limited number of years or might not be comparable. For example, data on the program's reach in previous years might include the number of people ever on ART, while in the projected period, the program aims to measure the number of people currently on ART.
 - d. **Increased resources and political commitment:** Changes in resource availability, policies, political commitment, and other factors that can impact the pace of scale-up may create an environment favorable for accelerating scale-up efforts. For example, the target of universal access by 2015 could enable programs to increase funding and hence accelerate scale-up. Lessons from earlier stages could be incorporated into creating more effective programs that can scale-up more quickly.
 - e. **Shift in focus from coverage to quality and integration of services:** Countries with high coverage are increasingly focusing on improving the quality of services and their integration. The increased focus on quality, impact, and sustainability might slow the scale-up, and as such should be factored when setting targets based on past performance

Advantages and disadvantages in applying past performance to target setting are summarized in Table 1. In light of these significant shortcomings, policy planners would be well advised to factor past performance into their decisions on targets, but use a different scale-up scenario as the basis for target setting, for example, the internationally agreed targets based on universal access by 2015 if these targets are achievable for the country.

TABLE 1: ADVANTAGES AND DISADVANTAGES IN APPLYING PAST PERFORMANCE TO TARGET SETTING

Advantages	Disadvantages
<ol style="list-style-type: none"> 1. Simplicity 2. A proxy to the capacity of the program 	<ol style="list-style-type: none"> 3. May fail to encompass ambitious yet achievable aspirations. 4. Might not reflect future trends due to past accelerated scale-up. 5. Might not reflect future trends due to past staggering scale-up. 6. Does not reflect future increased resources and political commitment. 7. Might not reflect future shifts in which enhancing quality and/or integration of services are slowing expansion of coverage. 8. Data may be absent or incomparable.

5.1.2 WHAT ARE THE FACTORS TO CONSIDER IN FORMULATING TARGETS BASED ON PAST PERFORMANCE?

Even when using universal access by 2015 as a scale-up scenario for programmatic targets, it is important to consider past performance to help inform the achievability of this goal and to understand constraints that need to be overcome to accelerate progress. This process may include estimating capacity for a given service based on past performance. In doing so, two major factors need to be specified:

1. **Use average increase in number rather than average percentage increase.** Table 2 provides the ART increase in Guyana (Singh 2010). The annual average increase in 2003–2007 was 125 percent, 400 percent higher than the 20-percent average annual increase in 2007 and 2009. In absolute numbers, the average increase in 2003–2007 was 450 cases, only 6 percent higher than the average increase of 425 cases in 2007–2009. This variation resulted because the higher the denominator, the lower the percentage increases, even if the increase in absolute numbers is similar. If the policy planner had projected 2008 and 2009 based on the percentage increase, the target would have been 6,300 in 2009, 125 percent more than the actual target of 2,800 in the example below. In comparison, projections based on numerical increases would have resulted in a target of 2,850, only 2 percent above the actual reach.

TABLE 2: EXAMPLE OF SCALE-UP BASED ON PAST PERFORMANCE – PEOPLE ON ART, GUYANA

Year	2003	2004	2005	2006	2007	2008	2009
People on ART (actual result)	120	500	1000	1600	1950	2500	2800
Number increase (actual result)		380	500	600	350	550	300
Percentage increase (actual result)		317%	100%	60%	22%	28%	12%
Average number increase	450					425	
Average percentage increase	125%					20%	
Projections based on number increase						2,400	2,850
Projections based on percentage increase						5,600	6,300

Note: Numbers are rounded to the nearest 50 or 100

2. **Examine past performance before deciding the years to average.** The increase in reach will vary by year, therefore, if the policy planner chooses the past four years versus the past three years, the average increase might be substantially different. As illustrated in Table 3, if the policy planner used the average increase between 2003 and 2006 of 20,000 cases, the projection for 2009 would have been 123,500. Comparatively, using the average increase between 2004 and 2006 of 25,500 cases would have resulted in a projection of 140,000. The latter average increase is closer to the actual 2009 result of 145,200. In this case, using an average increase of three years was better than using an average of four years. To improve the accuracy of this method, determining the number of years to average should be decided by those familiar with the program and based on reasons for past trends.

TABLE 3: EXAMPLE OF SCALE-UP BASED ON PAST PERFORMANCE – PEOPLE ON ART, BOTSWANA

Year	2003	2004	2005	2006	2007	2008	2009
People on ART	4,100	12,800	38,500	63,500	91,800	117,000	145,200
Number increase	4,000	8,700	25,700	25,100	28,200	25,300	28,100
Projections based on 2003–2006 average increase	2003–2006 average increase: 20,000				83,500	103,500	123,500
Projections based on 2004–2006 average increase	2004–2006 average increase: 25,500				89,000	114,500	140,000

Note: Numbers are rounded to the nearest 100

5.2 WHEN CAN INTERNATIONAL TARGETS BE THE SCALE-UP SCENARIO FOR TARGET SETTING?

As described above, the global community agreed to ambitious international targets to be reached by 2015. This cannot be the only factor used in establishing programmatic targets. In some countries, where progress to date has been particularly slow, where sufficient funding cannot be mobilized, or where other large barriers remain, universal access might not be achievable by 2015, or it might be achievable for only selected services. In such circumstances, a lower target might be required in the near term, accompanied by a strategy to overcome barriers and achieve universal access, even if not by 2015.

In other countries, universal access by 2015 might not only be achievable, but for some or many services, might not be sufficiently ambitious. This is most likely to be the case if universal access for certain services has already been, or is close to being, achieved. Higher targets, and hence more lives saved, could be achievable. In such circumstances, countries might seek to have a higher proportion of the population covered by a given service (e.g., 85 percent coverage for ART by 2015), an earlier date for achieving the UNAIDS-definition of universal access (e.g., 80 percent coverage for ART by 2013), or a more rigorous definition of what is to be achieved [e.g., 80 percent coverage for ART by 2015 using revised national guidelines that call for treatment to begin once CD4 count drops to 350 or below – in accordance with WHO’s revised (2010) treatment guidelines (WHO 2010b), rather than below 200], as described above.

Using universal access by 2015 does not mean disregarding past performance. Rather, past performance would be one among a number of factors policy planners consider in determining the achievability of universal access by 2015 (or more ambitious targets). Along with past performance, the main factors we consider are funding, human resources, and timing.

Summary

1. What are the pros and cons in setting targets based on past performance?
 - a. Advantages: (1) Simplicity, (2) A proxy to the capacity of the program.
 - b. Disadvantages: Might not reflect future trends or reachable aspirations.
2. What factors should policymakers consider in formulating targets based on past performance?
 - a. Analyzing past performance for future targets can be done by examining the average increase in number rather than average percentage increase in persons reached.
 - b. Determining the years for which the reach will be averaged can be decided only after examination of past performance.
3. When can international targets be the scale-up scenario for target setting?

In HIV programs in which current or potential capacity enables them to reach these targets. In HIV programs with particularly slow progress, targets should be adjusted to capacity. In countries exceeding international targets, more ambitious targets, improved quality, and/or more services could be considered.

For further reading:

1. WHO planning guide: World Health Organization. 2011. Planning guide for the health sector response to HIV. Geneva, WHO. Available from: http://whqlibdoc.who.int/publications/2011/9789241502535_eng.pdf.
2. UNAIDS's target setting working document: UNAIDS. 2006. Setting national targets for moving towards universal access: A working document. Geneva. Available from: http://data.unaids.org/pub/Guidelines/2006/20061006_report_universal_access_targets_guidelines_en.pdf

6. WHAT FACTORS HAVE CONSTRAINED PAST PERFORMANCE?

Maintaining the pace of past performance may be insufficient to achieve universal access by 2015. If past scale-up has been slow, it is critical to understand why. For example, were funds insufficient? Were there too few health workers? Has stigma slowed uptake? Have discriminatory policies kept marginalized populations away from health services? Were earlier policies poorly designed? Overcoming these constraints may even enable a country to accelerate scale-up to achieve universal access before 2015. It is critical to carefully evaluate constraints to past performance and develop strategies to overcome them. Along with being an important step in developing targets that are both ambitious and achievable, such careful analysis and planning will help in securing external funding and, in general, should be clearly explained in funding applications.

Resources, and the capacity to achieve them, are a major consideration in setting targets. By knowing the current limits of health system capacity and addressing them, it is possible to scale up beyond what would have been achieved with current capacity level and to speed progress toward universal access. The following sections will discuss three major elements related to resources and capacity: funding, human resources, and timing.

6.1 ASSESSING THE FINANCIAL GAP

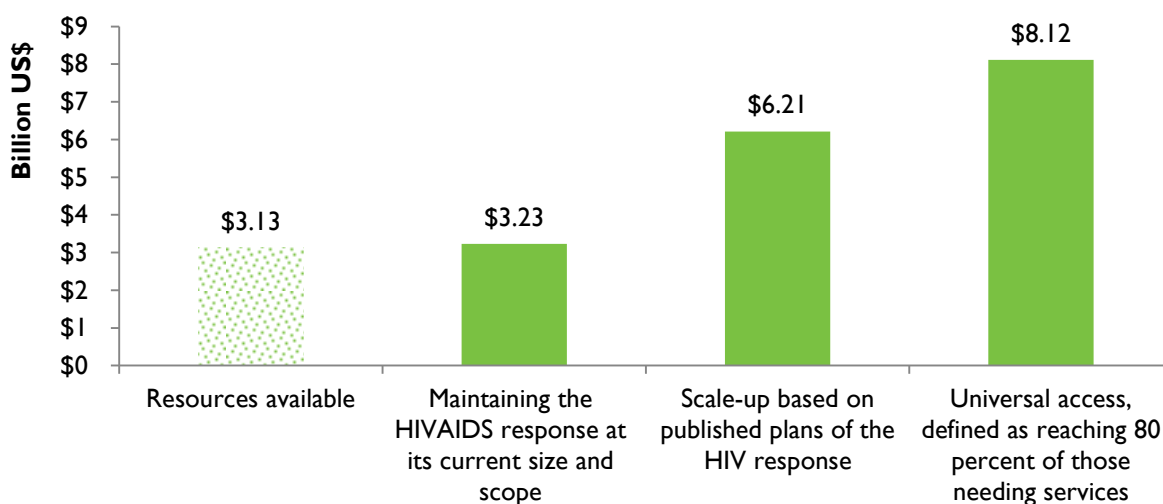
Global HIV funding leveled off in 2009 after a decade of steep increase. While public and private domestic resources accounted for 52 percent of total spending on HIV programs in low- and middle-income countries in 2009, in 56 mainly low-income countries, international donors supplied at least 70 percent of HIV resources (UNAIDS 2011a). The extent to which services can be scaled up depends on a country's ability to secure domestic or external funding.

To ensure that the funding matches the desired scale-up, planners need to cost the desired scale-up and compare its total cost with the total available resources. Figure 6 shows the results of a sustainability analysis in Nigeria in which the cost of three scenarios of scale-up were assessed (Resch, Wang et al. 2009):

1. Maintain the HIV/AIDS response at its current size and scope – US\$3.23 billion for 2010–2014.
2. Base scale-up on published plans of the HIV response – US\$6.22 billion for 2010–2014
3. Provide universal access, defined as reaching 80 percent of those needing services – US\$8.12 billion for 2010–2014.

Based on currently available funding of US\$3.13 billion for 2010–2014, at the time of the analysis the program could only afford the first scenario: maintaining the HIV/AIDS response at its current size and scope. Any scale-up would have required one or more of the following: mobilize further resources, reduce the cost by applying efficiency measures, and reduce the cost by scaling down certain activities.

FIGURE 6: COST AND RESOURCES AVAILABLE (BILLION US\$) FOR THREE POLICY SCENARIOS, NIGERIA 2010–2014

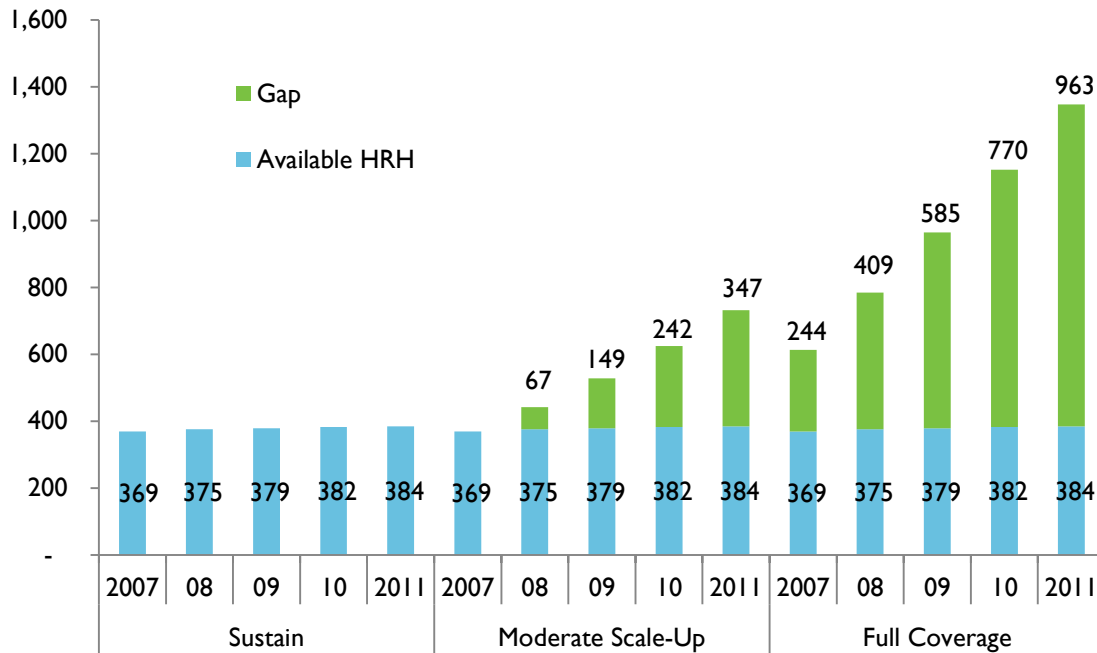


6.2 ASSESSING THE GAP OF HUMAN RESOURCES FOR HEALTH

The shortage in skilled health workers is a major constraint in scaling up health services in resource-limited settings (Chen, Evans et al. 2004; Hongoro and McPake 2004; Chen and Hanvoravongchai 2005). **HAPSAT** can quantify the human resources needed for scaling up clinically based services, such as ART, prevention of mother-to-child transmission (PMTCT), HIV counseling and testing (HCT), and sexually transmitted infection (STI) case management (for other tools, please refer to further reading in the Summary box below). Through data collected in facilities providing the above services, it is possible to quantify the amount spent per patient by each type of cadre (e.g., medical doctor, nurse, midwife). This value can be multiplied by the target number of people to estimate the number of full-time equivalent (FTE) health workers required to deliver these services.

A **HAPSAT** implemented in Zambia in 2008 showed the nursing labor gaps for ART, PMTCT, HCT, TB/HIV, and care and support services depending on policy scenario (Resch, Lee et al. 2008). As shown in Figure 7, if the HIV program was to moderately scale up, an additional 347 FTE nurses would be required by 2011. If the program aimed to provide full coverage to the examined HIV services, by 2011 an additional 963 nurses would be required. If it is impossible to allocate this number of nurses during the examined period, targets should be adjusted to feasible capacity expansion or policies should be adjusted to reduce the number of FTE nurses required, such as by implementing task shifting.

FIGURE 7: NURSING LABOR GAPS FOR ART, PMTCT, VCT, TB/HIV, AND CARE AND SUPPORT SERVICES, BY POLICY SCENARIO



There are two major challenges in quantifying the gap in human resources for health (HRH) for HIV services:

1. An FTE staff member for a given service (e.g., ART) is a health professional who spends all his/her working time on patient visits to provide that service. In most facilities, the volume of patients requiring HIV services is only a fraction of an FTE's time (Wong, Katz et al. 2011). In such cases – and they are the majority – training the existing staff on ART provision will frequently be sufficient, though in some cases there will still be a need to recruit more staff.
2. Because HIV services are provided mostly by health workers who also deliver other services, it is frequently hard to quantify the number of health workers available for delivering HIV services. If such data are lacking, it is impossible to assess the gap in human resources.

Quantifying the human resources needed for delivering HIV services is useful even if partial HRH data are available. In Guyana, a HAPSAT study showed that human resources needed for delivering clinically based HIV services is small, and that the shortage in health workers can be improved by implementing efficiency measures (Katz, Altman et al. 2011). A HAPSAT in Cote d'Ivoire showed that the shortfall in number of nurses is large, while no shortfall was expected in the number of medical doctors, and as such, task shifting of HIV services from medical doctors to nurses was not recommended (Health Systems 20/20 Project 2009).

Quantification of HRH required for HIV services can be done in HAPSAT 2.0, available from www.hs2020.org/hapsat. A list of HRH tools can be found at [WHO | Human resources for health \(HRH\) tools and guidelines](#).

6.3 ESTIMATING THE DURATION REQUIRED FOR THE DESIRED SCALE-UP

It is important to factor in the time required for scaling up services, even if the required resources are available. Scaling up services frequently requires adjusting governance, financial, and procurement procedures, and these changes take time. These factors partially explain why TB grants of the Global Fund perform poorly in their first year of funding when such procedures are established or adjusted (Katz, Abdel-Aziz et al. 2010). For a scale-up to be sustainable, careful planning is needed to develop positive synergies between scale-up and health systems strengthening. This takes more time than establishing a vertical program, yet in the long run it will be more sustainable (McCoy, McPake et al. 2008).

As previously noted, there may be factors other than resources that slowed earlier scale-up efforts. These must all also be carefully evaluated in setting targets and determining whether it will be possible to achieve universal access by 2015 (or earlier).

Summary

With the aim to reach international targets, policymakers should review current and potential capacity of their financial and human resources and address issues where necessary and possible. In addition, they should factor in considerations of time and duration into target setting.

Tools:

1. HAPSAT 2.0 is available from www.hs2020.org/hapsat
2. Costing tools are listed at http://www.aidstar-one.com/focus_areas/treatment/ART_costing_cross_walk
3. HRH tools are listed at [WHO | Human resources for health \(HRH\) tools and guidelines](#).

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