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Rwanda's Mixed Epidemic

Results-based Strategy Refocuses Prevention Priorities



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One in a series of HIV prevention billboards warning young Rwandans to avoid “sugar mamas” and “sugar daddies”: adults who offer adolescents cash or gifts in exchange for sex. The Rwandan Government has been conducting research into the factors that increase risk for young women and girls, who have higher HIV prevalence than males their age.

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In 2009, Rwanda found itself in an unusual and enviable position: its national HIV program was nearly fully funded for all activities. With primary support from the Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM) and the U.S. President's Emergency Plan for AIDS Relief (PEPFAR), Rwanda won an additional GFATM grant to fill remaining budget gaps in its HIV programming. Possibly for the first time ever, an African nation had the financial resources to undertake a complete, comprehensive HIV program, including prevention, care, treatment, and impact mitigation. How would Rwanda respond?

In many ways, the groundwork had been laid. Earlier that year, Rwanda had used newly available data to significantly revise its national strategic direction in HIV programming. *The National Strategic Plan on HIV and AIDS 2009–2012* (NSP 2009)¹ was designed as a response to a modeling exercise, suggesting that Rwanda has a “mixed epidemic” with transmission occurring within both most-at-risk populations (MARPs) and the general population (Republic of Rwanda 2009). Commissioned by the government, new sources of data—a modes of transmission study, a triangulation exercise, behavioral surveillance research, and more—provided the evidence necessary for planning the new strategy to address the realities of Rwanda's epidemic (see Box 1). In fact, the GFATM granting application itself—the National Strategy Application (NSA)—was a valuable undertaking that strengthened the NSP 2009, helping Rwanda analyze its national HIV strategy, operationalize its new program, and project its resource needs.

¹ Throughout this case study, the *National Strategic Plan on HIV and AIDS 2009–2012* is referred to as the NSP 2009, whereas its predecessor, the country's first National Strategic Plan (2005 to 2009), is referred to as NSP 2005.

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BOX 1. NEW SOURCES OF DATA FOR STRATEGIC DECISION MAKING

To fully understand the drivers of its epidemic before the NSP 2009 planning process began, the Rwandan government commissioned several key studies to gather new data on MARPs, including:

- An exploratory study looking at behaviors that put Rwandan men who have sex with men (MSM) in Kigali at high risk (Binagwaho et al. 2009).
- A modes of transmission study: a modeling exercise to identify most-at-risk groups and groups with rising rates of HIV infection, including female sex workers and their clients, and MSM. Among other findings, it estimated that MSM would account for about 15 percent of new infections (Asiimwe et al. 2010).
- The Rwandan HIV/AIDS Data Synthesis Project: a data triangulation exercise that combined information from earlier research to detect epidemiological trends in different populations (TRAC Plus and the Ministry of Health 2008).

What followed was a big step forward for public health in Rwanda. Recognizing the need to focus on vulnerable groups, the Rwandan government used the development of the new NSP to reorient prevention programming to target behaviors shown by research to be driving new infections and fueling the country's epidemic. In addition to adopting this data-based approach to planning, the NSP 2009 and other strategy documents provided concrete goals and objectives for stakeholders, making all parties responsible for success. The broadly participatory nature of the planning process brought together hundreds of stakeholders from many sectors, who contributed diverse perspectives and a broad array of experience and expertise. The result was a bold move away from planning based on re-implementing traditional program activities toward an ambitious, evidence-based, comprehensive strategy responsive to the nature of Rwanda's epidemic.

It is still too early to determine the overall effectiveness and impact of the NSP 2009 because many program components were slow to launch. But the strategic planning approach underlying Rwanda's HIV prevention programming redesign presents important lessons learned and suggests promising practices for other countries with a similar epidemiological profile.

Rwanda's Mixed Epidemic

With a population of over 10 million in an area about the size of the U.S. state of Maryland, Rwanda is the most densely populated country in Africa. The country is landlocked and mountainous, and its economy is primarily agricultural, with 83 percent of the population living in rural areas. Rwanda has made impressive progress in recovering from the genocide of 1994, during which more than 800,000 of its citizens were killed, the economy was crippled, and infrastructure—including much of the health care system—was destroyed.

In 1983, Rwanda was one of the first countries in Africa to identify cases of AIDS (Van de Perre et al. 1984). Today, Rwanda is among a dozen or more sub-Saharan African countries whose epidemic is characterized as "mixed" (see Box 2). The 2005 Demographic Health Survey estimates Rwanda's national HIV prevalence at 3 percent among the general adult population aged 15 to 49. Although this is much lower than in most other East African countries, small

studies of specific at-risk populations in Rwanda show much higher HIV prevalence, including a population of sex workers in Kigali with 57 percent prevalence (Ministry of Health [MOH] 2010). Vulnerable subpopulations within the general population also show higher HIV prevalence. For example, prevalence among women 20 to 24 years old is five times that of men their age (2.5 percent versus 0.5 percent; Republic of Rwanda 2009), a pattern seen throughout much of East and Southern Africa. There is also geographic variability, most notably higher HIV prevalence in urban areas (7.3 percent) than in rural areas (2.2 percent; Republic of Rwanda 2009).

Rwanda's recognition of the mixed nature of HIV transmission within its borders—in line with the global imperative promoted by PEPFAR for countries to collect and use data to better understand the drivers of their own epidemics—prompted the country to reorient its priorities and redesign its strategies to be more targeted and cost-effective. These efforts have put Rwanda among a handful of nations on the continent whose governments are gathering evidence on MARPs and targeting prevention programming to them.

In much of the world, MARPs—including sex workers, men who have sex with men (MSM), and people who inject drugs—are not effectively reached by HIV prevention programming. MARPs are socially marginalized and face intolerance, stigmatization, and imprisonment. As a result, they tend to avoid health services, a situation worsened by public health agencies that are unwilling or ill equipped to address their specific needs, which exacerbates their vulnerability to HIV. Less marginalized than MARPs are subpopulations within the general population who are significantly more vulnerable to HIV infection due to a mix of socioeconomic and contextual risk factors. These may include serodiscordant couples, city dwellers, and mobile populations.

Because these groups carry a disproportionate burden of the epidemic, countries are developing targeted prevention programs in hopes of decreasing HIV incidence. This requires a fundamental change in program design. Mixed epidemics are dynamic and complex, requiring a better understanding of the factors fueling new HIV infections and a clear focus on targeted populations and behaviors. Mixed epidemic planning requires that data measure actual rather than perceived risk; these data should be regularly collected from reliable sources to inform and adapt programs.

BOX 2. THE DYNAMICS OF MIXED EPIDEMICS

In recent years, the advent of improved and expanded data gathering in developing countries has helped health experts identify the populations at greatest risk of HIV. One result has been the recognition that some national epidemics are in fact several different epidemics, or “mixed.”

A mixed epidemic is operationally defined as low HIV prevalence of 2 to 5 percent in the general population, combined with high prevalence (15 percent or higher) among MARPs and vulnerable groups within the general population.

Program implementers must develop sensitivities and skills to effectively work with new populations. HIV program planners must commit to funding prevention programs that respond to data, and be prepared to reduce or eliminate programs that are proven ineffective. Programming for mixed epidemics forces planners to deal with thorny questions. Where funding is limited, which activities or regions will lose some or all of their support for prevention activities, and how will those cuts be made? How will longstanding programs, built on conventional wisdom, respond and adapt? What is the right balance in reaching underserved populations while maintaining some support for existing programs that reach the general population?

Rwanda's Strategic Response to HIV

Since 2005, Rwanda's Institute of HIV/AIDS and Disease Prevention and Control (IHDPC, known before 2012 as the National AIDS Control Commission or CNLS, its French acronym) has developed and coordinated two successive national strategic plans to guide the country's HIV response. A variety of stakeholders have implemented these plans in a decentralized manner.

Organizational structure: The IHDPC is a component of the Rwanda Biomedical Center, a coordinating body created in 2012 that is governed by a board of directors chosen by the office of the prime minister. The IHDPC's general directorate is charged with monitoring the implementation of the national strategic plan. Although all government agencies participate in Rwanda's national response to HIV, two agencies in particular have been deeply involved in the planning and coordination of HIV programs: the former Treatment, Research and AIDS Center Plus (TRAC Plus)—now

subsumed within the Rwanda Biomedical Center/ IHDPC—which was responsible for clinical care and research, and the MOH, which acts as the principal recipient for all GFATM grants to Rwanda, which total U.S.\$379 million for 2010 through 2013 (Dongier 2011a).

Decentralization: Since 2001, Rwanda has pursued a policy of decentralization for all development activities, including the HIV response. This strategy is designed to improve the responsiveness, appropriateness, and accountability of programming by increasing local participation and consultation in development initiatives. Although the national government provides strategic leadership and technical guidance, districts are charged with operationalizing policies and plans with appropriate actions.

District AIDS Control Commissions coordinate the HIV response across Rwanda's 30 districts. Each commission has dedicated staff who work with representatives from local governments, various ministries (health, education, planning), and civil society. Through district-level joint action forums, the commissions conduct annual planning exercises and convene regular coordination meetings with local implementers and stakeholders.

Civil society: In the wake of the 1994 genocide, the government monitors the activities of civil society organizations, including nongovernmental organizations (NGOs), the private sector, media, faith-based organizations, and groups for people living with HIV. A U.S. Agency for International Development-funded assessment published in 2002 described a passive civil society that focused on implementation rather than advocacy, and partially attributed that situation to the government's strong negative reaction to criticism (Management Systems International 2002). Since that time, relations have improved but tend to focus more on consensus building than confrontation.

NGOs especially continue to be beholden to the government for legitimacy, direction, and funding. This is evidenced by Rwandan legal requirements that international and national NGOs register annually at both the national and district levels. NGOs are also legally required to align their strategic plans with key national policy documents outlining economic development goals and to document their commitment to these plans. The Rwandan government also created umbrella organizations to coordinate the different facets of civil society participation.

Civil society organizations, which often have deep roots in the communities they serve, typically have better access to MARPs than public sector agencies or service providers. Yet a 2009 situation analysis noted that Rwandan civil society lacks a full understanding of MARPs and their needs; its response was deemed largely ad hoc, lacking rigorous evaluation and quality assurance (Rwanda NGO Forum 2009).

Funding sources: External financial support for Rwanda’s HIV programs currently comes from two main sources: GFATM and the U.S. Government through PEPFAR. As part of the national strategic plan/NSA development process, the CNLS costed out the NSP 2009. The total cost for fiscal year 2009 through fiscal year 2013 was estimated at U.S.\$934 million, with GFATM and PEPFAR commitments combined providing U.S.\$649 million. The costing exercise estimated the government’s contribution to be 13 percent, with the remainder coming from the United Nations and other donors.

Collecting the Evidence Base

In 2008, as Rwanda embarked on the design of its new HIV strategic plan, planners embraced the Joint UN Programme on HIV/AIDS (UNAIDS) guidelines, which were designed to foster a better



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A 2011 conference in Kigali on improving Africa’s national health care systems. Rwanda is among the African nations that has worked hardest to build the evidence base for its national HIV strategy.

understanding of: 1) the nature of HIV in a country (“Know Your Epidemic”) and 2) the achievements and gaps in current HIV programming (“Know Your Response”; UNAIDS 2007).² The first encourages countries to use available data, supplemented with modeling, to understand what drives their epidemic and what impedes access to HIV services. The second identifies which organizations and agencies are working in HIV prevention and identifies programmatic gaps in coverage and service delivery for high-priority areas or populations.

“Know Your Epidemic”: A systematic and comprehensive review of important data helped identify the populations in Rwanda at the greatest risk of infection, which in turn helped define priorities for the NSP 2009. Led by the MOH and TRAC Plus, the Rwandan HIV/AIDS Data Synthesis Project reviewed more than 100 independent sources of information to discern HIV trends among different population groups, as well as potential causes for these differences (TRAC Plus and

² Later encapsulated in PEPFAR’s *Guidance for the Prevention of Sexually Transmitted HIV Infections* as the “Four Knows”—know your epidemic, context, response, and costs.

MOH 2008). Among its findings were that rapid urbanization may be responsible for increases in HIV prevalence; prevalence among youth overall is low, although young women have higher prevalence than young men; and refugees and truckers self-report decreasing levels of risk behaviors.

A modes of transmission modeling exercise conducted by CNLS and MEASURE Evaluation added to the knowledge base (Asiimwe et al. 2010). It used behavioral, demographic, and epidemiological data to examine an individual's risk, creating groupings of low-, medium-, and high-prevalence populations to reveal what may be driving new infections in Rwanda. The exercise identified high-risk groups and subpopulations within the general population with rates of HIV that are elevated or trending upward. The modeling process included different scenarios and varying HIV prevalence and size of different risk groups; it used the best available data to predict how HIV infections would change between scenarios and to look for commonalities. Notably, estimations showed that MSM accounted for about 15 percent of new infections across a range of scenarios modeled. This finding prompted researchers to conduct an exploratory study of a population of MSM in Kigali (see Box 3) and emphasized the need to focus on MSM in the NSP 2009. The data also indicate that female sex workers, both commercial and transactional, will make a major contribution to new infections in Rwanda.

These studies confirmed that Rwanda is experiencing a mixed epidemic and pointed to the need to address new HIV infections among high-prevalence groups. These findings, as well as an assessment of Rwanda's existing programmatic response and capacity, were essential in developing the new, evidence-based strategic direction for the NSP 2009.

“Know Your Response”: To prepare for the development of the NSP 2009, in 2008 CNLS gathered all stakeholders for a joint review of

Rwanda's NSP 2005 (CNLS 2008). The review found that although access to HIV treatment and prevention services increased during the period of the NSP 2005, HIV prevalence remained high. To respond to this persistent challenge, Rwanda reoriented the NSP 2009 and gave it the primary goal of halving HIV incidence.

The NSP 2009 fits into the national government's strategic planning framework, which demonstrates the government's larger commitment to planning and program design, as well as its prioritization of HIV. This commitment is embodied in a series of documents that lay out long-term goals and develop operational plans to achieve them. These include *Rwanda Vision 2020*, which “seeks to fundamentally transform Rwanda into a middle income country by the year 2020” (Republic of Rwanda Ministry of Finance and Economic Planning 2000, 9) and includes goals to reduce HIV prevalence. The medium-term strategy to improve Rwandans' quality of life—the government's *Economic Development and Poverty Reduction Strategy 2008–2012*—is woven into Rwanda's overall development planning (Republic of Rwanda 2007). The *Health Sector Strategic Plan 2009–2012* outlines the MOH's HIV response, which reflects the goals and objectives laid out in the higher level documents (MOH 2008a). The MOH also worked with districts to develop the *District Health System Strengthening Framework*, a costing and strategic planning tool for use in public health facilities (MOH 2008b).

Constructing a New Policy

In early 2009, armed with a clearer understanding of the epidemic and potential responses as a result of these exercises, Rwanda sped up the extensive planning process that created the NSP 2009. Combined with the results-oriented approach, the data collected during the planning process were critical in reorienting Rwanda's HIV strategy.

BOX 3. MSM RESEARCH SHOWS HIGH VULNERABILITY AND SIGNIFICANT NEEDS

Throughout Africa, very little is known about populations of MSM. Because of profound stigmatization and discrimination, African MSM have been nearly invisible to the public health establishment and the larger public. Some political and health leaders question the existence of MSM within their societies, whereas others seek to pass laws criminalizing homosexual acts.

In recent years, Rwanda has become one of a handful of African nations to recognize their MSM populations and conduct research to learn more about them. When the modes of transmission study suggested that 15 percent of new HIV infections stem from homosexual sex (Asiimwe et al. 2010), many rejected those findings. To test this assertion, CNLS and MEASURE Evaluation conducted a study from 2008 to 2009, gathering exploratory behavioral research on MSM in Kigali (Binagwaho et al. 2009). The researchers recruited a cohort of 98 MSM aged 18 to 52 years. To understand risk factors for this MARP, the researchers asked about their sexual partnerships (including commercial and transactional), their HIV testing and sexually transmitted infections history, as well as attitudes about possible HIV prevention strategies for MSM.

Findings from this research show significant HIV risk for this population, with widespread sexual networks, a high frequency of casual sex, low levels of condom use, and high levels of alcohol consumption. One in 10 respondents reported exchanging sex for money. One-quarter of MSM said that they had also had sex with women within the past year.

Based on these preliminary data, the researchers recommended several directions for Rwanda's programming for MSM. First, all prevention programming should be conducted within a human rights framework, with great care to ensure privacy and safety for this stigmatized population. Second, health services should be MSM-friendly and should focus on the specific health needs of MSM, with increased access to counseling sensitive to their sexuality. Finally, wider distribution of condoms and lubricants is needed to promote safe sex. The minimum package of health services for MSM recently developed by CNLS/IHDPC reflects these priorities, but further research is needed to design responsive programs that will engender behavior change.

The NSP 2009 took shape between January and March 2009, three months packed with workshops and meetings organized by the executive secretariat of CNLS to discuss the full range of strategy options. The first gathering—the “Know Your Epidemic, Know Your Response” workshop in Kigali—was a hectic but productive two-day collaboration. Attended by more than 100 stakeholders, including government officials, district-level HIV coordinators, civil society organizations, donors, and international partners, its purpose was to review available evidence from Rwanda and around the world to identify program strategies for the Rwandan context. During the

workshop, participants convened and reconvened in small working groups to discuss multiple issues from a wide range of perspectives, with workshop organizers often rushing from group to group to communicate different positions and to help participants seek a common ground. The *Economic Development and Poverty Reduction Strategy* was used extensively to correlate planning with Rwanda's existing economic and development goals.

This intensive immersion in the planning process was followed by weeks of meetings of small technical working groups to formulate key strategies

and to design the basic components of the NSP 2009. This work was facilitated by a team of international consultants with skills and experience in strategic and operational planning, modeling, and HIV programming. Operational plans, an analysis of resource needs, and a budget came next. The monitoring and evaluation plan was also developed during this stage, a key program activity rarely integrated into strategic planning. Final steps included a situation analysis that examined the role played by Rwandan civil society organizations in the nation's HIV activities, the current capacity of civil society organizations to implement HIV programs at scale, and proposed strategies to strengthen that sector.

Defining high-priority populations: The NSP 2009 identifies five high-priority populations for HIV prevention: female sex workers, clients of female sex workers, serodiscordant couples, women aged 20 to 24 years, and MSM. Epidemiological data demonstrate higher levels of HIV infection in these groups than in the general population. Other populations also referenced as vulnerable are prisoners, truck drivers, people with disabilities, members of the military and uniformed services, and refugees. However, evidence demonstrates that HIV prevalence is lower in some of these subpopulations (such as refugees) and that some also report fewer risky behaviors (such as truck drivers). Despite these data, the organizations working with these subpopulations successfully advocated for their inclusion in the NSP, citing inherent vulnerability (in the case of refugees) or regional impact on HIV (members of uniformed services and truck drivers), which underscores the balancing act required to plan a program for mixed epidemics.

Emphasizing results-based planning: The NSP 2009 also marks a shift toward results-based planning and management, a significant change from the activity-based planning used

in the NSP 2005. The NSP 2005 prioritized prevention activities, but the joint review noted that the prevention-related objective—"to reinforce measures of preventing HIV/AIDS transmission"—lacked direction and made it difficult to objectively conduct evaluations (CNLS 2008). In contrast, the NSP 2009 used a results-based approach and established a clear goal for prevention with measurable indicators: halving HIV incidence in the general population by 2012 (Republic of Rwanda 2009).

The National Strategy Application: A Catalyst for the NSP 2009

The development of the NSP 2009 was further accelerated when GFATM invited Rwanda to submit an application for its new experimental granting module, the NSA, which would allow CNLS to fully fund all the activities in the NSP 2009. The NSA was designed to strengthen national HIV frameworks by using the grant application process to bolster areas of policy development that have typically been weak.

The NSA had three basic components: a rigorous costing exercise, a "gap analysis" to identify the program elements not covered by other funding, and a national operational plan to show how the application could be integrated into existing programs. The NSA process unfolded as the NSP 2009 was being developed, and the two activities became intertwined, prompting the planning team to speed their work to quickly operationalize and cost out the NSP 2009. The amount of work required was significant because each of the dozen or more of the proposed implementing partners had to submit program plans and budgets. Time pressures were also a challenge because the planning team had only two weeks to complete the gap analysis.

Despite these challenges, completion of the NSA was invaluable in helping Rwanda reorient to results-based planning. One particularly useful element of the NSA's gap analysis was the consolidation process, which unified all GFATM grants under one agreement, helping Rwanda detect programming weaknesses and duplication of activities.

The final result was a successful NSA for Rwanda, which was the first country to receive this form of GFATM support for its national HIV strategy. Although operationalizing strategic plans often takes many months to accomplish, the NSA rapidly turned the newly minted NSP 2009 from a planning document into a working blueprint for implementation. The NSA learning process has also helped Rwandan health leaders build budgeting and planning skills that will strengthen the country's planning efforts in the future.

What Worked Well

The most successful elements of Rwanda's intensive HIV strategy-building efforts are valuable for other countries to review and adapt to their own context.

Government leadership: All statements from high-level government officials (including President Paul Kagame's June 2011 speech at the UN General Assembly) indicate that HIV remains a priority in the government's agenda. Moreover, the political leadership that built and maintained momentum for the NSP 2009 process remains in place. The current minister of health is the former head of the CNLS, which indicates that HIV will likely retain its importance for the government. Government officials have demonstrated their willingness to fight to ensure the success of the new plan. For instance, when members of the Rwandan Parliament presented legislation in 2009 to criminalize MSM behavior, CNLS and civil society advocates successfully lobbied for the withdrawal of the proposed clause, using research findings to explain the negative impact the law would have on prevention programming.

Donor support: Donors supported the NSP 2009 process; they worked together to align their activities with government priorities and to ensure minimal overlap and adequate coverage. The development of the NSP 2009 paralleled the development of the PEPFAR Partnership Framework with Rwanda, and NSP 2009 goals,

CHRONOLOGY OF NSP 2009 DEVELOPMENT AND NSA AWARD

- August to December 2008: joint review of NSP 2005
- January to March 2009: workshops and consultations for NSP 2009
- April 2009: submission of NSP 2009 to GFATM for initial NSA review
- May to July 2009: NSP 2009 costing gap analysis completed; monitoring and evaluation framework designed
- August 2009: NSA proposal submission
- November 2009: GFATM approval of Rwanda HIV NSA
- November 2010: completion of post-award negotiations; signing of grant award.

strategies, and timeframes are directly reflected in the partnership framework.

Commitment to planning and priorities:

The logical framework consistent throughout all government policies and documents (*Rwanda Vision 2020*, the *Economic Development and Poverty Reduction Strategy*, and *The Health Sector Strategic Plan*) gave coherence and clear direction to the NSP 2009. The commitment to comprehensively address HIV is especially evident in the *Economic Development and Poverty Reduction Strategy*, in which all development sectors explicitly identify HIV as a cross-cutting issue. All three documents demonstrate the government's commitment to planning and goal setting and identify HIV as a national development issue. The government's investment of time, effort, and money in developing the NSP inspired civil society, donors, and district governments to be actively involved in the process.

A forward-moving participatory

process: The NSP 2009 was developed with the active participation of stakeholders from all sectors involved in health, although some groups (notably MARP advocates) did not feel adequately represented. A balance was struck by using dedicated technical staff to complete the documents while at the same time implementing participatory mechanisms that gave opportunities for CNLS to check in and for stakeholders to validate the outcomes. The consultative/validation process happened multiple times during the development of the NSP 2009. These meetings were not perfunctory but resulted in changes to the documents based on the validation exercises. For example, the results of the MSM study provided new data that influenced the strategies and activities included in the NSP 2009.

Use of data for decision making: The planning process used all available evidence to

guide the development of the NSP 2009, including epidemiological and programming data that revealed the priority populations, if and how they were reached, and impact. Planners used modeling and proxy data when information was not available, and current research activities are filling information gaps. The midterm review, scheduled for release in late 2012, will provide important information on the effectiveness of the NSP 2009 and point to any necessary adjustments.

Asking the right people the right

questions: The exploratory study of MSM in Kigali is an example of using rigorous data collection methods to gather information about marginalized MARPs. During a validation exercise, researchers presented initial results to MSM respondents, who provided invaluable insights that refined the analysis and pointed the way to appropriate approaches for prevention among MSM. This study and its methodology also underscore the importance of engaging members of these populations to describe their own lives and discuss their own risk behaviors and prevention needs. It is critical to engage MARPs in this way to gain knowledge and understanding, particularly in a mixed-epidemic setting.

Results-based planning: The NSP 2009's results-based approach provided clear direction for Rwanda's response to HIV. The broader results allow for successful programs to continue and expand, and for new programs to rationally fill in the gaps. The simultaneous design of the monitoring and evaluation system links all performance indicators and data sources to an NSP 2009 result. This approach allows stakeholders to understand and demonstrate how their work contributes to larger objectives. Finally, the monitoring and evaluation plan design requires that each result include indicators and data sources, which means that all results have to be measurable and realistic. This in turn facilitated the costing exercise.

Challenges

Little impetus to streamline programming:

Because Rwanda's HIV activities are fully funded, there is no imperative to streamline or reduce the activities within the prevention portfolio. The current approach, which simply adds activities to the current prevention portfolio, may only maintain the current levels of service delivery without achieving the desired impact on incidence.

Weak civil society: Through CNLS and TRAC Plus (now the IHDPC) and MOH, the government of Rwanda has played a remarkable leadership role in driving the NSP 2009 process by ensuring donor alignment with national strategies and priorities and by managing GFATM grants. However, this leaves limited space for other actors, particularly those within civil society. For example, the government is the sole principal recipient for all GFATM monies. Although the justification for this is that civil society is currently too weak to take on this role, this arrangement conflicts with GFATM's stated preference for a co-principal recipient structure—with both civil society and government managing funds—as a check on the power of a single entity and a diversification of local capacity. Allowing the government to control significant funding for civil society organizations undermines the role those organizations could play as government watchdogs or advocates for marginalized populations. Also, few organizations have experience working with MARPs in Rwanda, and the organizations led by these populations require significant capacity building. It is unclear who is responsible for building local organizational capacity to work with these newly targeted populations.

Insufficient technical guidance and capacity:

The lack of technical guidance from the Rwandan government has delayed roll-out of prevention programs targeting MARPs. Rwanda's minimum packages of prevention services for such

high-priority populations as sex workers, MSM, and serodiscordant couples are relatively new and may not yet be fully disseminated. These documents are critical for implementers seeking to provide appropriate services.

Lack of program data: The Data Synthesis Project noted the lack of high-quality program data. Most programs collect output data (e.g., number of people trained) but do not rigorously evaluate programs to determine their impact. Even with the NSP 2009 in place, key data elements remain uncollected. For instance, size estimations for MARPs—which provide a baseline and allow implementers to establish targets for program coverage—are still in process. In addition, better analysis of program data can reduce programmatic overlap, fill programming gaps, and promote more efficient scale-up. This is increasingly important in light of pending funding reductions.

A rushed planning process: Although the NSA process sparked intense activity and an investment of time and effort, the fast pace of the process forced the NSP 2009 to move forward without adequate background documents or information. With more time, the missing technical guidance could have been developed along with the NSP 2009, reducing the gap between the NSP 2009 launch and the start-up of activities.

Recommendations

Rwanda's experience in planning for mixed epidemics provides valuable lessons learned and recommendations both for Rwanda as it nears the end of the NSP 2009 and for other countries working in similar contexts.

Commit to a comprehensive planning process: Although the investment in time and

money to complete a comprehensive planning process is significant, it is worthwhile. The final report on the operationalization of the NSA (Dongier 2011b) concludes that, although Rwanda was able to speed up many of the steps of the NSP 2009, a similar planning process would normally take up to two years. In addition, planning is well worth the cost. Although the report estimates Rwanda's NSP/NSA external costs for planning (workshops and international consultants) at over U.S.\$500,000, this represents only 0.07 percent of the entire NSP 2009 budget.

Do not wait for perfect data: Rwanda's commitment to building an evidence base provided sufficient information for analysis. Although the data available were neither perfect nor complete, Rwanda's investment in compiling and analyzing available information yielded important and surprising findings that, among other things, highlighted the contribution of MSM to new infections, prompting Rwanda to recognize and address this prevention gap. Rwanda was also able to use data and information gathered from other parts of East Africa that served as an adequate substitute for actual data from Rwanda. Although this proved sufficient for initial planning purposes, program planners understand that these information gaps must be filled over time.

Remain flexible: The speed required to complete the NSA application required Rwanda to budget for activities that were not yet well defined. As these new activities became clearer, the estimated costs changed, prolonging budget negotiations. Fortunately, the consolidation process identified a number of cost savings that provided flexibility to adjust the budgets, and the granting mechanism allowed Rwanda to shift funds. Funding agencies should recognize the need for this funding flexibility, which is key to responding to the dynamic shifts that characterize mixed epidemics.

Continue to build the evidence base:

Although the NSP 2009 and associated data analysis exercises clearly identified MARPs, more research is needed to better understand the drivers of risk for those populations. For instance, all women aged 15 to 24 are not uniformly at risk for HIV infection, and further research is needed to understand the specific characteristics and risk behaviors to effectively target these women with prevention interventions. Similarly, serodiscordant couples may need different approaches, depending on which partner is infected. In addition, more data are needed on such marginalized groups as MSM to develop appropriate programs and activities and ensure adequate coverage of these populations.

Current Status of Implementation and Next Steps

Although the NSA represented full funding for Rwanda's comprehensive HIV prevention strategy, there have been significant delays in starting up new activities. The NSP 2009 was officially launched in June 2010, but the time needed for post-award negotiations and the consolidation of all GFATM grants into one agreement meant the final grant was not signed until November 2010. The competitive selection process used to choose the subrecipients also caused delays to the subgranting program. As a result, many disbursements were held up; some recipients did not receive their first tranche of funding until June 2011.

In fiscal year 2012, PEPFAR funding was reduced by 10 percent, compelling the U.S. Government to examine its funding priorities. Through intensive consultation with the government and implementers, some programs in Rwanda had to be scaled back.

New and continuing prevention activities:

Because most new activities were to be funded through the NSA, the bulk of activities up and running in 2011 represent continuations or scale-up of activities from the NSP 2005. Programs that focus on newly identified populations have been slower to launch. This is due in part to delayed funding, and also because the development of technical guidelines, especially for MARPs, was delayed as well. For example, the minimum package of HIV prevention services for female sex workers was not finalized until October 2010; the minimum packages for other groups were finalized in early 2011.

Research: Rwanda's research agenda continues to move apace, driven by the gaps in research and evidence identified through the national strategic planning process. The gaps in data previously noted have informed the government's current research agenda. Studies to estimate the population size and HIV infection rates for sex workers and truck drivers—critical for setting goals for outreach and coverage, and for assessing reductions of incidence within these groups—were scheduled for 2009; in 2010, the same studies were planned for prisoners and MSM. The U.S. Centers for Disease Control and Prevention supports the MOH to conduct another behavioral surveillance survey for MSM using a different methodology to recruit a broader array of respondents. Other operational research priorities include size estimation studies for MSM, truck drivers, prisoners, and sex workers. In addition, further research is planned to understand the broader sociocultural and environmental drivers of vulnerability to HIV infection, particularly to understand why young women are at such high risk for infection. Rwanda will evaluate progress made toward the Millennium Development Goals on HIV prevention in the coming years. The final evaluation is scheduled to be completed by 2015; the IHDPC is currently adapting UNAIDS evaluation guidelines

and building monitoring and evaluation systems, with particular focus on the evaluation component.

District activities: Given the push toward decentralized programming, it was critical that the NSP 2009 provide an initial roadmap for implementers and local government entities that coordinate HIV programming at the district level. Districts used the NSP 2009 as the basis for the annual district-level HIV action plan, a process coordinated by the 30 District AIDS Control Commissions. These plans were completed by April 2010. HIV prevention activities are now integrated into the district economic and social development plans. The commissions have put in place planning, coordination, and monitoring tools to track local programs and partners, including quarterly coordination meetings and annual supervisory visits. Some civil society partners, however, question whether the commissions have adequate guidance and skills to coordinate implementation of the entire NSP 2009, particularly activities targeting MARPs.

Evaluation: A midterm review of the NSP 2009 is scheduled for release in late 2012. As with the first joint review, stakeholders will see how much of the NSP 2009 is operational and identify major gaps in implementation. This will provide an opportunity for refocusing and prioritizing resources. The final report on the operationalization of the NSA also calls for another round of budgeting, which will likely coincide with the review.

The promise of the NSP 2009 remains strong, but it is still too early to assess its impact on HIV in Rwanda. For it to be successful, all actors will need to stay the course. The IHDPC and the government of Rwanda will need to persevere in their commitment to prevention strategies built on an ever growing evidence base. Implementers will need to be nimble to respond to the changing

dynamics of the epidemic, and funding agencies will need to remain flexible to allow funding shifts based on new information on the actual costs of effective strategies implemented in Rwanda. All actors must maintain an open and collaborative dialogue to share lessons learned, to raise and solve issues together, and to continue to work together to reduce HIV incidence in Rwanda. ■

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