

# 23

## MONITORING AND EVALUATION OF HIV/AIDS IN NIGERIA

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*“If you do not measure results, you cannot tell success from failure. If you cannot see success, you cannot reward it. If you cannot reward success, you are probably rewarding failure. If you cannot see success, you cannot learn from it. If you cannot recognize failure, you cannot correct it. If you can demonstrate results, you can win public support.”*

— DAVID OSBORNE AND TED GAEBLER IN *REINVENTING GOVERNMENT* (ADDISON WESLEY, 1992)

When the HIV epidemic first emerged in Nigeria, little was known about which interventions were likely to slow the spread of the virus. That lack of understanding, coupled with institutional and public denial of the existence of the epidemic, made measuring the success of the limited interventions then available extremely difficult. In Nigeria, as in most of Africa, monitoring and evaluation (M&E) efforts were limited to biological surveillance surveys conducted biennially. As program managers developed second-generation surveillance methodologies, they made halfhearted attempts to conduct behavior surveillance surveys and to evaluate high-risk population groups. Beset as they were with the challenge of mobilizing resources for their interventions, though, these managers failed to place emphasis on monitoring the success of their programs.

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Until the mid-1990s, most M&E in Nigeria took place in a relatively piecemeal fashion. An HIV surveillance system had been established, but it did not function effectively. Several isolated behavioral studies were conducted using different sampling methods and indicators, and research studies contributed additional information. Unfortunately, results were neither shared nor passed on to a central coordinating system for analysis and use in program planning and policy-making.

Since 2000 this situation has changed considerably. Much more is now known about how HIV spreads through populations and what changes are needed to slow its progression. Political commitment also has increased considerably, and Nigeria now receives substantial resources both from its own public coffers and from bilateral and multilateral donor organizations.

With many HIV/AIDS programs now scaled up, the need to track changes and be able to correlate them with interventions has become even more critical. The National Action Committee on AIDS (NACA) has established an M&E unit, which is appropriately staffed and supported by M&E working groups with membership from key stakeholders. The Federal Ministry of Health also has expanded its Epidemiological Unit for the Health Sector Response to the epidemic to strengthen other M&E elements. Other federal agencies have yet to develop similar M&E structures, however, and state and local governments have yet to establish equivalent structures to monitor and evaluate programs at those levels.

A country risks losing the utility of many of its HIV-related measurements when it lacks a comprehensive M&E system. Such a system confers several key advantages. It contributes to more efficient use of data and resources by ensuring, for example, that indicators and sampling methodologies stay comparable over time. It uncovers information that serves the needs of many constituents, including program managers, researchers, and donors. And it eliminates the need for those constituents to duplicate efforts by repeating baseline surveys and evaluation studies—an especially important asset when resources are scarce.

From the national perspective, a coherent M&E system helps ensure that donor-funded M&E efforts best contribute to national needs rather than simply serving the reporting needs of agencies or legislatures overseas. It also encourages communication among different groups involved in the national response to HIV. Shared planning, execution, analysis, and data dissemination can reduce programmatic overlaps and increase cooperation among the different groups, many of whom may work more efficiently together than in isolation.

The ultimate application of data for program planning and analysis is crucial in any M&E system. Analysts must avoid collecting data that cannot or will not be used. Countries have different M&E needs, dictated by the state of their HIV epidemics, their national response, and their available resources. Yet successful M&E systems share common elements, such as uncovering new information, limiting biases, providing clarity, enabling consensus, and fostering well-reasoned and meaningful actions that have broad-based ownership.

## THE ROLE OF M&E IN HIV/AIDS PREVENTION AND CONTROL

In the past, M&E systems were designed to improve health and promote development. They tracked programmatic activity and results, and they allowed program managers to allocate resources wisely to achieve the best possible result.

The HIV epidemic differs from many other health and development issues because of its relative newness and uncertain course. New interventions are constantly proposed, and they must prove effective to justify their incorporation in a national or international response. Operations research can establish the effectiveness of a given intervention, such as sex education in selected high schools to reduce risk behaviors. For a strong national M&E system, though, much more is needed to track more generalized success. In the example of sex education, repeated behavioral surveys among a national sample of high-school students would be needed to reflect changes in risk behavior following the integration of sex education into the nationwide curriculum.

The epidemic itself continues to shift. For years, everyone focused on prevention. As HIV epidemics have turned into AIDS epidemics from one country to another, though, care of the sick and social support to people living with HIV/AIDS and their families have gained in importance. These programs are often both difficult to deliver and expensive. Based on work in South America and Rwanda, for example, the World Bank has estimated the cost of AIDS treatment per person at 1 to 2.7 times a country's per capita gross domestic product. This formula predicts that Nigeria will spend an annual \$250 to \$675 to care for each person living with HIV/AIDS (1). Monitoring and evaluating the impact of HIV/AIDS programs is critical in ensuring delivery of the best possible services.

HIV is politically charged in most countries. Important religious and political lobbies, along with the general population, may oppose interventions, and top-level decision-makers may therefore be reluctant to tackle the issue, preferring to focus on more politically neutral programs, such as maternal mortality and child nutrition. It is in this context that M&E is perhaps most useful. Only careful measurements of the success of existing initiatives can persuade reluctant policy-makers to expand program efforts.

To gain the public's and politicians' approval for public expenditure on development programs, the evaluation field has adopted performance or results-based M&E. In some countries, such as India, public service performance contracts are being used in government reforms to prove accountability and to learn from the process of project, program, or policy implementation. As a management tool that assesses how outcomes are being achieved over time (2), results-based M&E can:

- Provide crucial information about public sector performance;
- Track the progress of a project, program, or policy;
- Promote credibility and public confidence by reporting on program results;
- Help formulate and justify budget requests;
- Identify potentially promising programs and practices;
- Focus attention on achieving outcomes important to organizations and their stakeholders;
- Provide timely, frequent information to staff;
- Help establish key goals and objectives;
- Permit managers to identify and take action to correct weaknesses; and
- Support a development agenda that is shifting toward greater accountability.

The results-based M&E tool becomes extremely important in tracking an epidemic as dynamic as the HIV one. Both explicitly and implicitly, Nigeria has chosen to use results-based M&E for its national response, as illustrated by the measurable targets it set in its 2003 National Policy on HIV/AIDS and the Nigerian National Response Information Management System.

## PROGRAM EXAMPLES FROM NIGERIA

The words “monitoring” and “evaluation” have often been used in HIV/AIDS programming in Nigeria, but there has been little evidence to suggest that M&E data have been used to ensure program accountability and sound decision-making. By 2002, under NACA leadership and with the support of its development partners, particularly UNAIDS, Nigeria undertook the design of a national M&E framework. The process was completed in 2003, with the establishment of the Nigerian National Response Information Management System (NNRIMS) (3). This framework was designed to track performance, provide feedback to program and project management, and ensure accountability based on the HIV/AIDS Emergency Action Plan (HEAP) and more appropriately the new National HIV/AIDS Strategic Framework (4). Thus Nigeria has adopted the principle of “The Three Ones”—one multisectoral coordinating and facilitating body, one national implementation framework, and one M&E framework—as stipulated by UNAIDS (5). Nigeria’s M&E systems are thus in their formative stages; but it is imperative to note that the Nigerian multisectoral HIV control program aims to achieve at least a 25% reduction in HIV prevalence every five years (6).

The implication of that goal is that Nigeria should invest in high-impact prevention programs with targeted interventions to high-risk groups such as sex workers, long-distance truck drivers, and high-risk youths. Much can be gained by focusing on youths, for example; from the 2003 survey the highest age-specific prevalence was observed among women aged 20 to 24 years (5.6%) followed by those aged 25 to 29 years (5.4%) (7). Other dividend-yielding interventions include the policy of 100% condom use and peer education among high-risk groups, particularly young people. Such interventions are crucial, especially because each year a new cohort of young people becomes sexually active (8). They can and should be helped to remain HIV free through delay in sexual initiation, decrease in casual sex, and increased condom use (9). Purposive and aggressive programming is needed to diagnose and treat sexually transmitted infections (STIs), prevent mother-to-child transmission of HIV, provide voluntary counseling and testing, and ensure the safety of the blood supply.

Explicitly, Nigeria needs to set priorities and scale up prevention interventions. Critical to the goal of reducing the HIV prevalence rate by 25% are other determinants of incidence, especially those emanating from such structural and environmental factors as poverty, gender inequality, migration, internal displacement, and low levels of education (10). Achieving that goal will also require concerted structural shifts, such as poverty alleviation, gender equality, and a reduction in conflict situations.

It should also be noted that the increased access to antiretrovirals for people living with HIV/AIDS would likely enhance the length and quality of their lives. The implication is that the same group could

be tested at several points, and repeated counts will be interpreted as a non-reduction in the prevalence rate. Essential to reducing prevalence, however, is the prevention of new infections and the reduction of incidence rates in both high-risk groups and the general population. To achieve these goals, Nigeria must identify resource needs and be able to mobilize both human and financial resources. Past efforts at resource mobilization produced good results, but more recently Nigeria has not been able to use such funds effectively or efficiently in a timely fashion, such as with the World Bank IDA credit and the Global Fund on AIDS, Tuberculosis and Malaria; donor reluctance may have been an issue here.

Nigeria needs a functional M&E system at national and subnational levels to track implementation and provide results for measuring success. This statement does not suggest that the country had a complete vacuum before; earlier M&E systems, which were largely driven by donors’ desires to track their own activities, resulted in a proliferation of M&E indicators. Most of these indicators, however, were not harmonized and standardized for use by all stakeholders. As a result, the various M&E programs could not feed into a national M&E structure (3).

Similarly, nongovernmental organizations (NGOs) have carried out related project evaluation, which usually captures the inputs and outputs of the process rather than the outcome. Experience has shown that NGO projects are so small and fragmented that it is difficult for them to coalesce enough to enable a meaningful, measurable impact on the epidemic. The project evaluation reports are also difficult to account for at the national level. It is therefore important that NACA and other stakeholders consciously embrace the culture of accountability and learning, establish data and data management policies, and build systems of continuous documentation of the country’s HIV-related activities.

### Program Monitoring and Evaluation

Since 1991, Nigeria has carried out national HIV and syphilis sentinel surveys on a biennial basis. The surveys, based on two important biological markers, are conducted among women attending antenatal clinics in both rural and urban settings in all 36 states. Other evaluation activities based on biological markers include patients attending tuberculosis and STI clinics and high-risk populations such as sex workers, injection drug users, and military personnel. As identified in the NNRIMS, these outcome indicators are important to tracking the epidemic and its impact. Second-generation surveillance surveys—the Youth Behavioral Surveillance Survey, the National HIV/AIDS and Reproductive Health Survey, and the National Demographic and Health Survey (NDHS)—have been conducted to monitor behavior change in the general population and in high-risk groups. These surveys are critical for providing information for the outcome-level behavior indicators.

The NNRIMS identified 21 core outcome indicators, and these surveys have proved their worth by helping to verify 16 of the 21 indicators. The 2003 NDHS, for example, provided information on HIV-related knowledge, attitudes, and beliefs and high-risk sexual encounters that are listed as indicators in the NNRIMS (11). It is important to understand, of course, that there is programmatic information vital to understanding the dynamics of the epidemic that the outcome indicators cannot reveal. Such information can provide answers to observed changes in the trend of the epidemic. It has always been

difficult in the Nigerian context, for example, to find evidence-based explanations for changes in prevalence levels from the sentinel surveys. Such ambiguity could result in black-box evaluations where program planners and other stakeholders “cannot adequately describe the nature of the program that produced, or failed to produce, the outcome of interest” (12). The other types of evaluation used in Nigeria include situation and response analysis, rapid assessment, evaluation of NGO projects, and behavioral studies.

Nigeria’s demand for evaluation is increasing, yet the country’s capacity to do the process justice remains weak. No institutions have been geared toward providing training in evaluation within the country. To date, donor agencies and other international organizations have supported M&E training outside Nigeria and have acted as catalysts for incorporating M&E into NGO programs.

### The Need for a National Results-Based M&E System

The NNRIMS was designed to bridge the gaps in the country’s evaluation practices. It was “developed to monitor the implementation of HIV/AIDS prevention and control activities and evaluate the impact of the various activities” (3). It focuses on the collection, collation, analysis, dissemination, and use of information from ongoing program efforts. It is also intended to harmonize, standardize, and operationalize national indicators and to popularize their use among stakeholders.

The twenty-one core outcome indicators that the NNRIMS recognizes include five for prevalence and impact of HIV/AIDS, eleven for behavioral outcomes, and five for policies and national commitment. The output-level indicators are subdivided into twelve for knowledge/beliefs and risk perception; four for availability and quality of products and services; and four for capacity building. NNRIMS is institutionalized in NACA and its operation is being developed to also capture information from subnational levels. NACA is currently pilot testing the framework in four states and two line ministries.

The ministries of health, defense, and internal affairs (through the prisons service), as well as the Armed Forces Programme on AIDS Control, have rudimentary M&E systems that feed into the national response. Although the other line ministries have ongoing activities, they lack an M&E system.

#### Building Results-Based M&E System

The 2003 National Policy on HIV/AIDS and NNRIMS have both established indicators and targets that are inherent parts of results-based M&E (Table 23-1). Once the expected results are fully defined and consensus is reached, a number of key steps will need to be taken to establish a viable M&E system. According to Rist (2) those steps are to:

- Select key performance indicators to monitor outcomes and agree on a performance evaluation methodology;
- Establish baseline data on indicators, including collection of data and documentation of sources;
- Quantify targets;
- Prioritize objectives by assigning weights that add up to 100% and, using a scale, define targets precisely (13);

Table 23-1. Core Indicators for HIV/AIDS Monitoring and Evaluation

Impact-Level Indicators	Targets	Source	Frequency
<b>1. HIV prevalence among pregnant women</b> Percentage of blood samples taken from pregnant women aged 15 to 24 who test positive for HIV during a routine sentinel surveillance at selected ANC clinics	<b>Baseline 2003:</b> 5.0% <b>Target 2005:</b> 15% reduction <b>Target 2007:</b> 25% reduction	Serosurveillance surveys	Biennially
<b>2. Percentage of children who are AIDS orphans</b> Percentage of children under 15 in a household survey whose mother and/or father had died of AIDS	<b>Baseline 2003:</b> Not yet released <b>Target 2005</b> <b>Target 2007</b>	NARHS DHS Special surveys	Biennially
<b>3. Ratio of orphans to nonorphans who are in school</b> The ratio of orphaned children aged 10 to 14 in a household survey who are currently attending school to non-orphaned children the same age who are attending school	<b>Baseline 2003:</b> Not yet released <b>Target 2005</b> <b>Target 2007</b>	MOE reports Special surveys	Annually
<b>Outcome-Level Indicators</b>			
<b>1. Higher risk sex in the previous year</b> Percentage of respondents who have had sex with a non-marital, non-cohabiting partner in the previous 12 months of all respondents reporting sexual activity in the previous 12 months	<b>Baseline 2003</b> All respondents: 14.8 Sexually active: 18.8 Had sex in the previous 12 months: 22.8 <b>Target 2005:</b> 5% reduction <b>Target 2007:</b> 10% reduction	NARHS/BSS	Biennially
<b>2. Condom use at last higher risk sex</b> Percentage of respondents who said they used a condom the last time they had sex with a non-marital, non-cohabiting partner in the previous 12 months of all respondents reporting sex with such a partner in the previous 12 months	<b>Baseline 2003:</b> 44.7% <b>Target 2005:</b> 60% <b>Target 2007:</b> 75%	NARHS/BSS	Biennially
<b>3. Consistent condom use among commercial sex workers</b> Percentage of sex workers reporting consistent condom use in the last one week of all sex workers reporting sex with clients in the previous week	<b>Baseline 2003:</b> 57.1% <b>Target 2005:</b> 75% <b>Target 2007:</b> 90%	Sex workers surveys	Biennially
<b>4. Men and women seeking treatment for STIs</b> Percentage of men and women with STI symptoms who have been treated in a health care facility/pharmacy in the last one year and whose providers have been trained in STI care in a population-based survey of all the people who reported symptoms	<b>Baseline 2003:</b> 39.7% <b>Target 2005:</b> 45% <b>Target 2007:</b> 50%	NARHS	Biennially
<b>5. Population requesting an HIV test, receiving a test, and receiving the results</b> Percentage of people aged 15 to 49 surveyed who ever voluntarily requested an HIV test, received the test, and received their result in the previous 12 months	<b>Baseline 2003:</b> 1.1% <b>Target 2005:</b> 5% <b>Target 2007:</b> 15%	Youth BSS/NARHS	Biennially
<b>6. Pregnant women counseled and tested for HIV</b> Percentage of pregnant women at public antenatal clinics offered VCT by trained staff or referred to VCT services of all pregnant women attending antenatal clinics	<b>Baseline 2003:</b> ..... <b>Target 2005:</b> 25% <b>Target 2007:</b> 50%	Health care facility assessment FMOH reports	Biennially  Quarterly
<b>7. HIV-positive women provided with antiretroviral therapy in pregnancy</b> Percentage of women testing positive at selected antenatal clinics in the previous 12 months who have received a complete course of antiretrovirals to prevent MTCT according to national guidelines of all women who tested positive at selected clinics	<b>Baseline 2003:</b> ..... <b>Target 2005:</b> 30% <b>Target 2007:</b> 60%	FMOH reports	Quarterly
<b>Output-Level Indicator (Political Commitment)</b>			
<b>1. Spending on HIV prevention</b> This is defined as the amount of money allocated in national accounts for spending on HIV prevention and care programs per adult aged 15 to 49	<b>Baseline 2003:</b> ..... <b>Target 2005:</b> ..... <b>Target 2007:</b> .....	Special surveys (National AIDS Accounts)	Biennially

Source: Adapted from the Nigerian National Response Information System  
Abbreviations: ANC: antenatal care; BSS: Behavioral Surveillance Survey; DHS: Demographic and Health Surveys; FMOH: Federal Ministry of Health; MOE: Ministry of Education; MTCT: mother-to-child transmission of HIV; NARHS: National HIV/AIDS and Reproductive Health Survey; NDHS: National Demographic and Health Survey; STI: sexually transmitted infection; VCT: voluntary counseling and testing

- Define the mode and frequency of data collection, analysis, and reporting for each input, output, and outcome indicator as well as the instruments for analysis and reporting;
- Determine the types, timing, and levels of evaluations;
- Define how the findings will be disseminated, used in decision-making, and incorporated into the improvement performance, such as through reports to the National Assembly; and
- Establish the roles and responsibilities for carrying out the various tasks for the M&E plan for its overall coordination.

Finally, building and running the system requires a champion—a committed person at the leadership level who can monitor the system and oversee its daily operation. That person must also be able to garner the highest political support.

#### *Incentives for Better Use of Information from M&E System*

Critical to the actualization of results-based M&E is the issue of incentives (13), especially in Nigeria, where the demand for evaluation is weak. A budget allocation should be established for M&E, and funds should be released when needed. Other incentives may include: tying fund disbursements for continuing projects and programs to successful achievement of results for every level of implementation; increasing budgetary allocations for good performances; universal usage of evaluation results and information for decision-making in program implementation, budgeting, and reporting to donors, the National Assembly, and the presidency; and rewarding evaluators and program personnel for good performance.

#### **Monitoring and Evaluation of the National Response (1993–2004)**

Under the Medium-Term Plan II (MTP II), from 1993 to 1998, the M&E problem became compounded by the lack of a coordinated plan and an inadequate M&E capacity within the National AIDS and STD Control Program (NASCP). A multidisciplinary committee later undertook an evaluation of the MTP II on an ad-hoc basis; the situation and response analysis included a desk review, interviews, collection and analysis of service records, facility inspection, and surveys.

The evaluation report provided a narrative of a constellation of findings from the six geopolitical zones (14). It also looked at the outcome of some prevention interventions conducted during the period, including promotion of safer sex behavior; diagnosis and treatment of STIs; blood safety measures; reduction of HIV transmission through injections and other skin-piercing instruments; and measures to increase health care accessibility for people with HIV. Others included the establishment of voluntary counseling and testing centers, local production of condoms, and advocacy to policy makers. The report contained an appraisal of the contributions of government, development partners, professional associations, and other civil society organizations toward the implementation of the plan.

Apart from the FMOH, other sectors were adjudged to have elicited negative responses (a lack of awareness), no responses (indifference), or weak responses. In fact the health sector response was

considered weak because the government did not fund the plan and because donor participation was limited, as it occurred during an autocratic military rule, when Nigeria was under sanctions. Although NASCP was supposed to coordinate the plan, it was hindered not only by a lack of funds but also by logistical problems, poor political commitment, inadequate staffing, and a lack of full participation by the states. The report concluded among other things that the MTP II was poorly implemented; the report findings have since been used to help inform the design of HEAP.

HEAP, which covered 2001 to 2004, has not yet been evaluated. A 2004 situation and response analysis for the health sector under HEAP documented progress in program implementation (15). The health sector has initiated antiretroviral therapy, prevention of mother-to-child transmission (PMTCT), and voluntary counseling and testing at the national level. Antiretroviral therapy is now provided to more than 13,000 HIV-infected people from 25 public sector sites (16). PMTCT is provided from 11 sites and voluntary counseling and testing is provided from the PMTCT sites and numerous other sites in the private sector. Some states have started similar programs. M&E systems are being built around these programs and the data generated will feed into the national indicators for these services. The report documented the availability and quality of Nigeria's blood supply, which it considers uneven. Other running programs focus on tuberculosis and STIs. At the national level, clinical guidelines and protocols have been developed but not well disseminated. The report noted that limited training had been provided, but in the absence of widespread distribution of national guidelines, many states had developed their own.

In 2005 NACA conducted the Nigeria National HIV/AIDS Response Review (2001–2004), which identified two major challenges: a lack of gender sensitivity in the system and the failure of NNRIMS to address program evaluation (17). NNRIMS, though a good structure, is still in its early stages of implementation. NNRIMS was based on HEAP, which had a narrow focus on HIV/AIDS responses and thus needs to be reviewed in conjunction with the thematic areas in the National HIV/AIDS Strategic Framework. Among the issues identified were an inadequate baseline data, a current M&E plan not comprehensive enough to cover 2005–2009, and the gender insensitivity of NNRIMS. The major constraint to evaluation was identified as inadequate technical capacity for M&E at all levels.

With reference to meeting international commitment for evaluation, Nigeria was one of the 189 signatories to the United Nations General Assembly Special Session on HIV/AIDS (UNGASS) Declaration of Commitment. It met an important M&E commitment in 2003 by reporting on nine of the thirteen UNGASS indicators (Table 23-2) (18).

#### **The Role of Donors and International NGOs and M&E in Nigeria**

Donors and international NGOs have contributed to M&E activities in Nigeria in terms of capacity building and instituting project evaluation practices among local NGOs. Some large interventions have produced meaningful measures of success and impact on the epidemic, while others have operational dimensions that input into future program designs.

A participatory evaluation of the STD/HIV Management Project, Nigeria Phase II was conducted at the end of the project in March 2003 (19). The goal of the project, which was funded by the Department

Table 23-2. Nigeria's Response to the UNGASS Indicators

National Commitment and Action
<ul style="list-style-type: none"> <li>National Composite Policy Index: policy formulation, 65%; legal and regulatory, 86%</li> <li>Government funds spent on HIV/AIDS: US\$14.1 million*</li> </ul>
National Program and Behavior
<p><b>Prevention</b></p> <ul style="list-style-type: none"> <li>30% of schools with teachers who have been trained in life-skills-based education have taught it during the previous academic year (data from Oyo State only)</li> <li>53% of large enterprises/companies have HIV/AIDS workplace policies and programs</li> <li>0.05% of HIV-infected pregnant women received a complete course of antiretroviral prophylaxis</li> </ul> <p><b>Care/Treatment</b></p> <ul style="list-style-type: none"> <li>The percentage of patients with sexually transmitted infections at health care facilities who are appropriately diagnosed, treated, and counseled (data not available)</li> <li>1.5% of people with advanced HIV infection received antiretroviral combination therapy</li> </ul> <p><b>Knowledge/Behavior</b></p> <ul style="list-style-type: none"> <li>23% of respondents aged 15 to 24 both correctly identified ways of preventing the sexual transmission of HIV and rejected major misconceptions about HIV transmission or prevention (Target: 95% by 2010)</li> <li>45.5% of sexually active youth aged 15 to 24 reported condom use during sexual intercourse with a nonregular sexual partner</li> <li>25% of IDUs used condoms with their last sexual partners and 70% of IDUs used new needles (data from Lagos State only)</li> </ul> <p><b>Impact Alleviation</b></p> <ul style="list-style-type: none"> <li>Ratio of orphaned to non-orphaned children aged 10 to 14 years who are currently attending school: 88%</li> </ul>

Source: Adapted from Barnett T, Whiteside A. *AIDS in the Twenty-First Century: Disease and Globalization*. New York: Palgrave Macmillan, 2002.  
 Abbreviations: IDU: injection drug user; UNGASS: United Nations General Assembly on Special Session on HIV/AIDS

Reproductive Health Survey, which provides information for measuring the HIV-related behavior indicators, SFH periodically evaluates the impact on behavior change of its various media campaigns. Its Future Dreams Radio Campaign, for example, resulted in a substantial increase in condom sales immediately after the campaign began (20). Monthly sales doubled from about 5.1 million condoms in June 2000 to more than 10.7 million by June 2001. Eighty percent of those who heard the message knew that condoms provided protection against HIV infection, compared to 62% of those who did not hear the message. The behavior data also showed that 51% of respondents who heard the program used condoms correctly and consistently with non-spousal partners in the preceding two months, compared with 33% of those who did not hear the program (20).

for International Development (DFID), was “to improve access of high risk and specific vulnerable groups to quality HIV/STD/TB health and support interventions in Benue and Ogun States.” All key outputs were assessed as either largely or completely achieved, with the exception of strengthening multisectoral responses. The project was noted to have “increased the quality, access and utilization of HIV related services in project areas.” High-risk and vulnerable groups were the target population for many of the preventive and outreach activities but care users were not classified by high-risk or vulnerability. The review team felt the data were insufficient to validate the extent to which the project has improved access for high-risk and vulnerable groups defined as specifically identifiable target groups within the community, such as sex workers, commercial motorcyclists, and long-distance truck drivers.

The Society for Family Health (SFH) is one of the few organizations that has invested heavily in evaluation in Nigeria. Apart from being involved in the National HIV/AIDS and

A survey of most-at-risk communities noted significant changes as reflected in an increased level of condom use in non-marital sex, increased parent-to-child communication on sexuality issues, less resistance to condom use by sex workers' clients, and increased feelings of self-worth among young people, sex workers, and married women (21). Similar evaluation reports have included the Boy/Girlfriend TV Adverts, the Radio Drama Evaluation Using Panel Listeners' Group, and the Femi and Fati HIV Billboard Campaign.

Similarly, USAID and DFID have conducted impact-related studies that have provided valuable information about the epidemic in the educational sector and rural Benue State. These studies form a benchmark for assessing the sectors in the future and have implications for programming. The Benue Impact Studies were conducted between July 2002 and June 2003 with the goal of analyzing the current and possible future impact of HIV/AIDS on rural livelihoods in Benue State (22). Among other findings the studies revealed that:

- Stigmatization was extensive in some communities and may have caused an underreporting of chronic illnesses and AIDS-associated symptoms.
- The HIV adult prevalence rate in Benue State was approximately 13.5% in 2001.
- A demographic analysis suggested a difference in population structures between AIDS-affected and non-AIDS-affected communities.
- The rural extended family still seems able to take care of the increased numbers of AIDS orphans, as 83% of them attend school while only 7% have been forced to work to support themselves.
- The trend over the past few years suggests an increase in poverty levels.

In 2004 USAID commissioned a study titled, “Assessing Educators' Views on the Impact of HIV/AIDS on Primary Education in Nigeria: Implications for Future Programs” (23). Conducted in Nassarawa, Kano, and Lagos states, the study noted variations across the states, with Nassarawa the most affected by the epidemic. Among the study's recommendations for future programming were the following:

- Operational guidelines should be developed to enable school administrators and educational planners to address HIV-related issues—such as stigmatization and absenteeism—among teachers and children affected by HIV/AIDS.
- The ongoing dissemination of the family-life-skills and HIV/AIDS curriculum developed by the Nigerian Educational Research and Development Council and the Universal Basic Education Commission should be scaled up to reach primary schools and be implemented with capacity-building workshops on HIV/AIDS issues for primary school teachers.
- More culturally appropriate and gender-sensitive resource materials on HIV/AIDS should be distributed to primary schools.
- The dialogue with teacher training institutions should be enhanced so that training on family life skills and HIV/AIDS can be incorporated into pre-service training curricula.

Although few HIV/AIDS programs have been evaluated in Nigeria, the national response is poised for more purposeful M&E, as evidenced by the progress being made in implementing the NNRIMS and enhancing the capacities of the agencies responsible for the sentinel and behavioral surveillance surveys. We are also beginning to see evaluative studies commissioned. But successfully monitoring and evaluating the epidemic will require expansive M&E capacity building, which can be done through identifying and developing training institutions within the country and by establishing evaluation associations to promote the culture and practice of evaluation. Collaboration with external evaluation associations and agencies—particularly the UN agencies—will go a long way toward improving the current capacity.

### MEETING INTERNATIONAL OBLIGATIONS FOR M&E REPORTING

Nigeria has been a signatory to several key HIV/AIDS resolutions, including the Millennium Development Goals, adopted at the Millennium Summit in 2000, which calls for expanded efforts to halt and reverse the rate of HIV spread by 2015, and the Abuja Declaration on HIV/AIDS, Tuberculosis and Other Related Infectious Diseases in 2001, which declared regional and national commitments to confront the epidemic (24).

As noted earlier, in 2001 Nigeria became a signatory to the Declaration of Commitment on HIV/AIDS adopted by the United Nations General Assembly Special Session on HIV/AIDS, or UNGASS, which commits member states and the global community to taking strong and immediate action to address the HIV/AIDS crisis. The declaration calls for achieving a number of specific goals, such as reducing HIV prevalence among young men and women, expanding care and support, and protecting human rights.

The UNGASS declaration underscores the critical importance of compiling accurate information and disseminating it widely to all interested individuals and stakeholders. By identifying concrete, time-bound targets and requiring that efforts be undertaken to measure global success in reaching these targets, the member states envisioned that the declaration would promote greater urgency and solidarity in the campaign against the epidemic.

The member states formulated a number of indicators to measure the efforts of the various nations to reach their goals. To monitor progress toward the actualization of the targets, countries were requested to make biennial reports on their national response and the epidemic using those indicators. Countries therefore had to develop methods to ensure regularity in reporting. The first reports were prepared in 2003; subsequent reports are expected biennially.

In its 2003 report, Nigeria was able to report on only nine of the thirteen indicators (25); the lack of systems made it impossible to produce data for the other four. Efforts have since been made to establish systems that can generate the desired data for subsequent reports. (See Table 23-3.)

The NNRIMS has incorporated these indicators into its country-response information system. The system is being piloted in just a few states, however, and may not be able to generate nationally representative data to meet all the needs for the UNGASS report (4).

Table 23-3. Nigeria's Preparedness to Report on the Core Indicators in the UNGASS Declaration of Commitment

Core Indicator	2003	2005 and Beyond
1. Amount national governments spend on HIV/AIDS	Information was based on interviews with key persons; no method of validation exists	Sensitivities about the release of information will make state surveys on financial resources difficult. The tracking of funds might be limited to national expenditures rather than individual state spending in multisectoral settings.
2. National Composite Policy Index	Reported on	This should still be possible using the same format as previously undertaken.
3. Percentage of schools with teachers who have been trained in life-skills-based HIV/AIDS education and who taught it during the last academic year	Reported on by only one of the 36 states because of the lack of a documentation system	This will require funds to conduct a survey in 2005, as no monitoring system has been instituted.
4. Percentage of large enterprises with HIV/AIDS workplace policies and programs	Reported on, but information was not validated	This will require funds to conduct a survey in 2005, as no monitoring system has been instituted.
5. Percentage of patients with STIs at health care facilities who are appropriately diagnosed, treated, and counseled	Not reported on; no documentation system is in place	A health facility survey had been included in the NNRIMS but the FMOH has yet to develop a study protocol.
6. Percentage of HIV-infected pregnant women receiving a complete course of antiretroviral prophylaxis to reduce the risk of mother-to-child transmission of HIV	Reported on (the numerator was based only on those receiving care in federal government settings)	The need to include the women being treated at other public and private centers will remain a challenge.
7. Percentage of people with advanced HIV infection receiving antiretroviral combination therapy	Reported on (the numerator was based only on those receiving care in federal government settings)	The need to include patients being treated at private centers will remain a challenge until the NNRIMS is fully implemented.
8. Percentage of IDUs who have adopted behaviors that reduce HIV transmission	Reported on, based on a small sample in one of the 36 states	No plans exist for reporting on this. An IDU survey has been included in the NNRIMS but no protocol for its implementation has been developed.
9. Percentage of people aged 15 to 24 years who both correctly identify ways of preventing the sexual transmission of HIV and who reject major misconceptions about HIV transmission	Reported on	Plans exist for the FMOH to conduct regular behavior surveillance surveys.
10. Percentage of people aged 15 to 24 years reporting condom use during sexual intercourse with non-regular partners	Reported on	Plans exist for the FMOH to conduct regular behavior surveillance surveys.
11. Ratio of current school attendance among orphans to that among non-orphans aged 10 to 14 years	Reported on	Plans exist for regular NDHS to be carried out, hence this should be regularly reported.
12. Percentage of people aged 15 to 24 years who are HIV infected	Reported on	This should be possible due to the regularity with which the study is conducted.
13. Percentage of infants born to HIV-positive mothers who are infected	Not reported on	This figure may be possible using estimates, projections, and information on program coverage.

Abbreviations: FMOH: Federal Ministry of Health; IDU: injection drug user; NDHS: National Demographic and Health Survey; NNRIMS: Nigerian National Response Information Management System; UNGASS: United Nations General Assembly Special Session on HIV/AIDS

Several factors account for this inability to generate data. First, sector-level M&E systems have yet to be developed. Second, other than the health sector, most sectors are new to the national HIV/AIDS response and have yet to establish systems for conducting interventions, much less monitoring and evaluating them. The health sector can provide some information, but it is limited to indicators that the population-based behavior surveys and HIV seroprevalence surveys have generated. Indicators requiring health facility surveys and program monitoring to generate do not have robust systems in place to provide valid and reliable data.

Nigeria is making many efforts to generate data. The NNRIMS places the responsibility for measuring the indicators with the ministries relevant to the activity being measured. Some are given to the Federal Ministry of Education and the Federal Ministry of Labor and Productivity, for example, though these ministries have yet to develop mechanisms to measure these indicators.

To track progress toward achieving the Millennium Development Goals, specific goals, targets, and indicators were also set. Among the indicators developed to measure the success of this initiative were:

- the HIV prevalence rate among 15- to 24-year-old pregnant women;
- the condom use rate or contraceptive prevalence rate, particularly during the last episode of high-risk sex;
- the percentage of people aged 15 to 24 who have a comprehensive and correct knowledge of HIV/AIDS; and
- the ratio of school attendance of orphans to school attendance of non-orphans aged 10 to 14.

These indicators are expected to be collected every three to five years. Most of them are already being collected through such regular surveys as the National Demographic and Health Survey and the National HIV/AIDS and Reproductive Health Survey; the former is expected to be conducted every four years and the latter biennially.

UNAIDS developed the Country Response Information System (CRIS) to ensure that information about the epidemic could be shared on a regular basis to determine the trends of member nations. The CRIS was developed to facilitate the systematic collection, storage, analysis, retrieval, and dissemination of information on countries' responses to HIV/AIDS, thereby strengthening information systems to be able to meet the increasing needs for higher quality data and analysis as well as increasing the ability to compare situations within countries and regions. At its basic level the CRIS consists of an indicator database, a project- and resource-tracking database, a research inventory database, and the capacity to store additional important information, including surveillance and AIDS case reporting.

The NNRIMS was designed to be Nigeria's CRIS. Efforts have been made to design a computer database that can allow the easy link up with the Internet-based CRIS when fully functional. The database is still being tested for suitability, however.

Nigeria has made attempts to fulfill its reporting obligations by devising appropriate methods and mechanisms. The problem lies in the tendency to be reactive rather than proactive in designing systems to track information. The fact that little use has been made of previous findings, however, may account for the reluctance to create such systems.

Reporting on international commitments has invariably meant increased financial requirements for M&E, especially when systems are lacking. In the past, donor partners provided most such funds. While the assistance has been welcomed, it raises concerns about the sustainability and ownership of systems that are built by donors to meet the needs of international obligations, with little local access and use of the information generated.

Reports written to meet international obligations are often available on the Internet but remain inaccessible within the country. The Nigerian civil service has a code of ethics that prohibits disclosure of information without authorization. This code has many times been extended to evaluation results. This decreases the usefulness of the information to the providers and further decreases the likelihood of sustainability.

M&E reports are usually shared in stakeholders' forums before the actual submission to the international organization overseeing the commitment. After such meetings the final reports are barely accessible to the general population.

Recently several international organizations collaborated on a study on coverage of selected services for HIV/AIDS prevention, care, and support in low- and middle-income countries in 2003. Nigeria responded by checking the records of organizations working in the program areas being covered. The data were insufficient to provide information on service coverage on opportunistic infections, home-based care, family life health education, outreach services for street children, care for prisoners, men who have sex with men, injection drug users, and people receiving voluntary counseling and testing. The service coverage component of the NNRIMS is meant to address those gaps (26).

Nigeria has made significant progress in its efforts to meet its reporting obligations. Unfortunately it continues to be constrained by insufficient funds and the lack of a fully functional system to provide updated information as needed. The NNRIMS is still undergoing the pilot phase and remains constrained by the limited funds available for its implementation.

## ISSUES, GAPS, AND CHALLENGES

### Political and Popular Support for M&E

In the past, governments, political leaders, and program managers in Nigeria neither supported nor advocated for M&E activities, as they were not generally considered part of the program. This trend has begun to change, however, and M&E activities are receiving more support. As part of its coordinating function, NACA has established a functional M&E unit with a dedicated budget line and key personnel to coordinate M&E activities of the national response. This unit is expected to be strengthened for optimal performance of its ever-increasing tasks.

As mentioned earlier, in 2003 NACA reacted positively to the identified need for M&E by developing a potentially robust and well-coordinated management information system for monitoring and evaluating HIV/AIDS activities. This system, NNRIMS, focuses on the collection, collation, analysis, dissemination, and use of information from ongoing program efforts. NNRIMS also serves as the repository for

the core indicators that guide performance of the national response to be reported on by NACA. This system is still being field-tested, and the challenge remains of providing adequate human, infrastructural, and financial resources to implement and sustain this system in Nigeria.

Demand for data and M&E results is low nationally, and until recently most M&E processes were donor driven, as many program managers saw the need for reporting as important mainly to fulfill donor requirements. That perception is changing, however, now that NACA, FMOH, and project implementers have become more proactive about M&E activities.

According to a national M&E needs assessment report that NACA produced, twice as many organizations received support from international donors as from the government (27). This survey also found that only about half of the organizations surveyed had any M&E framework. Of those without such plans, a lack of funds was the most frequently cited reason.

### **The HIV/AIDS Policy Environment**

The successful implementation of the 2003 National Policy on HIV/AIDS is expected to help curb the spread of the virus in Nigeria. Specifically, Nigeria has mandated relevant institutions to collect, on a continuous basis, information on the epidemic and factors influencing the spread of HIV. This mandate will enable NACA to monitor and report annually on progress achieved in responding to identified HEAP objectives and subsequently the National HIV/AIDS Strategic Framework (6).

Although the policy is in place, it has yet to be fully operationalized and stepped down to the lower levels. For example, while the policy stipulates that institutions engaged in HIV/AIDS activities are expected to commit a minimum of 5% of their project budgets to facilitate M&E, not many organizations are actually implementing this policy. In addition, no policy direction exists on data use, including access to such national data sets as the NDHS for secondary analysis.

### **The Need to Strengthen Existing M&E Systems**

The health sector response has begun to organize its M&E system to enable it to respond to the needs of the NNRIMS, but the other sectoral responses have yet to be developed well enough to provide regular data for an effective M&E system. What all the sectors critically need, however, is to establish an effective system to operationalize this work. Relevant staff needed to manage an effective M&E system is gradually being engaged, though much remains to be done to ensure good quality and appropriate numbers of personnel at all levels. Relevant equipment like computers is in short supply, and databases have yet to be set up at most levels.

No harmonization of core indicators exists to date, and the operationalization of NNRIMS is expected to create that harmonization, so all stakeholders can report on comparable indicators. The national PMTCT program—with support from the U.S. Centers for Disease Control and Prevention, APIN, and UNICEF—has made appreciable progress in standardizing data collection mechanisms and tools, and other programs will need to make reasonable progress to standardize their M&E systems

(3). Funds must be provided by all stakeholders, however, particularly NACA and FMOH, since funding appears to be the only option toward ensuring sustainability and ownership of this process.

### **Human and Institutional Capacity**

Only in the past two decades has evaluation become fully established as a way of assessing social programs. It is now being incorporated into programming at all levels of government as well as NGOs. As a result, M&E experts are scarce globally, particularly in developing countries (18). In Nigeria, not only has the demand side been affected, but the supply side as well, as NACA and NASCP have experienced a dearth of qualified professionals in their M&E units. Although many Nigerian universities and social science departments are noted for their evaluation studies, few focus on health-related evaluations.

### **Resource Allocations for M&E**

Monitoring efforts by UNAIDS have tracked a substantial increase in resources for HIV/AIDS programs in developing countries, as well as a growing public awareness of AIDS in countries where the epidemic is now emerging as a major problem. Current resources, however, fall substantially short of the amounts needed to conduct a comprehensive campaign against HIV/AIDS (18). Until recently, M&E activities rarely received budget lines. The situation has begun to improve both in NACA and FMOH, as funds are now available from varied sources for M&E activities. Little guidance has been given, however, on how these funds should be used. A plan that specifies fund use for M&E beyond data collection is needed as part of the development of a sustainable M&E system for responding to the epidemic in Nigeria.

### **Quality and Use of M&E Outputs**

Data quality influences M&E results, so great care must be taken to ensure high-quality data. Many factors can help guarantee the quality of data collected, including the skill of personnel, the availability of equipment and necessary logistics, and adequate motivation of M&E personnel at all levels. A quality assurance system is needed to ensure the production and dissemination of quality data.

Skills of data producers, infrastructure, logistics, and systems for collecting, collating, validating, analyzing, and disseminating quality data need to be built at all levels. These efforts require significant financial resources on a sustainable basis, preferably from different sources.

Another obvious challenge to obtaining quality data is the difficulty in reporting small research or intervention efforts as they often feed only into process indicators that do not easily lead to outcomes or even outputs. There is poor follow-up to research results, and attempts are not usually made to find scientific explanations to any unusual findings. For example, it would be revealing to find answers to some unexpected observations in the sentinel surveys (28) and NDHS. This would reduce the tendency to speculate about possible reasons for such findings.

## LESSONS LEARNED

An important aspect of evaluation is that it provides opportunities for learning. M&E managers are therefore expected to always document both positive and negative lessons as important sources of information about improving program performance.

UNAID's 2003 Progress Report on the Global Response to the HIV/AIDS Epidemic (18) detailed the following lessons:

- M&E is needed at all levels and is most useful when performed in a logical sequence, from assessing data on input, process, and output; to examining behavioral and immediate outcomes; to determining disease and social effects.
- Existing indicators should measure population-based, biological, behavioral, facility-based, and program data to determine the collective effectiveness of consolidated programs. Good contextual data should supplement these measurements.
- To minimize the data collection burden and maximize limited resources, M&E activities must be well coordinated and use ongoing systems for collecting and analyzing data.
- To increase the usefulness of evaluation results, the design, planning, analysis and reporting of M&E should actively involve key stakeholders, such as district and national managers, policy makers, community members, and program participants.
- An M&E system needs at least 10% of the total program budget to function optimally.
- Gender equality and the empowerment of women are crucial in reducing the vulnerability of women and girls to HIV/AIDS. The Declaration of Commitment agreed on several targets aimed at empowering women and girls to protect themselves from HIV infection. To assess national progress toward these goals, nine indicators requested data, asking for a breakdown by gender. Unfortunately, not even one in five countries provided these disaggregated data.

## CONCLUSION

Few HIV/AIDS programs have been evaluated in Nigeria, with methodologies ranging from reviews to rapid appraisal and response monitoring. Both content and methodology gaps have hampered results-driven implementation and decision-making. Although the national response is poised for more purposeful M&E—as evidenced by progress in implementing the NNRIMS and enhancing the capacities of the agencies responsible for the sentinel and behavioral surveillance surveys—the human and institutional capacity must be developed to engage in the magnitude of efforts needed to monitor and evaluate the epidemic.

By creating NNRIMS, Nigeria has largely fulfilled its international M&E obligations, especially toward the UNGASS indicators and in compliance with UNAIDS recommendations on CRIS. Still following the UNAIDS guidelines, it has begun the pilot phase of the NNRIMS and, through the assistance of Measures Evaluation, has begun to develop a software program for gathering and collating the national data set. The progress is encouraging, but the political will to follow through will prove critical to the success of the entire process.

Although vestiges of the results-based M&E tool exist in Nigeria, systems have yet to be instituted to use the tool rigorously and to maximize the advantage of measuring performance against the targets identified both in the NNRIMS and the National Policy on HIV/AIDS. The important question here is: How do we know success when we see it? The program has failed to translate lessons learned in the field into improving program management, and no evidence suggests that such strategic information is being reflected in policy development. For example, every sentinel survey has indicated that people aged 20 to 29 years old have the highest prevalence rate, yet no meaningful interventions at scale-up levels have been directed at that age group.

The National Policy on HIV/AIDS is bland and generic, lacks a cogent policy thrust apart from its multisectoral approach, and fails to set priorities. It seems to presume that each intervention will achieve the same impact on reducing the epidemic. This presumption clearly reveals the paucity of appropriate data for making decisions on policy direction or shift.

Some painstakingly implemented policies in other countries—such as the 100%-condom-use policy among sex workers in Thailand (29) and the registration and treatment of sex workers for STIs in Senegal (30)—have produced good results. With prevalence rates ranging from 1.2% to 12%, Nigeria has multiple epidemics and must therefore prioritize its interventions, address issues of equity, expand access to programs and services, and significantly scale up its response. The country can accomplish all this by ensuring a strong policy backing and translating such policies into action. Finally, findings from evaluation and research should contribute to such policy-making and ultimately influence practice.

Specific recommendations include the following:

- **Create a demand for evaluation.** Although the demand for evaluation is on the increase through donor insistence, evaluation professionals should make concerted efforts to sensitize politicians and other policy makers to their statutory oversight functions and make it clear that evaluation can deliver more objective assessments of performance. Civil society organizations also should champion the demand for accountability.
- **Ensure supply.** While creating demand for evaluation is a continuous process, by the same token there should be expansive capacity building in M&E, including identifying and developing training institutions within the country and establishing evaluation associations to promote the culture and practice of evaluation. Collaboration with external evaluation associations and agencies, particularly the UN agencies, will go a long way toward improving the current capacity.
- **Build the systems.** Results-based M&E systems should as a matter of urgency be pushed through legislation so they become the norm. Such systems can derive and benefit from existing international standards but they should also be homegrown from the local governments to the state and federal levels. The local action committees on AIDS should develop systems that can track local indicators and feed into the information-gathering structure of the state action committees on AIDS. Data collected at the state level will also supply information to NACA's national data collection system. The guiding principles should include utility, values identification, report timeliness and dissemination, political viability, cost-effectiveness, and feasibility (31).

- **Fund the systems.** For M&E systems to survive, the UN has suggested a minimum budget of 10% of the actual program or project cost at all levels of intervention. Such funds should be disbursed as needed in a timely fashion.
- **Create incentives for sustaining the systems.** Budgetary allocations for M&E are just one kind of incentive. Other incentives should include: tying fund disbursements for continuing projects and programs to successful achievement of results for every level of implementation; increasing budgetary allocation for good performance; ensuring universal application of evaluation results for decision-making in program implementation, budgeting, and donor reporting, the National Assembly, and the presidency; and rewarding evaluators and program personnel for good performance.
- **Ensure information flow and use.** Deliberate provisions should be made to disseminate M&E results to all stakeholders. Policy makers can then apply the information to pursue evidence-based decision-making. Feedback loops will encourage data providers to continue to supply information.
- **Earmark funds for dissemination activities as well as advocacy for data use as a management tool at all levels.** The key findings from M&E activities need to be shared with those providing the data to encourage a continuous supply of necessary information to track accomplishments.
- **Ensure that research findings feed into national M&E efforts and provide additional funds for operations research.** Lessons learned from ongoing research can help improve program performance.
- **Take sociocultural factors — including economic, educational, and religious aspects — into consideration.** These factors might make local translations to answer questions raised by global indicators difficult. In developing an effective M&E system, though, it is important to take these factors into consideration, not just to fulfill a commitment to the UNGASS declaration, but also to be able to compare Nigeria's progress with that in other countries.

Nigeria must scale up its HIV/AIDS interventions massively in the next five years if it will ever be able to achieve the goal that it set for itself in the 2003 national policy and meet international obligations under the UNGASS and the Millennium Development Goals. The National HIV/AIDS Strategic Framework should set priorities and share the experiences of other African countries (32). Interventions targeted to high-risk groups such as sex workers and long-distance truck drivers should be the top priority. The second priority should be prevention of HIV transmission among young people. Sentinel surveys have found high prevalence rates among young people, who constitute more than 25% of Nigeria's population; hence investment in prevention efforts in the group will yield a high dividend. Large-scale, school-based behavior change programs and modified curricula will help significantly. Other priority areas include PMTCT, care of orphans and vulnerable children, and care and support for women and children infected and affected by HIV.

*And once we have given our system a good start, I pointed out, the process of growth will be cumulative.*

— PLATO IN *THE REPUBLIC*

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