

# A Case Study to Measure National HIV M&E System Strengthening

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*Nigeria*



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## Executive Summary

**Background:** Monitoring and evaluation (M&E) are integral and individually distinct parts of program preparation and implementation. They are critical tools for forward-looking strategic positioning, organizational learning, and sound management. Monitoring and evaluation are meant to influence decision making, including decisions to improve, reorient, or discontinue the evaluated intervention or policy; decisions about wider organizational strategies or management structures; and decisions by national and international policy makers and funding agencies.<sup>1</sup>

To a large degree, monitoring and evaluation depend on sound health information systems with reliable, timely, high-quality input and usable and available information output. National governments and subnational entities need this information to set policy, plan for needed resources, and design and implement effective, targeted programs. At the global-level, donors and partners use the information to track progress toward the goals of special initiatives in low-resource countries, such as the President's Emergency Plan for AIDS Relief (PEPFAR),<sup>2</sup> the President's Malaria Initiative,<sup>3</sup> Family Planning 2020,<sup>4</sup> and Ending Preventable Child and Maternal Deaths,<sup>5</sup> among others. The stronger a health information system is, the more available, accurate, and useful the information output is to meet the various needs. Global investment, therefore, should continue to support sustainable country-led health information systems.

Measurement of those M&E systems strengthening efforts has proven difficult from technical and political perspectives (OED 2005; Porter et al. 2012). Evaluations of the success of systems strengthening must take into account the specific sensitivities of environments where multiple donors, investors, and recipients operate when crafting findings and recommendations (Bennett et al. 2006; IOM 2013, 39). This case study of Nigeria was successful in documenting the M&E system strengthening interventions and investments from 2007–2012 because it produced evidence of how the systems have been strengthened and identified the remaining existing needs to further strengthen the M&E system.

The rapid scale-up of the national response to the HIV/AIDS epidemic in Nigeria required revision to the Nigeria National Response Information Management Systems (NNRIMS), which began in 2007. The HIV/AIDS NNRIMS Operational Plan (NOP) I, 2007–2010, was developed to guide data collection,

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<sup>1</sup> UNICEF (United Nations Children's Fund) Programme Policy and Procedures Manual: Programme Operations, UNICEF, New York, Revised May 2003, pp. 109-120.

<sup>2</sup> Since 2005, the U.S. President's Emergency Plan for AIDS Relief (PEPFAR) is the U.S. Government initiative to help save the lives of those suffering from HIV/AIDS around the world.

<sup>3</sup> Since 2005, the President's Malaria Initiative (PMI) strives to reduce the intolerable burden of malaria and help relieve poverty on the African continent.

<sup>4</sup> Family Planning 2020 (FP2020) is a global partnership that supports the rights of women and girls to decide, freely and for themselves, whether, when, and how many children they want to have.

<sup>5</sup> On June 25, 2014, the U.S. Agency for International Development (USAID) and the Governments of Ethiopia and India, in collaboration with UNICEF and the Bill & Melinda Gates Foundation, came together for a high-level forum called "Acting on the Call: Ending Preventable Child and Maternal Deaths" to celebrate progress, assess the challenges that remain, and identify the steps needed to sustain momentum in the future.

management, analysis, reporting, decision making, and program planning and implementation. The next generation of NNRIMS, NOP II, was developed to help achieve these objectives. The process that led to NOP II was initiated with an assessment that used the 12 Components M&E Systems Strengthening Tool. The 12 Components assessment led to (1) data collection tool harmonization, (2) use of a common database, PEPFAR's District Health Information Software (DHIS 2.0), (3) implementation of the routine use of the Joint Routine Data Quality Assessment (RDQA) Tool developed in 2008 by The Global Fund, Office of the Global AIDS Coordinator, PEPFAR, USAID, WHO, UNAIDS, and MEASURE Evaluation, and (4) development of a research agenda (see Section 5, Findings). In 2011, the National Agency for the Control of AIDS (NACA) produced the National HIV and AIDS Monitoring and Evaluation Plan, 2011–2016. NOP II has 70 indicators that are to be measured with data collected in NNRIMS through routine monitoring, surveys, and surveillance activities. NOP II calls for the collected data to be organized in a thematic intervention method.

**Methodology:** This case study used a mixed-methods retrospective approach. It drew information from a participatory self-assessment to determine the most significant changes experienced by stakeholders in the improvement of the HIV M&E system, key informant interviews obtained through a semi-structured questionnaire, and extraction of data from documents and routine information systems to compile selected indicators to measure M&E system performance. Nigeria was selected deliberately after a review of the 12 PEPFAR focus countries in Africa, based on donor interest and the level of U.S. Government investment in HIV strategic information over the last 5 years. Researchers made two data collection visits to Nigeria in August 2013 and January 2014. The objective of the first visit was to engage stakeholders in the case study activity. During the second visit, researchers worked with stakeholders to identify areas of improvement in the HIV M&E system and collected data through key informant interviews and in a verification workshop. Data analysis was both qualitative and quantitative.

**Most Significant Changes Identified:** The following six most significant changes were identified during the self-assessment workshop using an adapted version of the 12 Components M&E Systems Strengthening Tool:

1. Indicators are harmonized to improve reporting processes.
2. Data quality has improved as a result of training efforts and the harmonization process.
3. Data are now analyzed and used by states.
4. Surveys and surveillance are used in the development of an M&E plan and for international reporting.
5. Information systems evolved from paper-based stand-alone formats to an integrated electronic system.
6. Evaluation and research are overseen by functional ethics committees.

**Most Significant Changes Explored:** This case study of Nigeria revealed that routine health information system strengthening has been achieved through the following activities:

- **Harmonization of antiretroviral therapy, HIV testing and counseling, and prevention of mother to child transmission indicators and data collection tools.** The adaption of harmonized indicators and data collection tools by facilities and implementation partners has standardized indicator definitions and data collection and collation procedures across program areas. The harmonized indicators and tools are the standard for assessing data quality using the RDQA tool. These data are reviewed by program managers during quarterly

data validation meetings. In addition, harmonization provided the foundation for two core and subsequent M&E system strengthening efforts. The harmonized indicators cleared a way forward to adapt DHIS 2.0, which then enabled the development of monthly summary forms that map to DHIS 2.0 and the data capture interface. All these changes eased data entry and made it easier to reduce errors.

- **Updating paper-based NNRIMS to eNNRIMS and updating the DHIS.** The integration of the paper-based National Health Management Information System into the electronic Nigerian National Routine Information Monitoring System (eNNRIMS) in 2011, under the management of the Department of Planning, Research and Statistics in the Federal Ministry of Health (FMOH), enabled the capture of HIV and non-HIV data. DHIS is software that enables Nigeria to begin to move away from multiple, silo-configured information systems into a more fully integrated information system based on harmonized indicators and data collection tools. DHIS 2.0 is the first web-based database system in use for HIV in Nigeria, and it became the agreed system for NACA to use for The Global Fund and state-level reporting. DHIS 2.0 was rolled out to about 200 service delivery points and 20 states in 2010.
- **Efforts to improve data quality.** M&E monthly and quarterly meetings and State Agency for the Control of HIV/AIDS and Local Agency for the Control of HIV/AIDS forums provide a platform to capture and review submitted routine data. NACA has led the National Joint RDQA Exercise four times since 2008. The exercise identifies weaknesses and produces action plans for a multi-state national sample of service providers. Since 2011, quarterly data validation meetings are conducted at the state level by the FMOH Strategic Information unit with The Global Fund and World Bank to review implementing partners' data.
- **Use of survey and surveillance data.** FMOH coordinated the 2007 Integrated Biological and Behavioral Surveillance Study, the 2008 Antenatal Clinic Sentinel Sero-prevalence Survey, and the 2012 National HIV/AIDS and Reproductive Health Survey with support from NACA. All of these surveys have successfully captured data for impact and outcome indicators that are identified in the National M&E Plan. Survey and surveillance data are used to adjust programs, such as behavioral change communication messages in the prevention program, along with international reporting, such as the 2008 United Nations General Assembly Special Session report, 2010 Universal Access Report, and 2012 Global AIDS Response Progress Report, and for general decision making in FMOH.

**Conclusion:** Quantitative measurement of M&E system strengthening has proven challenging; however, this case study of Nigeria's efforts to strengthen its M&E systems identified and described several most significant changes. This study used interviews with stakeholders and key informants and other evidence to verify real change in routine health information system strengthening through indicator and data collection tool harmonization, development of an electronic patient record system, and improvement in data quality through the collection, collation, and reporting data cycle. The study also showed that although much has been accomplished, considerations for future M&E system strengthening assessment and implementation should account for a systems thinking approach<sup>6</sup> to strengthen a country-led M&E

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<sup>6</sup> Alliance for Health Policy and Systems Research (AHPSR) and The World Health Organization (WHO) (2009). Systems thinking for health systems strengthening. Geneva (Switzerland): WHO.

system. Future interventions also will need to collaboratively and actively identify the work of each national agency and development partner to build partnerships that use substantive, productive feedback on what is and is not working.

## Acronyms

|         |                                                                                   |
|---------|-----------------------------------------------------------------------------------|
| ANC     | Antenatal Clinic Sero-prevalence Surveillance                                     |
| CDC     | The Centers for Disease Control and Prevention                                    |
| CISHAN  | The Civil Society HIV/AIDS Network                                                |
| DHIS    | District Health Information Software                                              |
| DMRS    | Data Management and Reporting System                                              |
| DPRS    | Department of Planning, Research and Statistics in the Federal Ministry of Health |
| eNNRIMS | electronic Nigerian National Routine Information Monitoring System                |
| FACA    | Federal Capitol Territory Agency for the Control of AIDS                          |
| FASCP   | Federal Capitol Territory AIDS and STI Diseases Control Program                   |
| FCT     | Federal Capitol Territory                                                         |
| FHI     | Family Health International                                                       |
| FMOH    | Federal Ministry of Health                                                        |
| HAD     | HIV/AIDS Department                                                               |
| HEAP    | HIV/AIDS Emergency Action Plan                                                    |
| HISP    | University of Oslo-Health Information Systems Programme                           |
| IBBSS   | Integrated Biological and Behavioral Surveillance Survey                          |
| LACA    | Local Agency for the Control of HIV/AIDS                                          |
| NACA    | The National Agency for the Control of AIDS                                       |
| NARHS+  | National AIDS and Reproductive Health Survey                                      |
| NASCP   | National AIDS and Sexually Transmitted Diseases Control Program                   |
| NAWOCA  | The National Women's Coalition on AIDS                                            |
| NFACA   | The National Faith-based Advisory Committee on AIDS                               |

|         |                                                          |
|---------|----------------------------------------------------------|
| NHMIS   | National Health Management Information System            |
| NHREC   | National Health Research Ethics Committee                |
| NIBUCAA | The Nigerian Business Coalition against AIDS             |
| NNRIMS  | Nigeria National Response Information Management Systems |
| NOP     | National Operational Plan                                |
| NPHCDA  | National Primary Health Care Development Agency          |
| NSF     | National Strategic Framework                             |
| NSP     | National Strategic Plan                                  |
| NYNETHA | The National Youth Network on HIV/AIDS                   |
| RDQA    | Routine Data Quality Assessment                          |
| SACA    | State Agency for the Control of HIV/AIDS                 |
| SASCP   | State AIDS STI Control Program                           |
| SMO     | Senior Medical Officer                                   |
| SNR     | Strengthening the National Response Project (DFID)       |
| UNAIDS  | The Joint United Nations Programme on HIV/AIDS           |
| UNICEF  | United Nations Children's Fund                           |
| WHO     | The World Health Organization                            |

# I. Background

This case study is a MEASURE Evaluation project activity funded by the U.S. Agency for International Development (USAID) to document the most significant changes achieved in efforts to strengthen Nigeria's monitoring and evaluation (M&E) systems. The study explored how the sum of multiple interventions delivered by various development partners and host-country agencies has contributed to produce valid, reliable data used in planning, program management, and national and global reporting.

M&E are integral and individually distinct parts of program preparation and implementation. They are critical tools for forward-looking strategic positioning, organizational learning, and sound management. Monitoring and evaluation are meant to influence decision making, including decisions to improve, reorient, or discontinue the evaluated intervention or policy; decisions about wider organizational strategies or management structures; and decisions by national and international policy makers and funding agencies.<sup>7</sup>

To a large degree, monitoring and evaluation depend on sound health information systems with reliable, timely, high-quality input and usable and available information output. National governments and subnational entities need this information to set policy, plan for needed resources, and design and implement effective, targeted programs. At the global-level, donors and partners use the information to track progress toward the goals of special initiatives in low-resource countries, such as the President's Emergency Plan for AIDS Relief (PEPFAR),<sup>8</sup> the President's Malaria Initiative,<sup>9</sup> Family Planning 2020,<sup>10</sup> and Ending Preventable Child and Maternal Deaths,<sup>11</sup> among others. The stronger a health information system is, the more available, accurate, and useful the information output is to meet the various needs. Global investment, therefore, should continue to support sustainable country-led health information systems.

Measuring M&E systems strengthening has proven to be difficult from technical and political perspectives. The difficulties stem from a variety of deficits: baselines were not established for how nascent M&E systems were functioning before interventions; indicators—their large numbers, lack of precision during selection, and lack of operationalized definitions—have not helped to evaluate systems strengthening; and routine monitoring systems, as well as the output data they were intended to

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<sup>7</sup> UNICEF (United Nations Children's Fund) Programme Policy and Procedures Manual: Programme Operations, UNICEF, New York, Revised May 2003, pp. 109-120.

<sup>8</sup> Since 2005, the U.S. President's Emergency Plan for AIDS Relief (PEPFAR) is the U.S. Government initiative to help save the lives of those suffering from HIV/AIDS around the world.

<sup>9</sup> Since 2005, the President's Malaria Initiative (PMI) strives to reduce the intolerable burden of malaria and help relieve poverty on the African continent.

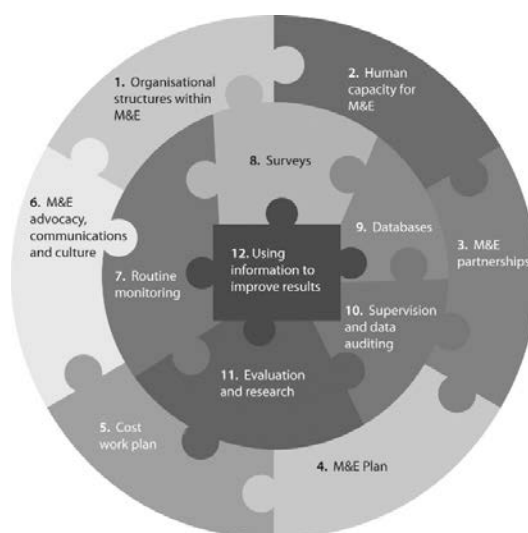
<sup>10</sup> Family Planning 2020 (FP2020) is a global partnership that supports the rights of women and girls to decide, freely and for themselves, whether, when, and how many children they want to have.

<sup>11</sup> On June 25, 2014, the U.S. Agency for International Development (USAID) and the Governments of Ethiopia and India, in collaboration with UNICEF and the Bill & Melinda Gates Foundation, came together for a high-level forum called "Acting on the Call: Ending Preventable Child and Maternal Deaths" to celebrate progress, assess the challenges that remain, and identify the steps needed to sustain momentum in the future.

produce, often were undermanaged (OED 2005; Porter et al. 2012). Evaluations of the success of systems strengthening must take into account the specific sensitivities of environments where multiple donors, investors, and recipients operate when crafting findings and recommendations (Bennett et al. 2006; IOM 2013, 39).

To organize this study and conduct the research, a U.S. study team used the *12 Components Organizing Framework*, adapted by MEASURE Evaluation from the Joint United Nations Programme on HIV/AIDS (UNAIDS) guidelines, to assess the knowledge, skills, and competencies of people tasked with M&E responsibilities in a mixed-method retrospective approach that included (1) a document review, (2) key informant interviews,<sup>12</sup> and (3) measurement of selected indicators on system performance. The study team identified appropriate indicators, and Nigerian stakeholders made the final selection. The framework's middle ring focuses on mechanisms used to collect, verify, and transform data into useful information (UNAIDS MERG 2008).<sup>13</sup>

**Figure: The 12 Components of a Functional M&E System**



Source: UNAIDS MERG, 2008

The Nigeria case study, in adherence to the Three-Ones Principles,<sup>14</sup> identified the National Agency for the Control of AIDS (NACA) as the national AIDS coordinating authority in Nigeria. The One National

<sup>12</sup> Key informants were identified during a participatory self-assessment workshop.

<sup>13</sup> The case study used these middle-ring concepts from the framework to evaluate Nigeria M&E systems strengthening efforts: Component 7, Routine Monitoring; Component 8, Surveys and Surveillance; Component 9, National and Sub-national HIV Databases; Component 10, Supportive Supervision and Data Auditing; and Component 11, HIV Evaluation and Research.

<sup>14</sup> The Three Ones Principles for concerted country-level action have been recognized by international organizations and national governments to ensure effective coordination of national responses to HIV and AIDS. The principles are (1) one agreed HIV/AIDS Action Framework for coordinating the work of all partners, (2) one National HIV/AIDS Coordinating Authority with a broad-based multi-sectoral mandate, and (3) one agreed HIV/AIDS country-level monitoring and evaluation system.

HIV M&E System is the source for the National AIDS Coordinating Authority; it is the repository for all data sources and systems that are necessary for national coordination, including the United Nations General Assembly Special Session (UNGASS) report, PEPFAR, and other international development partner reporting (UNAIDS 2004).

The case study goal was to document efforts (activities and investments) at M&E system strengthening that occurred from 2007–2012. Because any intervention in a system has an effect on the overall system (AHPSR and WHO 2009), these activities and investments influence the availability and use of HIV information. The availability and use of HIV information then can be used to produce evidence-based lessons about measuring M&E systems strengthening activities across the case study countries. The case study objectives are to (1) produce evidence of how M&E systems have been strengthened from 2007–2012 in two to three countries by the end of the first quarter of 2014 and (2) develop country-level case studies to identify M&E system progress and strengths and identify existing needs for strengthening M&E systems beginning in the third quarter of 2014.

This Nigeria case study, one of these country case studies, answers the overarching research questions: (1) How do key stakeholders perceive changes in the national-level commitment to its health information systems (a subset of the M&E system) during the course of M&E systems strengthening interventions? (2) How has the M&E system performance improved as a result of M&E systems strengthening interventions? (3) How has the capacity of individuals—and the organization’s ability to absorb and put to use that capacity—improved as a result of M&E system strengthening? and (4) To what degree does the M&E system draw its data directly from national health information systems?

## 2. The Nigerian Context

Based on donor interest and the level of U.S. Government investment in HIV/AIDS strategic information over the last 5 years, Nigeria was selected after a review of the 12 PEPFAR focus countries in Africa. Table 1 lists U.S. investments in Nigeria from 2007–2013 by USAID, the Centers for Disease Control and Prevention (CDC), Department of Defense, and the National Institutes of Health.

**Table 1: PEPFAR Funding Allocated to Nigeria for Strategic Information by Year and Agency (U.S. Dollars)**

| Agency | HVSI<br>FY2007 | HVSI<br>FY2008 | HVSI<br>FY2009 | HVSI<br>FY2010 | HVSI<br>FY2011 | HVSI<br>FY2012 | HVSI<br>FY2013 |
|--------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| USAID  | 8,546,846      | 8,288,179      | 7,830,144      | 7,519,990      | 10,182,016     | 7,565,472      | 5,100,295      |
| CDC    | 3,700,000      | 7,394,690      | 7,308,289      | 3,593,564      | 9,113,088      | 8,418,557      | 5,049,705      |
| DOD    | 250,000        | 769,000        | 593,551        | 100,000        | 205,786        | 1,300,000      | 253,926        |
| NIH    | 0              | 0              | 0              | 0              | 0              | 0              | 0              |
| Total  | 12,496,846     | 16,451,869     | 15,731,984     | 11,213,554     | 19,500,890     | 17,284,029     | 10,403,926     |

Note: HVSI = HIV/AIDS Strategic information  
Source: PEPFAR, 2013

The Nigeria case study to document M&E systems strengthening explores how the sum of multiple interventions delivered by various development partners and host-country agencies have contributed to strengthening the national HIV M&E system to produce valid, reliable data that are put to use for planning, program management, and national and international reporting.

After a U.S. study team scoping mission in August 2013 to determine technical, program, and logistical eligibility, Nigeria was deemed eligible for inclusion in the case study based on its demonstrated technical progress in HIV and AIDS M&E systems strengthening and the level of PEPFAR strategic information funding under PEPFAR I and PEPFAR II. This case study was undertaken in close collaboration with NACA through the MEASURE Evaluation country team and guidance from the USAID mission in Abuja.

The time and demands of this case study were balanced against other core and field-funded MEASURE Evaluation activities during the proposed study duration. MEASURE Evaluation, which is the USAID Global Health Bureau's primary vehicle for supporting improvements in M&E in population, health, and nutrition worldwide, is also funded by PEPFAR to work on HIV and AIDS programs and to help identify data needs, collect and analyze technically sound data, and use that data for health decision making.

## **2.1 HIV in Nigeria**

Nigeria identified its first HIV case in 1985 and reported it in 1986 (NACA 2012; NACA, PEPFAR, USAID, UNAIDS, and MEASURE Evaluation 2010; and NACA 2007). Nigeria then adopted Antenatal Clinic (ANC) Sentinel Surveillance to monitor the epidemic in 1991 (NACA 2012). The first HIV ANC Sentinel Surveillance Survey in 1991 estimated a prevalence of 1.8%, immediately identifying that Nigeria had a generalized epidemic; that is, Nigeria had a sero-prevalence greater than 1% among ANC clients.<sup>15</sup> Subsequent sentinel surveys estimated Nigeria's HIV sero-prevalence at 3.8% (1993), 4.5% (1996), 5.4% (1999), 5.8% (2001), 5.0% (2003), 4.4% (2005), 4.6% (2008) and 4.1% (2010) (NACA 2012; NACA 2011a; NACA 2011b; NACA and UNAIDS 2010; NACA 2010; and NACA 2007). The 2007 National HIV/AIDS and Reproductive Health Survey, a population-based survey, estimated Nigeria's HIV prevalence to be 3.6%, and another 2011 estimate determined a 3.7% sero-prevalence (World Bank 2011; WHO 2011; NACA 2011b).

The highest concentration of HIV is in the north central zone (7.5%); the lowest prevalence rate is in the north western zone, at 2.1%. Prevalence levels range from 1–10.6% among states, and 18 states have prevalence levels of 5% or greater; Akwalbom, Anambra, Bayelsa, and Benue states and the Federal Capital Territory (FCT) have prevalence rates greater than 8%. Prevalence in urban and rural areas vary greatly, from 2.7–18.0% in urban areas and 0.7–21.3% in rural areas (NACA 2012; NACA 2011a; and NACA 2011b).

Nigeria carries the second heaviest burden of HIV in Africa after South Africa. An estimated 3.14 million<sup>16</sup> to 3.4 million Nigerians now live with HIV, and an estimated 1.5 million people in Nigeria require antiretroviral (ARV) drugs. In 2011, an estimated 281,180 to 388,864 new infections occurred. This high incidence reflects one of the fastest growing epidemics in West Africa, and it must be viewed in context of Nigeria's large population.<sup>17</sup> By the end of 2011, a total of 217,148 AIDS-related deaths and a cumulative total of 2.1 million AIDS-related deaths were documented since the first AIDS case

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<sup>15</sup> <http://www.who.int/hiv/topics/surveillance/2ndgen/en/>.

<sup>16</sup> Federal Ministry of Health (2010) Technical Report on the 2008 National HIV/Syphilis Sero-prevalence Sentinel Survey Among Pregnant Women Attending Antenatal Clinics in Nigeria. Department of Public Health National AIDS/STI Control Programme. Abuja: Nigeria.

<sup>17</sup> HIV/AIDS in Nigeria: A USAID Brief, [http://pdf.usaid.gov/pdf\\_docs/Pnacq945.pdf](http://pdf.usaid.gov/pdf_docs/Pnacq945.pdf).

was identified in Nigeria, and the epidemic has left an estimated 2.2 million AIDS orphans (NACA 2012; NACA 2011a; NACA and UNAIDS 2010).<sup>18</sup>

The leading routes of HIV transmission in Nigeria are heterosexual intercourse, mother-to-child transmission, and transfusion of infected blood and blood products (NACA 2011b; NACA 2010). Heterosexual intercourse accounts for more than 80% of infections (NACA 2011b; NACA 2010). The remainder of infections occurs among most-at-risk populations, which include female sex workers, intravenous drug users, transportation workers, and male-to-male sex partners, youths, and uniformed service members (NACA 2011b). The key driver of the HIV epidemic in Nigeria is multiple concurrent sexual partnerships with low consistent condom use. Contributing drivers of the epidemic are intense transactional and inter-generational sex, low personal risk perception, and stubborn persistence of HIV and AIDS-related stigma and discrimination (NACA 2010). Critical social and structural drivers of the epidemic in Nigeria include low literacy, chronic and debilitating poverty, poor health-seeking behavior of most Nigerians in the context of inadequate access to and poor quality of healthcare services, ineffective and inefficient services for sexually transmitted infections (STIs), and entrenched gender inequalities and inequities resulting in the low status of women in society (NACA 2010; NACA 2007).

The HIV/AIDS burden falls disproportionately on women ages 15 and up, a group that accounts for 58.6% of the total population of people living with HIV/AIDS. Among youths ages 15–24, women have almost three times more burden than males have, with 2.9% and 1.1% prevalence levels, respectively (World Bank 2011). The most-at-risk populations for HIV infection include female sex workers, intravenous drug users, men who have sex with men, long-distance drivers, young people, and members of the uniformed services, contributing an estimated 38% of new infections (NACA 2010). Table 2 shows the epidemiology of HIV in Nigeria.

**Table 2: HIV Epidemiology in Nigeria**

|                                         | 2008        | 2012        |
|-----------------------------------------|-------------|-------------|
| <b>National Median HIV Prevalence</b>   | <b>4.6%</b> | <b>4.1%</b> |
| Estimated Number of PLWHIV              | 2,980,000   | 3,459,363   |
| Annual AIDS Death                       | 192,000     | 217,148     |
| Number requiring Antiretroviral Therapy | 857,455     | 1,449,166   |
| New HIV Infections                      | 336,379     | 388,864     |
| Total Number of AIDS Orphans            | 2,175,760   | 2,193,745   |

Source: NACA, 2012: 11.

Note: PLWHIV = People living with HIV.

## 2.2 Overview of the National HIV M&E System

Nigeria is a federal system, with the national HIV M&E system's activities devolved to the state level but managed and coordinated through NACA and the Federal Ministry of Health (FMOH). Data are collected from service delivery points, collated at the state level, and then state-level data are collated at

<sup>18</sup> Federal Ministry of Health. (2011). ANC 2010 Survey Report, HIV estimates and projection in NOP II, page 18.

the national level. The HIV/AIDS Division, formerly National AIDS and STI Control Programme (NASCP), gathers and reports data to the international community.

Before 2002, monitoring of the HIV epidemic was conducted through HIV sentinel surveys among pregnant women that accessed antenatal services in hospitals and clinics, according to the World Health Organization (WHO) standards. In 2002, an initiative was launched to develop a robust, standardized, and unified M&E framework, which resulted in the Nigeria National Response Information Management System (NNRIMS) framework that was to guide HIV/AIDS Emergency Action Plan to monitor and evaluate its interventions (NACA 2012; NACA and UNAIDS 2010; and NACA 2007).

NACA<sup>19</sup> was established in 2000 to coordinate the national response to HIV through behavior change communications; prevention and treatment; care and support of people living with HIV; services for orphans and vulnerable children (OVC); policy, advocacy, human rights, and legal issues; the enhancement of institutional organization and resource mobilization; and M&E systems (NACA 2010).

NACA coordinates M&E activities at the national level, overseeing the multi-sectoral national HIV response according to the National Strategic Plan 2010–2015 (NSP). National M&E meetings are held twice a year. State Agencies for the Control of AIDS (SACAs) hold quarterly coordination meetings with implementing partners to harmonize and analyze the data collected and address arising challenges (NACA and UNAIDS 2010).

Through SACAs and international partners, NACA implements various response mechanisms to address the challenges that HIV/AIDS impose on Nigeria's people and economic development (NACA 2011b). NACA, the main coordinating agency for the HIV response, coordinates the national response through umbrella organizations: Civil Society HIV/AIDS Network, National Faith-based Advisory Committee on AIDS, National Women's Coalition on AIDS, Nigerian Business Coalition against AIDS, and National Youth Network on HIV/AIDS (NACA 2012).

NACA works with a host of international partners.<sup>20</sup> Major donors are PEPFAR (USAID and CDC) and The Global Fund. PEPFAR provides annual funding to Nigeria for HIV/AIDS prevention, treatment, care and support: USD \$448 million in 2008,<sup>21</sup> USD \$456 million in 2010, USD \$488 million in 2011, and USD \$478 million in 2012 (NACA 2012, page 36; PEPFAR 2010; PEPFAR 2011; and PEPFAR 2012). This was the third highest amount out of PEPFAR's allocations to all 15 countries (NACA 2012, page 36). By the end of 2008, The Global Fund had disbursed USD \$95 million in funds to expand treatment and prevention of mother-to-child transmission (PMTCT) programs in Nigeria. The World Bank provides

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<sup>19</sup> The resource section of the National Agency for the Control of AIDS hosts on its website more than 100 policy and strategic HIV-related documents (NACA.gov.ng 2013) that are easily accessible and well organized into seven subcategories.

<sup>20</sup> The following institutions have earmarked resources for HIV/AIDS activities in Nigeria from 2005–2009: Federal Government of Nigeria; ActionAid International Nigeria; AIDS Prevention Initiative in Nigeria; Chevron/Elf; Canadian International Development Organization, United Kingdom Department of International Development, Strengthening Nigeria's Response to HIV/AIDS Program; Support to the International Partnership against AIDS in Africa; ECOBank; Japanese International Cooperation Agency; Julius Berger; MTN Foundation; Joint United Nations Program on AIDS; United Nations Educational, Scientific, and Cultural Organization; The Women's Fund at the United Nations; United Nations Children's Fund; United Nations Population Fund; United Nations Development Program; United States Agency for International Development; United States Department of Labor; and The World Bank.

<sup>21</sup> <http://www.pepfar.gov/countries/c19428.htm>

key technical and financial support to NACA. In 2002, the World Bank loaned USD \$90.3 million to Nigeria to support the 5-year HIV/AIDS Program Development Project. In May 2007, the World Bank further allocated a USD \$50-million loan for the program. WHO provides critical technical support to FMOH, and UNAIDS provides technical support primarily to NACA. The UN Family has provided technical assistance to the federal and state governments to develop and implement proposals and strategies (HIV among women and girls, gender) and to accelerate the scale-up of programs to track progress in PMTCT of HIV. NACA acknowledges an overdependence on donor support; in 2008, only 7.6% of total funding for HIV/AIDS came from the country's public sector. The country has strengthened its commitments to funding the national response to the epidemic, and in 2010 the proportion of funding for HIV/AIDS rose dramatically to 45.5% of total funding from all sources (USD \$286,658,813) (NACA 2012, page 36).

### **2.3 Nigeria National Response Information Management System**

In 2004, NNRIMS became the mechanism to monitor and evaluate the national response to the HIV epidemic, with the intention that it would provide a robust, standardized, and unified M&E framework. The adoption of the Three Ones Principles provided additional push for NNRIMS, which tracks the national response through output-level indicator data collected and collated from a selection of service delivery points using standard and harmonized tools. At the same time, NACA initiated the formation of the National M & E Technical Working Group to backstop the gap in technical capacities in HIV M&E (NACA 2012; NACA and UNAIDS 2010; and NACA 2007).

The rapid scale-up of the national response required revision to NNRIMS, which began in 2007. The revision was intended to produce an adequately budgeted operational plan for resource mobilization and M&E. The HIV/AIDS NNRIMS Operational Plan (NOP) I, 2007–2010 was developed to guide data collection, management, analysis, reporting, decision making, and program planning and implementation. NOP I initiated the harmonization process of M & E tools. The NOP 2007–2010 led to the development of harmonized and standardized data tools and collection systems. Data collected by NNRIMS are for global and national level indicators (NACA and UNAIDS 2010; NACA 2007).

NACA and development partners conducted wide-scale training of M&E officers on NNRIMS. All 36 states and the FCT have been trained in the use of NNRIMS, and this training has been stepped down from state level to service delivery points. Since 2007, over 846 state-level, local government areas (LGAs), and nongovernment organizations (NGOs) and community-based organizations (CBOs) M&E officers have been trained (NACA 2012; NACA and UNAIDS 2010). According to interviewed key informants, such trainings have not happened since roughly 2010. Application of knowledge acquired during trainings has not been possible because multiple resource constraints have limited state AIDS program buy-in and use of NNRIMS. Additional restraints derive from duplication of efforts, non-adherence to national tools, and parallel reporting systems that were mostly donor driven and not responsive to NNRIMS (NACA 2012; NACA and UNAIDS 2010).

The National Strategic Framework (NSF) on HIV and AIDS expired at the end of 2009. In anticipation for the next version of the NSF, NACA reviewed the national AIDS policy before the review of the multi-sectorial NSF on HIV and AIDS. NACA identified two M&E objectives as part of the NSF review process: (1) to strengthen national capacity for M&E to ensure that the national HIV M&E plan is fully implemented and (2) to build national capacity for research, knowledge sharing, and the acquisition and

use of new HIV and AIDS technologies. The next generation of NNRIMS, NOP II, was developed to help achieve these objectives. The process that led to NOP II was initiated with an assessment of the national HIV M&E status, which was to identify strengths and weaknesses in the systems, as well as identify critical action points and recommendations, using the 12 Components M&E Systems Strengthening Tool,<sup>22</sup> which was supported by MEASURE Evaluation, UNAIDS, USAID, and CDC. The application of the 12 Components assessment had these intended uses:

- Revise NNRIMS to align with the National Strategic Framework II.
- Develop a multi-year, multi-partner, multi-sector, costed M&E workplan to define specific interventions and actions that address current gaps in the system, identify the roles and responsibilities of each stakeholder, and make funding commitments for the activities and resource mobilization plan with agreed timelines.
- Develop a research and evaluation agenda.
- Develop a capacity-building plan to bring NNRIMS II into operation.
- Develop in-country capacity to conduct state-specific HIV M&E assessments using the 12 Components M&E Systems Strengthening Tool (NACA, PEPFAR, USAID, UNAIDS, MEASURE Evaluation 2010, page 5).

The key findings of the 12 Components assessment identified five core areas of the one national HIV M&E system that needed strengthening. The harmonization of M&E systems, especially indicators, data collection, and reporting tools and templates, was identified as poor across partners and service delivery areas, thus leading to vertical reporting systems and burdening data collection at lower levels. Evidence indicated that human resource development is taking place, but the major gaps pointed to the quantity of qualified staff. Data use, although evident at the NACA and NASCP levels, is still very weak among the other five out of seven sectors assessed. The relevancy of data collection, collation, analysis, and information creation loses its value because data are not being used at all levels. Key tools for M&E system harmonization, coordination, and funding (i.e., research and evaluation agenda, technical assistance, capacities strengthening plan, and resource mobilization plan) are lacking. The third principle of the Three Ones needed strengthening by clarifying roles and responsibilities of all players in the national HIV M&E system to reduce tension and friction among stakeholders; this strengthening should increase harmonization in the M&E system (NACA, PEPFAR, USAID, UNAIDS, MEASURE Evaluation, 2010, p. v).

The 12 Components assessment led to (1) harmonization of indicators and data collection and reporting tools; (2) a common database, DHIS 2.0; (3) implementation and routine use of the Joint Routine Data Quality Assessment (RDQA) tool; and (4) development of a research agenda (see Section 5).

In 2011, NACA produced the National HIV and AIDS Monitoring and Evaluation Plan, 2011–2016 (NACA, 2011a), which is directly linked to the National Strategic Plan 2010–2015 and the NSF. NACA produced the plan in collaboration with the Ministry of Education, Ministry of Women Affairs and Social Development, and the HIV/AIDS Division of the FMOH, with technical and financial assistance from UNAIDS, USAID through MEASURE Evaluation, and The Global Fund. This plan describes how the

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<sup>22</sup>[http://www.unaids.org/en/media/unaids/contentassets/documents/document/2010/2\\_MERG\\_Strengthening\\_Tool\\_12\\_Components\\_ME\\_System.pdf](http://www.unaids.org/en/media/unaids/contentassets/documents/document/2010/2_MERG_Strengthening_Tool_12_Components_ME_System.pdf).

national HIV M&E system, NNRIMS, needs to be implemented. Development of the plan included a data needs assessment that consulted implementing partners, government agencies, and bilateral and multi-lateral agencies to establish priorities and develop the roles of implementing partners in program implementation and M&E. The assessment identified indicators that are relevant to the global, national, and subnational data needs (see Table 3).

**Table 3: Number of Indicators by Programmatic Area and Level**

| <b>Programmatic Area</b>                                                | <b>Number of Impact Indicators</b> | <b>Number of Outcome Indicators</b> | <b>Number of Output Indicators</b> | <b>Total Number of Indicators</b> |
|-------------------------------------------------------------------------|------------------------------------|-------------------------------------|------------------------------------|-----------------------------------|
| PM                                                                      | 1                                  | 0                                   | 6                                  | 7                                 |
| Infection Control Management                                            | 0                                  | 0                                   | 1                                  | 1                                 |
| Human Resources for Health                                              | 0                                  | 0                                   | 1                                  | 1                                 |
| Treatment                                                               | 0                                  | 1                                   | 4                                  | 5                                 |
| Lab (System Strengthening)                                              | 0                                  | 0                                   | 3                                  | 3                                 |
| Health System Leadership and Governance                                 | 0                                  | 0                                   | 2                                  | 2                                 |
| Health System Strengthening, Health Financing                           | 0                                  | 0                                   | 2                                  | 2                                 |
| Health System Strengthening, Medical Products, Vaccines, and Technology | 0                                  | 0                                   | 1                                  | 1                                 |
| Health System Strengthening, Service Delivery                           | 0                                  | 0                                   | 1                                  | 1                                 |
| HIV Counseling and Testing                                              | 2                                  | 0                                   | 6                                  | 8                                 |
| Orphans and Vulnerable Children                                         | 1                                  | 1                                   | 3                                  | 5                                 |
| TB/HIV                                                                  | 0                                  | 0                                   | 5                                  | 5                                 |
| Sexual Behavior Change                                                  | 1                                  | 11                                  | 7                                  | 19                                |
| Workplace                                                               | 0                                  | 2                                   | 0                                  | 2                                 |
| Injection Safety                                                        | 0                                  | 1                                   | 0                                  | 1                                 |
| Bloody Safety                                                           | 0                                  | 1                                   | 0                                  | 1                                 |
| Care and Support                                                        | 0                                  | 0                                   | 4                                  | 4                                 |
| Gender                                                                  | 0                                  | 0                                   | 1                                  | 1                                 |
| Other (Special Study)                                                   | 0                                  | 1                                   | 0                                  | 1                                 |
| <b>TOTAL</b>                                                            | <b>5</b>                           | <b>18</b>                           | <b>47</b>                          | <b>70</b>                         |

Data are collected through routine monitoring, surveys, and surveillance activities. As outlined in NOP II, the data collected are organized in a thematic intervention method. Data typically flow upward from the service providers that offer one or more of the services listed in Table 3 to NACA, and then the data are shared with reporting partners and made available by NACA for globally reported indicators.

Data in the electronic Nigerian National Routine Information Monitoring System (eNNRIMS) flow to three agencies at the national level: (1) NACA (health and non-health sector data); (2) NASCP in FMOH (health sector data); and (3) Department of Planning, Research and Statistics (DRPS) in FMOH (health

sector data). Table 4 outlines relationships in the eNNRIMS structure by health-sector and non-health sector data.

**Table 4: eNNRIMS Structure**

| <b>Level</b>                     | <b>Health and Non-Health Sector Data</b>        | <b>Health Sector Data</b>                                                                           |                                                                                                  |
|----------------------------------|-------------------------------------------------|-----------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| National                         | NACA                                            | NASCP (FMOH)                                                                                        | DPRS <sup>23</sup> (FMOH)                                                                        |
| State                            | SACA                                            | SASCPs                                                                                              | State MOH (DPRS)                                                                                 |
| LGA                              | LACA                                            | Local AIDS STI Control Program in some states and local government and health departments in others | LGA M&E                                                                                          |
| Data Sources:                    | Health facilities and CBOs                      | PEPFAR implementing partners (IPs)                                                                  | Facilities                                                                                       |
| Technical Assistance and Funding | World Bank, MEASURE Evaluation, The Global Fund | All PEPFAR USG IPs                                                                                  | U.S. Government implementing partners TSHIP, GF, UN Family, DFID Projects (PATHS 2, PRINN-IMNCH) |
| Data Systems                     | DHIS 2.0; e-NNRIMS                              | Health Sector Database                                                                              | NHMIS DHIS                                                                                       |

In reality, data flow is complex; it depends on the database, type of data, and development partner, such as PEPFAR or The Global Fund. Figure 1 illustrates the NACA-managed data flow through DHS 2.0 for international reporting.

Both eNNRIMS and the National Health Management Information System (NHMIS) use District Health Information Software (DHIS) 2.0. Health data are collected at tier 1 health facilities and from community service organizations (CSOs) and then submitted to LGAs on paper summary sheets. LGAs collate these summary sheets by entering the data in DHIS 2.0 and sending reports to the state level. At the state level, LGA data are collated and then transmitted to NACA in a report, where the final collation occurs. The state also transmits data to NASCP. Both NACA and NASCP produce reports that are submitted to development partners. The process is the same at tiers 2 and 3 health facilities, except that those facilities submit monthly summary data electronically to LGAs through DHIS 2.0. DHIS 2.0I is a database used for data entry and production of pivot tables.

<sup>23</sup> Department of Planning, Research and Statistics in the Federal Ministry of Health.

**Global level: MDG, UNGASS, Partners**

**OTHER FEDERAL SECTOR (FME, FMWASD, etc)** ↔ **NACA** ↔ **FMoH/NASCP**

**OTHER STATE SECTORS (SMWASD, SME, etc)** ↔ **SACA** ↔ **SMoH/SASCP**

**LGA M&E officer**

**National/Periodic OVC Summary forms, FLHE and other community interventions**

**Public or private (FBOs, NGOs, etc)**

**National Monthly Summary form (NMSF) for HCT, ART, PMTCT**

**Public or private (FBOs and NGOs), SDPs, primary, secondary and tertiary hospital hospitals**

**Data flow ↑**      **Feedback flow ↓**

For NHMIS, health data are collected at tier 1 health facilities and submitted to LGAs on paper summary sheets. The LGAs collate these summary sheets by entering the data in DHIS 2.0 developed for NHMIS, and then the LGAs send the information electronically to the state level. At the state level, LGA data are collated and then transmitted to DPRS. Data from tier 2 facilities are managed from the state level. Data are collected on paper forms that are sent to the state for review and collation. Tier 3 facilities are managed from the federal level, where data are collected on paper-based forms, reviewed, and collated.

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information collected is intended for use at LGA, state, and national levels to plan strategies and activities to improve various HIV/AIDS programs. NACA is responsible for collating information on the core indicators of the multi-sectorial national response on HIV/AIDS. The data flow for other non-health sector indicators coordinated by Federal Ministry of Education and Federal Ministry of Women's Affairs and Social Development follow a similar structure (NACA 2011, pages 55–56).

At the same time, HIV/AIDS thematic areas, such as antiretroviral therapy (ART), PMTCT, and HIV testing and counseling (HCT), are housed in a management information system (MIS) in FMOH that collects the following data that is fed into NNRIMS (NACA and The Global Fund 2011):

- **ARV:** The Patient Management and Monitoring tools, under the Patient Management and Monitoring System, developed by FMOH, collect key patient statistics daily. The data are aggregated into a form and sent monthly to the state MOH, and quarterly to the Strategic Knowledge Management Directorate of NACA and Strategic Information Division of NASCP, FMOH.
- **HCT:** Data are collected from counseling and testing sites through the HCT MIS, which includes a client intake form and three different registers.
- **PMTCT:** Data are collected in six registers and summary forms. The information is stored in a computerized MIS maintained by FMOH. The forms are provided by the PMTCT sites to the FMOH monthly.
- **PEPFAR:** PEPFAR implementing partners submit collected data to LGAs on paper summary sheets. The LGAs collate these summary sheets by entering the data in DHIS 2.0 and sending the electronic reports to the state level. At the state level, LGA data are collated and then electronically transmitted to NACA and NASCP. PEPFAR implementing partners also submit data directly to the country PEPFAR office. The intention was that by January 2014, the PEPFAR DHIS 2.0 reporting system would have been fully integrated with NACA's DHIS 2.0. At the time of data collection for this case study, this had not yet been initiated.
- **Global Fund:** The Global Fund manages data primarily through DPRS (NHMIS). Health data are collected at tier I health facilities and from CSOs, and then submitted to LGAs on paper summary sheets. The LGA collates these summary sheets by entering the data in DHIS 2.0 and sending them to the state level. At the state level, LGA data are collated and then transmitted to DPRS, where the final collation is conducted. From DPRS, reports are submitted to NACA; the Country-Coordinating Mechanism Principal Recipient for Treatment; Society for Family Health, the Principal Recipient for Prevention; and Association for Reproductive and Family Health, the Principal Recipient for TB.

### 3. Methodology

The methodology for this case study has a number of advantages, particularly for an empirical, in-depth inquiry that investigates a contemporary phenomenon in its real-world context with multiple partners investing in one HIV M&E system. The focus of this type of inquiry can expand, narrow, and shift as information saturation and convergence are reached and as new relationships and factors emerge (LaFond et al. 2012).

This case study used a mixed-method retrospective approach that included (1) a document review, (2) a participatory self-assessment (3) key informant interviews,<sup>24</sup> and (4) measurement of HIV M&E system performance through the use of selected outcome-level indicators.

### **3.1 Literature Review**

In preparation for the case study, a literature review was conducted to identify and summarize information from peer-reviewed journal articles published after 2001 that included evidence of improvements in M&E systems in the health sector of low-income countries and methods applied to assess or monitor change in M&E systems. Reviewers also compiled and summarized technical tools and guidance on assessing and measuring system strengthening.

Among the 629 independent articles originally identified, 103 met additional selection criteria after two rounds of review. Among the 103 articles were six examples of evidence for M&E system strengthening where both pre- and post-data were used to evaluate changes in M&E system performance as a result of a specific activity or intervention. Another 17 peer-reviewed journal articles explained various methods for assessing specific components or M&E system strengthening activities. Based on the findings, reviewers identified clear gaps in the evidence base. These included the need for more evidence of system-wide improvements in M&E performance and objective, measurable outcome-level evidence that addresses system components.

### **3.2 Participatory Self-Assessment**

A study team comprising U.S.-based and Nigerian-based MEASURE Evaluation staff made two data collection visits to Nigeria in August and November 2013. The study teams comprised U.S.-based and Nigerian MEASURE Evaluation staff.

On the first visit, the team identified areas of improvement in the HIV M&E system through a participatory self-assessment workshop with 30 high-level stakeholders who were selected in consultation with the MEASURE Evaluation country team, including the Nigeria case study's co-principal investigators, based on their knowledge and experience in working with the M&E system. The stakeholders represented host-country agencies, including line ministries; the UN Family; PEPFAR implementing partners; and civil society (see Appendix 1: List of Participatory Self-Assessment Participants). The workshop used the *Most Significant Change Methodology*, which elicits group prioritization through a participatory self-assessment (Davies and Dart 2005). The self-assessment used the 12 Components Monitoring and Evaluation Systems Strengthening tool, adapted by MEASURE Evaluation from the UNAIDS guidelines, to assess the knowledge, skills, and competencies of people tasked with M&E responsibilities (UNAIDS MERG 2010). The adapted tool helps identify the most-significant changes in the middle-ring components of the national HIV M&E system from 2007–2012: Component 7, routine monitoring; Component 8, surveys and surveillance; Component 9, databases; Component 10, supportive supervision and data auditing; and Component 11, research and evaluation. (See Appendix 2, The 12 Components Monitoring and Evaluation Systems Strengthening Tool Adapted for the Case Study.)

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<sup>24</sup> Key informants were identified through a participatory self-assessment workshop.

The participatory self-assessment workshop followed a three-step process. First, participants self-selected into a group that responded to questions related to one of the middle-ring components. Next, each group used the adapted tool to guide discussion, agree on a response, and then provide an evidence source (key informants, existing datasets, reports produced, and acknowledgements from line ministries and development partners on the success of an HIV M&E-related activity, set of activities, and deliverables) for each response and relevant indicators. Finally, groups reported to the plenary and verified each other's findings. The case study engaged stakeholders by asking them to identify the most significant changes during the workshop, which is why groups were asked to provide detailed responses only to questions answered "Yes, Completely" and "Yes, Mostly."

Engaging stakeholders to identify the most significant changes that resulted from M&E systems strengthening interventions raised interest at the start of the case study, defined the domains of change, and collected stakeholder experiences and opinions. The outputs of self-assessment guided adaption of the key informant interview guide, identified documents to be gathered, clarified the list of quantitative indicators, and identified sources for evidence, such as supporting documents and available M&E system performance data.

### **3.3 Key Informant Interviews**

The study team then conducted 18 key informant interviews with host-country agencies, including line ministries, regional and district health officers, PEPFAR implementing partners, and the UN Family. (See Appendix 3, List of Key Informants.) Interviews were conducted using a semi-structured guide (see Appendix 4, Key Informant Interview Guide). Each interview was administered by an interviewer, an observer, and a note-taker. All interviews were recorded. The purpose of these interviews was to obtain additional details and the perspective of the interviewee on the most significant changes that were identified.

At the end of the data collection and key informant interviews, the study team conducted a verification workshop for review of initial findings by self-assessment participants, key informants, and other stakeholders. (See Appendix 5, List of Verification Workshop Participants.)

### **3.4 Secondary Analysis to Determine M&E System Strengthening Outcomes**

To address the gap of objective quantitative outcome-level data on M&E system strengthening, the team reviewed existing indicators from global resources related to measuring M&E system performance to identify outcome-level indicators that could be used to demonstrate performance improvement through the secondary analysis of data sources that should already be available in a functional HIV M&E system. After the indicators were selected, the definitions were reviewed and revised as needed, and instructions for calculation and analysis were developed. During the participatory self-assessment, participants reviewed these indicators and agreed that they would be good measures to demonstrate outcome-level change in the M&E system. The complete list of indicators supported each of the middle-ring components and responded to the case study research questions. In the case of Nigeria, stakeholders identified two performance indicators in addition to the existing 19. (See Appendix 6: List of Indicators, Nigeria.)

The overall data collection process for this case study brought together the experiences of individuals and institutions to increase the understanding around success and lessons learned, as well as to inform

future decisions on how to diffuse and scale-up effective strategies for M&E systems strengthening. At the end of data collection, a verification workshop with the self-assessment participants, key informants, and other stakeholders reviewed the initial findings. (See Appendix 5, List of Verification Workshop Participants.)

### **3.5 Data Analysis**

Data analysis was qualitative and quantitative. Qualitative data analysis involved researchers coding interview transcripts according to key themes, classifying the data, and then reviewing and summarizing the interview findings. Data analysis to identify and explore how multiple interventions led to success in M&E systems strengthening was addressed by reviewing interview notes, team discussions, and a cross-reference of interview data with collected quantitative data.

## **4. Most Significant Changes Identified During Self-Assessment Workshop**

The Self-Assessment Workshop identified six most significant changes. The Nigeria case study results discussed in this section are organized according to the most significant changes identified.<sup>25</sup>

**Indicators are harmonized to improve reporting processes (Component 7).** Three to five years ago data were aggregated at the central (national) level and then collected from partners, such as PEPFAR, and aggregated with national data to report on output-level global indicators, such as the number of people enrolled on ART. These data were of poor quality because of transcription errors, double counting, and a lack of standardized definitions. Analysis and use at sub-national levels were limited. In response to this situation, indicators, and data collection tools were harmonized among partners, such as the U.S. Government, the United Nations, and Nigerian universities from 2010–2012 to make it possible for Nigeria to report nationally. The process started with UNGASS, Universal Access, and Millennium Development Goals indicators, which were reviewed and mapped to what was relevant to managing the Nigerian national HIV program. Next, data collection tools and data elements were harmonized, which in turn led to the development of the national register forms for pre-ART, ART, PMTCT, and HCT, including monthly summary forms for use at the state level. During this harmonization process, the HIV M&E Technical Working Group (TWG) also was strengthened. These national, harmonized tools are in the process of dissemination.

**Data quality has improved as a result of training efforts and the harmonization process (Components 7 and 10).** According to the self-assessment workshop participants, data are now from 80–90% complete, as defined by the proportion of states that report on time. In addition, data previously were submitted with incomplete forms that were aggregated without follow up to complete the blanks with the sites that submitted them. Now all monthly summary forms are reviewed and not collated until problems, such as blanks and obvious arithmetic errors, are addressed. PEPFAR's implementing partners are now mandated to share their reports with state authorities and Global Fund

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<sup>25</sup> A timeline of key achievements appears in Appendix 7.

implementing partners that report directly to NACA, the Principal Recipient in Nigeria, further increasing data completeness. NOP II provides a reference of the same operational definitions of program output-level indicators as the National HIV M&E Plan, and they are used systematically by all groups that deliver services. A National Joint Data Quality Assessment Exercise is conducted biannually in collaboration with FMOH and NACA implementing partners. States are required to implement the RDQA tool quarterly. This is a tool that was developed in 2008 by The Global Fund, Office of the Global AIDS Coordinator, PEPFAR, USAID, WHO, UNAIDS, and MEASURE Evaluation. Data auditing results have been recorded and feedback provided to entities whose data were audited. Further, a mechanism for a biannual data quality assessment at state and national levels is in place to reconcile discrepancies in reports and provide systematic feedback.

**States now analyze and use data (Components 7, 8, and 11).** Overseen by State Action Committees (SACs), this most significant change in the national HIV M&E system is a result of training and harmonization of tools among partners. Data managers at the peripheral level have been the focus of capacity development efforts, which has led to the emergence of an M&E culture. Trainings have been targeted short-term and dedicated to specific tasks: (1) national-level data quality assurance trainings for PEPFAR implementing partners' M&E officers, who then engage the state level during data quality audits and (2) M&E officer training that provides basic knowledge in M&E and basic collection and collation skills. A curriculum is also under development for health records officers that will be a pre-service training implemented through schools of public health.

**Surveys and surveillance are used in the development of an M&E plan and for international reporting (Component 8).** Biological surveillance—Integrated Behavioral and Biological Sentinel Survey (IBBSS) and ANC—are conducted every 2 years. National surveys or surveillance with a behavioral component in the general population—National AIDS and Reproductive Health Survey (NARHS+), Demographic and Health Surveys (DHS), and Multiple Indicator Cluster Surveys—are conducted every 2–3 years. Second-generation surveillance<sup>26</sup> (secondary analysis of existing biological and behavioral surveillance data and program monitoring data) was undertaken in 2010 through data triangulation, epidemiologic appraisal in 2012, and currently in epidemiology and policy analysis. NACA's HIV National Resource Center and FMOH's website act as the inventory of HIV-related surveys conducted in Nigeria and updated regularly. Biological surveillance, national surveys or surveillance with a biological component, national-level workplace surveys, national-level school-based surveys, and health facility surveys are conducted in Nigeria every 2 years according to a schedule that is outlined in (a) the HIV-related survey inventory and (b) the National HIV M&E Plan. The National Health Research Ethics Committee (NHREC) in FMOH, the NACA research team, and committees coordinated by NACA that are responsible for coordinating and approving new HIV research and evaluations meet regularly.

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<sup>26</sup> Second-generation surveillance for HIV/AIDS is the regular, systematic collection, analysis, and interpretation of information for use in tracking and describing changes in the HIV/AIDS epidemic over time that also gathers information on risk behaviors, using them to give warning of changes in levels of infection or to explain the changes. Second-generation surveillance includes sexually transmitted infections (STI) surveillance to monitor the spread of STI in populations at risk of HIV and behavioral surveillance to monitor trends in risk behaviors over time (WHO 2013: <http://www.who.int/hiv/topics/surveillance/2ndgen/en/>).

**Information systems evolve from paper-based stand-alone to an integrated electronic system (Component 9).** Currently three databases use DHIS to feed into eNNRIMS: (1) NHMIS, (2) NACA DHIS (DHIS 2.0), and (3) PEPFAR DHIS. DHIS 2.0 is an open source, client-server software for managing routine health data. DHIS was developed by the Health Information Systems Programme (HISP)<sup>27</sup> and became cloud-based in Nigeria in 2011; both an NACA version of DHIS 2.0 and a PEPFAR version are in use. The NACA version is in use by facilities and CSOs; the PEPFAR version is in use by PEPFAR's implementing partners. Both the NACA and PEPFAR versions of DHIS 2.0 are supported by PEPFAR and accessible to all stakeholders. Partners have supported its implementation in states where they work by building the capacity of state personnel to use the system.

**Evaluation and Research Are Overseen by Functional Ethics Committees (Component 11).** A well-defined reference is the mandate for NHREC in FMOH, the NACA research team, and committees coordinated by NACA to coordinate and approve new HIV research and evaluations. NACA has a research agenda to direct future HIV research and evaluation needs of the national HIV program. Stakeholders' meetings were held to prioritize HIV research and evaluation. Evaluation and research findings are disseminated regularly. HIV research and evaluation findings are used in policy formation, planning, and implementation; however, decisions are still influenced by other factors or situations.

## **5. Most Significant Changes Explored Through Key Informant Interviews, Document Review, and Available Data**

This section discusses only the most significant changes identified by stakeholders during the participatory self-assessment workshop and then verified during the key informant interviews as changes substantively improved. These most significant changes then were reviewed substantively by stakeholders during the verification workshop, based on key informants and stakeholders agreeing that a change had happened and that it was significant. Most significant changes were excluded if the consensus among stakeholders and key informants was that it had not actually occurred or that it had been initiated but nothing had evolved from it. Data were available for two of the indicators identified for the Nigeria case study (see Appendix 6) and presented in this section: (1) Percentage of M&E Plan indicators reported against (for strategic period or fixed year, as defined by the National M&E Plan) and (2) Percentage of expected reports received from districts on time. These findings are organized into two key areas: (a) Routine health information strengthening and (b) use of survey and surveillance data.

### **5.1 Nigeria National Response Information Management System Strengthening**

NNRIMS was strengthened through the following activities: (1) harmonization of ART, HTC, and PMTCT indicator and data collection tools; (2) customization and adaptation of DHIS for use by NACA;

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<sup>27</sup> <http://www.hisp.org/>

and (3) efforts to improve the quality of output-level data. Key informants validated these three activities as producing significant changes in the routine monitoring component of the national HIV M&E system.

Beginning in 2002, Nigeria's FMOH began to roll-out PMTCT and ART. Organizations engaged in the roll-out captured data using their own tools, developed independently of all other organizations. In 2004, PEPFAR began implementing programs in Nigeria through implementing partners that reported to PEPFAR using PEPFAR indicators. In 2004, demand from international development partners to strengthen HIV M&E resulted in FMOH beginning to harmonize data and data collection processes among various implementing partners that deliver services through FMOH facilities and facilities operated by international non-governmental organizations. The United Nations Children's Fund (UNICEF) and CDC started the process by developing a PMTCT register that was to be a check on service delivery quality. In 2004 and 2005, training of trainers on the PMTCT register was rolled out, with CDC providing Epi Info<sup>28</sup> and hardware to capture data electronically at the national level.

In 2004, with support from partners, FMOH developed a Patient Management and Monitoring System for M&E of the ART program. Facility data were collected daily using FMOH tools<sup>29</sup> and aggregated into the ART monthly summary forms, which were sent through LGAs to the state MOH, where they were collated into the state HIV/AIDS summary report and sent quarterly to the Strategic Knowledge Management Directorate of NACA and Strategic Information Division of NASCP, FMOH. From 2002–2004, FMOH, with support from partners, identified key performance indicators for the PMTCT program. Several data collection tools<sup>30</sup> with instruction manuals were produced, along with an electronic MIS and training curriculum. The PMTCT facility tools continue to supply data needed to complete the PMTCT component of the NNRIMS monthly summary form. HCT service providing and data collection tools are used to manage data collection, collation, and reporting (NACA, 2011a).

In 2005, the ART Patient Monitoring Tool<sup>31</sup> training was held in Tanzania, and the team that attended adapted the ART register for Nigeria. From this point, scale-up of the national ART program was rapid and led by CDC and Institute for Human Virology Nigeria and AIDS Prevention Initiative. At this stage, the following tools were in use and managed through parallel systems: FMOH tools and indicators, Global Fund tools and indicators, PEPFAR tools and indicators, UNGASS data elements and indicators, the 2007–2010 National M&E Plan indicators, and each individual implementing partner's tools and indicators. These multiple tools, indicators, and systems resulted in a huge reporting burden in facilities and other service delivery points and a huge amount of data that could not be used.

In 2005–2006, National M&E TWG meetings, chaired by NACA, noted the many data collection tools in use in the M&E system. The proliferation of tools was attributed to the arrival of PEPFAR and The Global Fund.

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<sup>28</sup> <http://wwwn.cdc.gov/epiinfo/>.

<sup>29</sup> HIV/AIDS care card; Patient Management and Monitoring forms include adult initial clinical evaluation form, pediatric initial clinical evaluation form, laboratory request and result forms, pharmacy tools (daily worksheet and monthly worksheets), adherence support tools, pre-ART register, ART register, ART monthly summary forms, and cohort analysis forms.

<sup>30</sup> These include the general antenatal clinic register, the HIV/AIDS counseling and testing register, partner register, labor and delivery register, maternal follow-up register, and child follow-up register.

<sup>31</sup> <http://www.who.int/3by5/capacity/ptmonguidelinesfinalv1.PDF>.

Beginning in 2006, PEPFAR led the development of the first set of harmonized data collection and reporting tools among PEPFAR implementing partners. In 2007, PMTCT, ART, and HTC were selected to be harmonized, with technical assistance from WHO, MEASURE Evaluation, and the U.S. Government. WHO provided its Treatment and PMTCT Guidelines<sup>32</sup> and technical assistance to select indicators based on these guidelines. MEASURE Evaluation conducted indicator mapping and defined indicators using indicator protocol sheets and data collection tools. Through the PEPFAR coordinator, the U.S. Government facilitated the process. This harmonization process allowed agreement and facilitated decisions on variables that needed to be housed in an electronic platform and guided what data mapped to which indicators.

In 2007, The Global Fund introduced indicators into the system that had been selected by the Government of Nigeria during the application process, according to Global Fund procedures. Because The Global Fund was implemented largely through existing Government of Nigeria structures, the Government of Nigeria had greater control to specify what data were to be collected and reported. The Global Fund and PEPFAR indicators were similar but different, and Global Fund reporting was 80% reliant on PEPFAR implementing partners for data.

By 2007, multiple data collection tools were in use collecting the same routine HIV data from health facilities and CSOs, but with different data elements and different tools. This resulted in part because of different disaggregation needs among the implementing partners.

By 2008, HIV, tuberculosis, and malaria data were harmonized and integrated into one simple form used by health centers to collect data that were then collated into DHIS 1.4 and NHMIS, managed by DPRS. Arriving at this point was a long and involved process.

### **5.1.1 Harmonization**

By 2010, key informants stated that the National M&E System was silo-configured, and the parallel reporting systems caused significant reporting burden and data of poor quality. A 12 Components assessment was conducted in 2009 (see Section I) to diagnose and plan a way to strengthen the system. A key finding of the assessment was the lack of harmonized indicators and parallel reporting systems. Following the 12 Components assessment, the process to harmonize relevant data collection tools for ART, PMTCT, HCT, and home-based care was initiated with agreement on core indicators and operational definitions. In 2010 and 2011, meetings with stakeholders were held to begin the harmonization process. The Government of Nigeria organized a national tool review meeting in June 2011 to harmonize existing tools, revise the tools, and develop new tools to capture indicators that were not currently captured (NACA, PEPFAR, USAID, UNAIDS, and MEASURE Evaluation 2010, page 16).

Nigeria's FMOH led the harmonization process, with technical assistance from MEASURE Evaluation. Core stakeholders engaged in the process were NACA, UNAIDS, UNICEF, WHO, and PEPFAR through its implementing partners AIDS Prevention Initiative in Nigeria, Family Health International, HIV/AIDS Department, IEAPP, and Institute of Human Virology Nigeria. MEASURE Evaluation compiled

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<sup>32</sup> <http://www.who.int/hiv/pub/guidelines/WHOPMTCT.pdf>.

a desk review of indicators required by PEPFAR, The Global Fund, NACA, and NASCP and the data collection tools in use. A series of technical meetings was held with stakeholders to harmonize indicators and tools, which then were mapped to meet multiple needs. NASCP then cleaned all harmonized tools and indicators and presented them to stakeholders for final review. After the harmonized tools and indicators were complete, FMOH produced the first set of harmonized tools, and implementing partners were expected to reproduce them on their own.

By 2012, 70 operationally defined output, outcome, and impact indicators were agreed to by all stakeholders involved in the HIV/ADS response for service data collection, collation, and reporting. Data collection tools for ART, PMTCT, and HCT were then harmonized.

Initially, stakeholders had zero compliance in using the harmonized data elements, indicators, and data collection tools. In 2012, FMOH mandated the reporting of any non-compliant organization; concurrently, PEPFAR's paradigm shifted to claim less attribution and to focus more on its role as a contributory organization to the national HIV response. These two events laid the foundation for an enabling environment in which reporting could become more standardized along agreed upon national information needs.

The adaption of harmonized indicators and data collection tools by facilities and implementing partners has standardized indicator definitions and data collection and collation procedures across program areas. The harmonized indicators and tools are the standard against which data quality is assessed during RDQA tool implementation (see Section 5.1.3), and data are reviewed during quarterly data validation meetings (see Section 5.1.3). In addition, harmonization provided the foundation for two core and subsequent M&E system strengthening efforts. The harmonized indicators cleared the way forward for the adaption of DHIS 2.0, which enabled the development of monthly summary forms that map into DHIS 2.0 and data capture interface, thus easing data entry and potentially reducing errors.

### **5.1.2 Moving from Paper-based Stand-Alone to Integrated, Electronic Information System**

Although HIV/AIDS indicators were harmonized in 2011, multiple data collection systems continue to be in place to manage these data, including NHMIS, eNNRIMS, and PEPFAR DHIS. The goal was to merge these three separate systems into one, under DPRS, by January 2014, which at the time of data collection had not yet happened. PEPFAR reports more than 80% of the data in the NHMIS and is committed to make certain that the three separate systems are merged into one, and that the one system works. Currently, PEPFAR implementing partners are being trained and required to report through the PEPFAR DHIS. The HIV M&E TWG will be responsible for the nuts and bolts of this consolidation process. Because the PEPFAR DHIS is completely donor run and operated, and because it is only a stop-gap measure until the national system and implementing partners have sufficient capacity to operate a fully integrated system, this Nigeria case study focuses on eNNRIMS and DHIS 2.0 in the remainder of this section.

**NHMIS:** The National HMIS collects routine health information. The integration of the paper-based NHMIS into the electronic Nigerian National Routine Information Monitoring System (eNNRIMS) took place in 2011. NHMIS captures HIV and non-HIV data and is managed by DPRS. This was done with support of all partners that provide support for AIDS, TB, and malaria programs. These have been customized into the NHMIS database. A module for indicators and data elements being collected at

secondary and tertiary facilities also has been created in the NHMIS database. According to a respondent, NHMIS is a success because transparency and accountability “...are coming to the fore instead of a consultant owning the data.” NHMIS has reduced logistics of data management and reporting, increased timeliness of data and information product production from semi-annual to monthly, improved internal validation and reduced basic arithmetic errors, and improved data storage practices, which has improved data integrity. NHMIS was not in place 4 years ago, and its current use has enabled the harmonization of tools. NHMIS was developed for the entire health sector, not just for HIV. NHMIS has compelled states that report to NHMIS to examine their reports for completeness, and verify the number of facilities reporting and number of data elements reported by facilities.

**eNNRIMS:** The DHIS enabled Nigeria to begin to move away from multiple, silo-configured information systems to a more fully integrated information system based on harmonized indicators and data collection tools. From 2003–2009, DHIS 1.4 was in use. DHIS 1.4 was a distributed, stand-alone system that was not connected to a network. DHIS 1.4 was adopted as an open source software to capture routine HIV data in 2007 by Family Health International and the Strengthening Nigeria’s Response to HIV Project (SNR), with the University of Oslo-Health Information Systems Programme (HISP) as SNR’s contractor. HISP supported six states.<sup>33</sup> Five LGAs in each state were picked for piloting, and data were transmitted using DHIS 1.4 from 2009–2012. In 2012, DHIS 1.4 and Logistic and the Health Program Management Information Platform were stopped as a result of unresolvable challenges. DHIS 1.4 was migrated to DHIS 2.0 in 2011. DHIS 2.0 is the first web-based database system in use for HIV in Nigeria, and it became the agreed system for NACA to use for Global Fund and state-level reporting. PEPFAR supported customization and adaptation of DHIS, through HISP, for NACA to produce reports from all states except three. PEPFAR also adopted DHIS 2.0 to manage reporting processes for implementing partners. The plan was that the NACA and PEPFAR DHIS 2.0 systems would be integrated by January 2014. At the time of data collection for this case study, the migration process had not been initiated.

A major benefit of moving from DHIS 1.4 to DHIS 2.0 was in addressing threats to data integrity, which is inherent in moving from a distributed, stand-alone system to a web-based, central processing system. Moving to DHIS 2.0 also has built the in-country capacity to manage the database and analyze the data contained in it. NACA now has 20 people (16 Strategic Information and Knowledge Management and 4 IT MIS staff) who can manage problems within 24 hours; previously IT support was based in the United States. This is a standard business practice that is outlined in the NNRIMS DHIS manual. Data analysis is facilitated because the analysis interface with DHIS 2.0 is simpler and more user friendly. By December 2013, 34 of 36 states were analyzing data monthly using the interface.<sup>34</sup>

DHIS 2.0 was rolled out to about 200 service delivery points and 20 states in 2010 (NACA and UNAIDS 2010). According to key informants at the time of data collection for this case study, 28 states now use DHIS. According to key informants, more than 70% of identified stakeholders have reported using the NACA DHIS at least once as of January 2014; however, not a single state has yet reported data from 100% of the stakeholders. The issue of reporting led to the evolution of a two-prong

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<sup>33</sup> Benue, Nassarawa, Cross River, Enugu, Kaduna, and FCT.

<sup>34</sup> As of December 2013, only Bayelsa and Ebonyi states were not yet analyzing data using the interface.

approach to improve data completeness: (1) state-level meetings with implementing partners to enter data into DHIS and (2) the empowerment of LGAs to go to facilities to collect and enter data directly into DHIS.

DHIS 2.0 also has enabled data use at all levels. LGAs can analyze reports and provide feedback to facilities, states can analyze reports and provide feedback to LGAs, and the federal level can analyze reports and provide feedback to states. On the other hand, reports have not been stored in a retrievable manner, if they are stored at all.

The transition from a paper-based system to an electronic system through the implementation of DHIS 2.0 has been highly successful, although it has been wrought with many challenges. First, facilities have perceived the process as a top-down approach and do not see the usefulness of routine health data in their daily work. Paper-based tools still must be collected and collated from service delivery points to the LGA level, but states and LGAs have yet to take over their mandated responsibility to produce these paper-based tools. Most facilities lack the necessary hardware to capture data and transmit them electronically to LGAs. Human capacity to operate a data management and reporting system (DMRS) at all levels is highly limited.

### **5.1.3 Efforts to Improve Routine Data Quality**

In 2008 and 2009, completeness of output-level, routine monitoring data produced by the national HIV M&E system was poor, according to key informants. Data completeness improved after harmonization, with an estimated 85% of sites reporting, compared to the number of expected sites reporting, according to key informants. As a result of attrition of trained personnel and hardware and software infrastructure challenges, completeness of expected data has reached roughly 60%, with about 90% of states actively reporting.<sup>35</sup> Efforts undertaken to improve data quality included M&E monthly and quarterly meetings, SACA and LACA forums, a National Joint RDQA Exercise, and quarterly data validation meetings.

M&E monthly and quarterly meetings provide a platform to capture and validate health data with partners before entry into DHIS 2.0. These meetings are held between state authorities and LGAs, which key informants said have improved validity, reliability, and integrity of data reported from state to federal levels.<sup>36</sup>

The primary feedback mechanisms that focus on data from the national level to states, LGAs, and service delivery points are SACA and LACA forums and partner forum meetings at the state level; the National Expanded Team Group (PEPFAR, Government of Nigeria, World Bank) quarterly meetings; and state-level review meetings. Minutes or reports from any of these meetings were unavailable at the time of this data collection. Further, key informants did not provide clear processes that have or should have produced higher-quality data.

The National Joint RDQA, led by NACA, has occurred four times since 2008. Before 2008, no data quality assurance process was in place. The process for implementing the Joint Data Quality Assessment

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<sup>35</sup> Bayelsa, Ebonyi, Imo, and Kano were not reporting at the time data were collected for this case study.

<sup>36</sup> No evidence is available to verify that this claim was valid at the time of data collection.

begins with the selection of states and facilities. Before 2012, a convenience sample of states was selected each year. In 2012, MEASURE Evaluation began to conduct multi-state sampling of facilities<sup>37</sup> on behalf of NACA. Following state and facility selection, MEASURE Evaluation implements a training, and two to four M&E staff from the federal level collect state-level data. The RDQA exercise identifies weaknesses, and action plans are developed at the end of the process. Although these plans are shared with the federal level, no mentorship or supportive supervision mechanisms exist to support implementation of the action plans through the LGAs to facilities. These gaps include the need for additional human resources and system strengthening at the state level. As a result of these action plans, the federal level has reminded state health management boards that job postings need to include a list of necessary skillsets for service delivery points and staff member skillsets should match the requirements.

FMOH's Strategic Information unit conducts state-level quarterly data validation meetings according to a mandate with the Global Fund and the World Bank. Data validation meetings began in 2011 with implementing partners' data. According to a key informant, the FMOH reported that in 2012, "...there were two or three meetings..." with implementing partners and representatives from all 36 states and the FCT. One data validation meeting was held in 2013, with all 36 states, the FCT, and implementing partners attending. That meeting, held in July 2013, combined 2013 Q1 and 2013 Q2 meetings. Because of the poor result, quarterly reporting was switched to monthly reporting at the state to federal level, and 12 of 36 states (32%) plus the FCT reported regularly under the new schedule.

The data validation meetings are intended to collate data from implementing partners and facilities at the state level. These meetings also address data quality challenges, such as double counting, which threatens the validity of reported data. For example, the indicator, "Number of people currently on ART," was reported as a cumulative sum; however, it should have been "Number of people currently on ART as of the previous month." This oversight introduced an over-estimate of the number of people that receive ART. An estimated 80% of data reported to the federal level had this error. The fix, however, was simple and involved instructing data officers to select the sum from the correct column in DHIS 2.0. Key informants were unable to describe the data validation meetings in detail or how the process was undertaken to validate data. Researchers for this case study also were unable to elicit a clear and agreed upon definition for the term "validation" among stakeholders.

#### **5.1.4 Performance of M&E System: Indicators Reported Against**

Data were available for two indicators selected for the Nigeria case study: Indicator 1, Percentage of M&E plan indicators reported against (for strategic period or fixed year, as defined by the National M&E Plan),<sup>38</sup> and Indicator 20, Percentage of expected reports received from districts on time.<sup>39</sup>

The analysis for Indicator 1 began by comparing indicators from the UNGASS Country Progress Report (NACA and UNAIDS 2010), the 2011 Universal Access Report (NACA et al. 2011), the 2011 Annual

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<sup>37</sup> The value of multi-state sampling is unclear. It would seem that a more appropriate and effective approach would be to select the lowest performing states first, and then the lowest performing facilities in those states, while providing on-going support to all states and facilities in the data management and reporting system.

<sup>38</sup> Source: UNAIDS MERG 2010, page 39, question 16, and page 40, question 2.

<sup>39</sup> Source: Aqil et al. 2009; The Global Fund et al 2007.

Report (NACA draft), and the 2012 GAPR report (NACA 2012) with the NOP II (NACA 2011a), which has 70 indicators. Among the 70 NOP II indicators, 36 had data reported in the draft 2011 Annual Report. Although certain indicators are reported only annually, biennially, or less frequently, which raises the potential for timing distortions, the draft 2011 Annual Report presented tables of data from 2009–2011. Of the indicators listed in NOP II, 34 were not reported in the draft 2011 Annual Report, and only one indicator in the draft 2011 Annual Report was worded exactly as it is in NOP II. (See Appendix 8, List of Indicators Reported against in Annual Reports.)

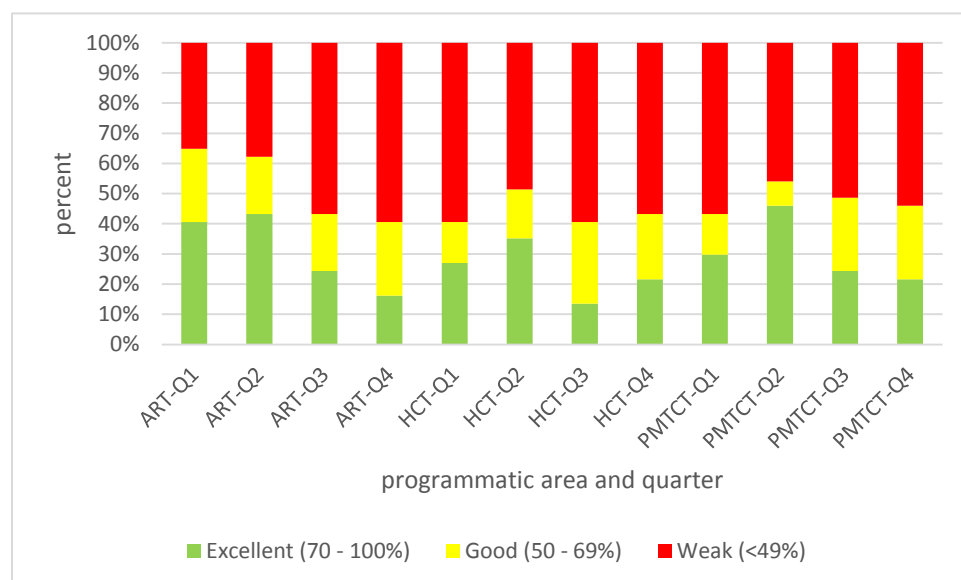
Because about half of the national indicators that were expected to be reported against in the Annual Report were missing, it would be interesting to investigate further why this was the case. The obvious conclusion is that the data were missing, but it is also possible that the prioritization of the indicators following the harmonization process, or as a result of something else unknown to the study team, reduced the need for these data or that no resources or other support were in place to bring these indicators into operation.

For the analysis of Indicator 20, Percentage of expected reports received from districts on time, the case study team received reporting rates for Nigerian states for all four quarters of 2013 from NACA.

According to key informants, 4 of 32 states (Enugu, Jigawa, Lagos, and Zamfara) plus the FCT are up to 90% complete and on-time with data reporting. Roughly 30% of facilities report completely and on time. Before implementation of DHIS, the rate was roughly 10% of facilities reporting completely and on-time to the LGAs. Facilities that do report completely and on-time are supported by implementing partners funded by USAID, Clinton Health Access Initiative, Bill and Melinda Gates Foundation, CDC, WHO, UNICEF, DFID, and The Global Fund.

Figure 2 from NACA shows states that submitted timely quarterly reports in 2013. States that achieved the high watermark of 70% or better in on-time reporting by quarter and programmatic area (ART, HTC, and PMTCT) are coded green to represent excellent.

**Figure 2: Percentage of States with Excellent, Good, or Weak Reporting by Year 2013 Quarters**

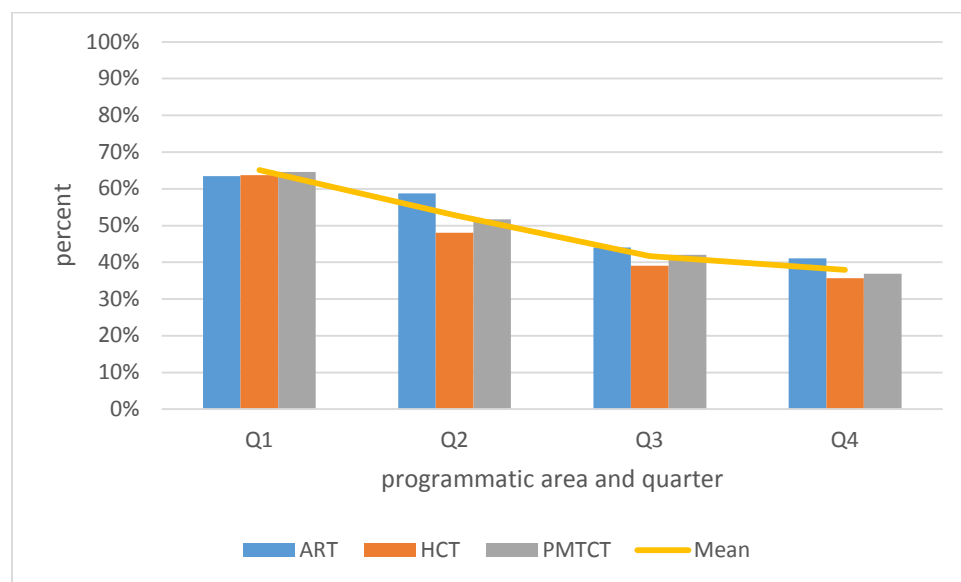


Source of Data: NACA, 2014

These measures, although lacking specificity, are being used by NACA to assess data availability through reporting rates.

Figure 3 shows data organized according to programmatic area (ART, HTC, and PMTCT) and on-time reporting by 2013 quarters. The mean proportion of data submitted on time across all states was taken for each programmatic area and each quarter, and then an overall mean was calculated.

**Figure 3: Proportion of States that Submit Reports on Time by Programmatic Area and Year 2013 Quarters**



Source of Data: NACA, 2014

The Nigeria case study can only speculate on the reasons for the decrease in on-time reporting. Possible explanations are (1) an increased number of sites being identified that are not reporting yet, (2) follow-up from national-to-state level tapering; (3) Ramadan and Christmas seasonality rates dipping in Q3 and Q4 ; (4) or an actual decline in sites that are reporting on-time. It is important to note that the national-level focus is on reviewing reporting rate data to understand what is and is not available.

## 5.2 Use of Survey and Surveillance Data

Survey and surveillance strategies were absent before 2007. Key HIV surveillance data were produced through ANC and IBBSS only. Beginning in 2007, IBBSS expanded to second-generation surveillance, and biomarkers were added to NARHS+ for 2005–2007. Before 2007, surveys and surveillance activities were primarily donor-driven. Now, these activities are more institutionalized in FMOH through the establishment in 2008 of the Strategic Information unit, which continues to receive support and technical assistance from PEPFAR.

In 2008, ANC surveillance began to rely on routine PMTCT data to establish HIV prevalence. The U.S. Government through CDC supported FMOH in this effort with funds, technical assistance, protocol design, training, sample testing, and analysis. FMOH managed the logistics of collecting and storing samples. PEPFAR implementing partners are encouraged to scale-up PMTCT surveillance to replace ANC for routine HIV prevalence estimates. The Government of Nigeria uses second-generation surveillance data in the annual planning and budgeting process.

Sentinel surveillance surveys have been conducted at the national level. Examples include the 2007 IBBSS, the 2008 ANC Sentinel Sero-prevalence Survey, and the 2012 NARHS+. These activities were coordinated by FMOH with support from NACA. All of these surveys have successfully captured data for impact and outcome indicators that are identified in the National M&E Plan (NACA and UNAIDS 2010).

Survey and surveillance data are used to generate estimates in Spectrum EPP. Survey data since 1991 are in the Spectrum format. Before a Spectrum training in 2011 in South Africa, NASCP did not update the file or run the analysis. Now NASCOP continues to input data into the Spectrum file and manages the software. In the past, UNAIDS updated the estimates and the Government of Nigeria did not use the estimates. Now, NASCP updates the estimates and uses them for program planning and sharing with UNAIDS. According to Spectrum, 500,000 people receive ART, and the target is 1.5 million, but the Spectrum analysis estimates 3.5 million need to be on ART (UNAIDS 2013).

Key informants reported that survey and surveillance findings are now used for these activities:

- **To set, revise, and adapt behavior change communications messages.** Compared with the 2007 IBBSS, the 2010 IBBSS showed a lower HIV prevalence among police, armed forces, and transport workers. As a result, the most at-risk populations were reclassified for priority interventions. The results of previous HIV prevalence rates in ANC surveillance surveys were used as the basis for selection of priority states for PMTCT interventions. The survey results also were used to target behavior change communications.
- **For international reporting.** In the 2008 UNGASS report, secondary analysis was necessary; in the 2010 Universal Access Report, less literature review and secondary analysis was required; and in the 2012 GARPR, key informants reported that “all required indicators were included in the survey.”
- **For decision making in FMOH.** Key informants reported that no decision is made in FMOH that does not rely on survey and surveillance data.

Further, key informants stated that they view IBBSS, NARHS+, and PMTCT surveillance as a success because they are now largely implemented by FMOH. Indicator data were unavailable at the time of this case study data collection to support key informant statements (see Appendix 6).

## 6. Conclusions

The Nigeria case study methodology was designed to identify successes and the most significant changes in the M&E system and to evaluate how those changes improved the M&E system functions overall in the middle ring of the 12 Components Organizing Framework. It is now clear that, on the basis of the identified significant changes, substantial progress was made in strengthening Nigeria’s M&E system. It also is clear that additional opportunities exist for further system improvements. The data collection process for this case study brought together the experiences of individuals and institutions to increase an understanding of the successes and lessons learned and to inform future decisions on how to diffuse and scale-up effective strategies for M&E systems strengthening. Conclusions in applying this case study methodology fall into three areas:

- I. Evidence of HIV M&E system strengthening exists.

2. Highlights for future investment involve building on current successes and further understanding how greater outcomes could be realized through the assessment, prioritization, and implementation of activities through a systems thinking lens (AHPSR and WHO, 2009).
3. Performance measurement of the HIV M&E system in Nigeria is limited.

## 6.1 Evidence of HIV M&E System Strengthening

This case study initially identified five most significant changes:

1. Indicators are harmonized to improve reporting processes.
2. Data quality has improved as a result of training efforts and the harmonization process.
3. States now analyze and use data.
4. Surveys and surveillance are used in the development of M&E plan and for international reporting.
5. Information systems evolve from paper-based stand-alone to an integrated electronic system.
6. Evaluation and research are overseen by functional ethics committees.

Of these, real change was verified through key informants and other evidence to confirm that NNRIMS was strengthened through indicator and data collection tool harmonization, moving to an electronic data management and reporting system through the adaptation of DHIS 2.0, and efforts to improve data quality at the end of the collection, collation, and reporting data cycle.

## 6.2 Highlights for Future Investment

Although much has been accomplished, as documented by the most-significant changes identified by stakeholders and the key informant interviews, future technical and financial investment is need for these successes to lead to system outcomes at a national scale. Also needed for continued success is an approach that considers the factors, context, and dynamics in which the M&E system is implemented. The following specific activities for future investment were identified in the key informant interviews:

**Use indicator harmonization to ensure successful scale-up.** The harmonization process in 2007–2012 was led by FMOH and funded largely by PEPFAR, with technical assistance from UNAIDS, UNICEF, and WHO. As part of that process, MEASURE Evaluation compiled for PEPFAR a desk review of indicators that are required by PEPFAR, the Global Fund, NACA, and NASCP and data collection tools in use. PEPFAR also funded a series of technical meetings with stakeholders to harmonize indicators and tools. After the harmonization process was complete, FMOH produced the first set of harmonized tools for use by PEPFAR and Global Fund implementing partners, who were to reproduce the tools needed to collect, collate, and report primarily output-level data. Now the investment in harmonization needs to be leveraged and expanded, a process that will require ensuring that (1) the roll-out is expanded to all states, LGAs, and service delivery points; (2) sufficient funding is available to produce the necessary materials and that a supply chain management process is in place to limit stock-outs (and threats to data integrity); and (3) that a plan is developed and implemented to ensure regular updates to the harmonized tools and indicators so that this process does not need to be started from scratch.

**Database harmonization and local ownership.** The development and adaptation of NACA DHIS 2.0 required inputs from international sources. Initially, DHIS 1.4 was adopted as open-source software to capture routine HIV data in Family Health International and the Strengthening Nigeria's Response to

HIV Project, with HISP as SNR's contractor. Then, the Global Fund Health Systems Strengthening grant mandated Nigeria to strengthen its HMIS, which led to the transition from DHIS 1.4 to DHIS 2.0, the first web-based database system in use for HIV in Nigeria. DHIS 2.0 became the agreed software for NACA to use for the Global Fund and state-level reporting. PEPFAR supported customization and adaptation of DHIS, through HISP, for NACA to produce reports from all states. PEPFAR also adopted DHIS 2.0 to manage the reporting processes of its implementing partners. All of these investors and investments have created a foundation so that Nigeria could establish a fully integrated electronic data capture and warehousing mechanism. In the near term, PEPFAR would need to finalize integration and then hand over full management of it through a step-wise approach that is time-bound and punctuated with clearly identified milestones.

**Institutionalize data quality assurance for HIV information.** Efforts to improve data quality also are largely donor-dependent. NACA is heavily supported to implement the Joint RDQA Exercise by PEPFAR through MEASURE Evaluation. MEASURE Evaluation conducts the sampling, implements and funds the training, and sends staff as part of the data collection team. After the Joint RDQA Exercise is complete, the federal level is slated to take on the duties of mentoring and supportive supervision, which is not happening. In a similar move, FMOH's Strategic Information unit is to conduct quarterly data validation meetings with the Global Fund and WHO to produce an accurate count of the number of people currently on ART. These meetings are part of the Global Fund grant agreement and, therefore, may be viewed as a largely donor-driven initiative. Nigeria is discussing the importance of data quality and its effect on reporting and decision making, and this is a solid foundation for moving forward. Data quality approaches should leverage the successes of harmonization and integrated electronic databases by developing a comprehensive data quality assurance plan to begin to address data quality at collection and collation points, where threats to data quality occur. Waiting to validate data quarterly or annually after they have been processed through the entire system will not produce the desired improvements to data quality. Data management must be part of daily activities at service delivery points at the LGA, state, and federal levels.

A key theme in both successes and needs for future investment is the strong reliance on donors in M&E system strengthening efforts. Specifically, interventions were undertaken with substantial initiative and financial and technical support from donors, as evidenced by the examples of indicator harmonization database development and implementation, and data quality assurance. This indicates a need to further understand the steps and benchmarks that are necessary to establish an enabling environment for M&E that leads to real country ownership and sustainability. One approach is to focus M&E system assessment and interventions on the outer ring of the 12 Components Organizing Framework. These components include the human resources, partnerships, and planning that are required to support data collection and use. A more comprehensive approach would recognize the complex nature of improving the M&E system as a part of the overall health system. Such an approach involves appreciating the dynamic, ever-changing environment; understanding the behaviors of the people who are responsible for the system and how those behaviors are generated; understanding the context of system relationships; and appreciating the concept of loop thinking where causality is constantly being influenced (AHPSR and WHO, 2009).

### **6.3 Performance Measurement of M&E Systems Strengthening**

The study team faced challenges in compiling case study outcome-level indicators to measure system performance, which highlights the need to improve the availability and consistent use of performance indicators and to develop national and local M&E performance management plans. The study team had hoped to access existing data sources, documents, and reports, and performance data produced by the national HIV M&E system to construct reports on identified M&E system performance indicators. Although data were available to compile two reports out of the 21 pre-determined indicators for Nigeria, the data sources were still either difficult to find, as in the case of the annual reports for HIV/AIDS, or still being established and requiring more detail, as in the case of the national data on reporting rates. These data and information from the key informant interviews can establish a baseline of national change in the one HIV M&E system and lay a foundation for the development of M&E system performance metrics. These performance metrics will become more important as countries and global partners continue to increase their reliance on the M&E system for planning and understanding achievement of national and health goals.

## **7. Limitations**

This case study methodology presented a number of limitations that should be considered in the interpretation of these findings and any forthcoming study design to further identify evidence for M&E system strengthening.

Although the selection of MEASURE Evaluation countries for these case studies had benefits, such as gaining a more complete knowledge of the context and ease of stakeholder engagement, this approach may have introduced selection bias. The MEASURE Evaluation team selected stakeholders who identified key informants, and because the stakeholders represented host-country agencies that receive strategic information assistance and those agencies are actively engaged in the one national HIV M&E system, the study team believes that the selection bias was not strong and that a representative sample of key informants was interviewed. On the other hand, the potential for recall and social desirability biases is high because the study participants also were involved in developing and implementing the system. To establish case study priorities and parameters, the methodology specified the review of M&E strengthening at the national level, with a focus on collecting, capturing, and verifying information on components of a functional M&E system (Görgens and Kusek 2009). This means that this study does not capture or reflect all of the strengthening initiatives that may have occurred at the national level or the effects that various national initiatives may have had subnationally.

Stakeholders were asked to identify the most significant changes as a starting point for exploration of how the M&E system evolved through activities and investments that were intended to strengthen it. The methodology sought to identify extremes of success and failure and the most exemplary stories, and therefore, it can be biased toward successes (Davies and Dart 2005). In reality, the case study identified several challenges, particularly a lack of systems thinking in developing and implementing activities that were identified as the source for the most significant changes; but because the case study had no clearly defined mechanism to provide follow-on support, the case study was not designed to be a diagnostic assessment.

The protocol called for the collection and analysis of the full list of 19 pre-determined indicators in addition to the two indicators identified by Nigerian stakeholders (see Appendix 6). This list of pre-determined indicators, presented during the self-assessment workshop, was selected by stakeholders because they believed those indicators are necessary to the Nigeria case study and because the necessary data for them are produced by the national HIV M&E system and are available. The study team could identify only some of the data sources required and collected data for two of the identified indicators (see Section 5.1.5: Performance of the M&E System).

The potential for recall and social desirability biases in this study are high because the people involved also were part of the system development and implementation. To prioritize the case study and establish parameters, the methodology specified a review of M&E strengthening at the national level, with a focus on the collect, capture, and verify components of a functional M&E system (Görgens and Kusek, 2009). This means that this study does not capture or reflect all of the strengthening initiatives that may have occurred at the national level or that the effect that various national initiatives may have had sub-nationally.

## Resources

- Alliance for Health Policy and Systems Research (AHPSR) and the World Health Organization (WHO) (2009). Systems thinking for health systems strengthening. Geneva (Switzerland): WHO.
- Aqil, A., Lippeveld, T., and Hozumi, D. (2009). 'PRISM framework: A paradigm shift for designing, strengthening and evaluating routine health information systems'. *Health Policy and Planning* 24(3): 217–228. Retrieved July 2, 2010, from <http://heapol.oxfordjournals.org/cgi/content/short/24/3/217>
- Bennett, S., Boerma, J.T., and Brugha, R. (2006). Scaling up HIV/AIDS evaluation. *Lancet* 367: 79–82. Retrieved on 14 May 2013 from [http://www.researchgate.net/publication/7372964\\_Scaling\\_up\\_HIVAIDS\\_evaluation/file/32bfe5101578bab48e.pdf](http://www.researchgate.net/publication/7372964_Scaling_up_HIVAIDS_evaluation/file/32bfe5101578bab48e.pdf).
- Davies, R. and Dart, J. (2005). The most significant change technique: A guide to its use.
- Federal Ministry of Health (FMOH) (2010). HIV Integrated Biological and Behavioural Surveillance Survey (IBBSS). Retrieved 12 July 2013 from [http://www.popcouncil.org/pdfs/2011HIV\\_IBBSS\\_2010.pdf](http://www.popcouncil.org/pdfs/2011HIV_IBBSS_2010.pdf)
- The Global Fund to Fight Aids, Tuberculosis and Malaria. (2013). Investing in Nigeria. Retrieved 6 July 2013 from <http://portfolio.theglobalfund.org/en/Country/Index/NGA>
- The Global Fund to Fight Aids, Tuberculosis and Malaria, Office of the Global AIDS Coordinator, PEPFAR, USAID, WHO, UNAIDS, MEASURE Evaluation. Routine Data Quality Assessment Tool, Guidelines for Implementation for HIV, TB & Malaria Programs, June 2008.
- Görgens, M. and Kusek, J. (2009). Making Monitoring and Evaluation Systems Work: A Capacity Development Toolkit. Washington, DC (USA): World Bank.
- Institute of Medicine of the National Academies (IOM). (2013). Evaluation of PEPFAR. The National Academies. Retrieved May 14, 2013, from <http://www.iom.edu/Reports/2013/Evaluation-of-PEPFAR.aspx>.
- LaFond, A.K., Kanagat, N., Sequeira, J.S., Steinglass, R., Fields, R., & Mookherji, S. (2012). Drivers of routine immunization system performance at the district level: Study findings from three countries, Research Brief No. 3. Arlington, VA: JSI Research & Training Institute, Inc., ARISE Project for the Bill & Melinda Gates Foundation.
- NACA (draft). 2011 Annual Report. Abuja (Nigeria): The National Agency for the Control of AIDS.
- NACA (2007). Guidelines for national M&E plan: HIV/AIDS NNRIMS operational plan, 2007–2010. Abuja (Nigeria): The National Agency for the Control of AIDS.
- NACA (2010). National HIV/AIDS strategic plan: 2010–2015. Abuja (Nigeria): The National Agency for the Control of AIDS.
- National Agency for the Control of AIDS (NACA) (2011a). National HIV and AIDS monitoring and evaluation plan - Nigeria National Response Information Management Systems (NNRIMS) operational plan II; third edition. Abuja (Nigeria): The National Agency for the Control of AIDS. Retrieved on 08 April 2013 from [http://www.ilo.org/wcmsp5/groups/public/---ed\\_protect/---protrav/---ilo\\_aids/documents/legaldocument/wcms\\_201321.pdf](http://www.ilo.org/wcmsp5/groups/public/---ed_protect/---protrav/---ilo_aids/documents/legaldocument/wcms_201321.pdf)

- Nigerian National Agency for the Control of AIDS (NACA). (2011b). Factsheet 2011: Update on the HIV/AIDS epidemic and response in Nigeria. Retrieved May 24, 2013, from <http://naca.gov.ng/content/view/423/lang.en/#epidemiology>
- NACA. (2012). Global AIDS response country progress report: Nigeria GARPR 2012. Abuja (Nigeria): National Agency for the Control of AIDS. Retrieved July 13, 2013, from <http://www.unaids.org/en/dataanalysis/knowyourresponse/countryprogressreports/2012countries/Nigeria%202012%20GARPR%20Report%20Revised.pdf>
- NACA. (2014). eNNRIMS DHIS 2.0 reporting rates for states in Nigeria: Year 2013, quarters 1–4. Abuja (Nigeria): The Presidency.
- NACA, PEPFAR, USAID, UNAIDS, MEASURE Evaluation. (2010). Report on the Status of the Nigerian National HIV monitoring and evaluation system: Assessment using 12 components system strengthening tool. Chapel Hill, NC (USA): Carolina Population Center, The University of North Carolina at Chapel Hill, MEASURE Evaluation.
- NACA and UNAIDS. (2010). UNGASS country progress report - Nigeria: January 2008 - December 2009. Abuja (Nigeria): National Agency for the Control of AIDS.
- NACA, WHO, UNICEF, USAID, MEASURE Evaluation, and UNAIDS. (2011). 2011 Universal Access report for Nigeria's monitoring and reporting on the health sector response to HIV/AIDS. Abuja (Nigeria): Federal Ministry of Health.
- Operations Evaluation Department (OED). (2005). Committing to results: Improving the effectiveness of HIV/AIDS assistance, an OED evaluation of the World Bank's assistance for HIV/AIDS control. Washington, DC (USA): World Bank. Retrieved May 14, 2013, from <https://openknowledge.worldbank.org/handle/10986/7435>.
- Porter, L.E., Bouey, P.D., Curtis, S., Hochgesang, M., Idele, P., et al. (2012). Beyond indicators: advances in global HIV monitoring and evaluation during the PEPFAR era. *J Acquir Immune Defic Syndr*. 15: 60 Suppl 3:S120-6. doi: 10.1097/QAI.0b013e31825cf345. Retrieved May 2, 2013, from <http://www.ncbi.nlm.nih.gov/pubmed/22797733>.
- UNAIDS. (2004). “Three Ones” key principles: Coordination of national responses to HIV/AIDS—guiding principles for national authorities and their partners. Geneva (Switzerland): UNAIDS. Retrieved February 4, 2010, from [http://data.unaids.org/UNA-docs/three-ones\\_keyprinciples\\_en.pdf](http://data.unaids.org/UNA-docs/three-ones_keyprinciples_en.pdf)
- UNAIDS. (2013). Nigeria HIV and AIDS estimates (2011). Retrieved May 24, 2013, from <http://www.unaids.org/en/regionscountries/countries/nigeria/>
- UNAIDS Monitoring and Evaluation Reference Group. (MERG). (2008). Organizing framework for a functional national HIV monitoring and evaluation system. Geneva (Switzerland): UNAIDS. Retrieved June 30, 2010, from [http://data.unaids.org/pub/BaseDocument/2008/20090305\\_organizingframeworkforhivmesystem\\_en.pdf](http://data.unaids.org/pub/BaseDocument/2008/20090305_organizingframeworkforhivmesystem_en.pdf)
- UNAIDS Monitoring and Evaluation Reference Group (MERG). (2010). The 12 components monitoring and evaluation systems strengthening tool. Geneva (Switzerland): UNAIDS.
- U.S. Agency for International Development (USAID). (2013a). MEASURE Evaluation in Nigeria. MEASURE Evaluation Phase III. Retrieved May 24, 2013. <https://www.cpc.unc.edu/measure/countries/nigeria>
- U.S. Center for Disease Control. (2012). Global HIV/AIDS: Nigeria. Retrieved June 28, 2013, from <http://www.cdc.gov/globalaids/Global-HIV-AIDS-at-CDC/countries/Nigeria/>

- U.S. Central Intelligence Agency. (2013). The World Factbook. Retrieved May 24, 2014, from <https://www.cia.gov/library/publications/the-world-factbook/geos/ni.html>
- U.S. Diplomatic Mission to Nigeria. 2013. U.S. President's Emergency Plan for AIDS Relief. Retrieved June 28, 2013 from <http://nigeria.usembassy.gov/pepfar.html>
- The United States President's Emergency Plan for AIDS Relief (PEPFAR). (2010). Nigeria operational plan report, FY 2010; FACTS Info v3.8.3.30. Washington, DC (USA): Office of the Global AIDS Coordinator. Retrieved June 18, 2014, from <http://www.pepfar.gov/documents/organization/145730.pdf>
- The United States President's Emergency Plan for AIDS Relief (PEPFAR). (2011). Nigeria operational plan report, FY 2011; FACTS Info v3.8.3.30. Washington, DC (USA): Office of the Global AIDS Coordinator. Retrieved June 18, 2014, from <http://www.pepfar.gov/documents/organization/199713.pdf>
- The United States President's Emergency Plan for AIDS Relief (PEPFAR). (2012). Nigeria operational plan report, FY 2012; FACTS Info v3.8.3.16. Washington, DC (USA): Office of the Global AIDS Coordinator. Retrieved June 18, 2014, from <http://www.pepfar.gov/documents/organization/212153.pdf>
- The United States President's Emergency Plan for AIDS Relief (PEPFAR) and the Government of Nigeria (GoN). (2010). Partnership framework on HIV/AIDS, 2010–2015: A memorandum of understanding between the government of Nigeria and the United States government to fight HIV/AIDS in Nigeria. Retrieved June 27, 2013, from <http://www.pepfar.gov/documents/organization/148812.pdf>
- The World Bank. (2011). DataBank. Retrieved May 24, 2013, from <http://databank.worldbank.org/data/home.aspx>
- World Health Organization. (2011). Global health observatory data repository: Nigeria statistics summary (2002–present). Retrieved May 24, 2013, from <http://apps.who.int/gho/data/node.country.country-NGA?lang=en>

## Appendix I: List of Participatory Self-Assessment Participants

| Name                      | Designation               | Organization                     |
|---------------------------|---------------------------|----------------------------------|
| Abatta, Emmanuel          | Head, SI Unit             | NASCP                            |
| Adeoye, Ronke             | Principal Program Officer | NACA                             |
| Adepeju, Odunlami         | Research                  | NACA                             |
| Adeyemi, Adedayo          | Resident Advisor          | MEASURE Evaluation               |
| Adeyemo, Bodunde Olufunke | MO/SI/ART-MIS             | Federal Ministry of Health/NASCP |
| Agbo, Francis             | M&E                       | NACA                             |
| Amadiogwu, Stanley        | Senior Resident Advisor   | MEASURE Evaluation               |
| Araoye, Segilola          | Director PDA              | NASCP                            |
| Atobatele, Akin           | M&E Manager               | USAID                            |
| Bamidele, Samson          | Country Lead              | MEASURE Evaluation               |
| Bashorun , Adebobola      | SMO                       | FMoH                             |
| Dalhatu, Ibrahim          | Medical Epidemiologist    | CDC                              |
| Dare, Elizabeth           | A&CA                      | MEASURE Evaluation               |
| Ekong, Eunice             | P.O SI                    | IHVN                             |
| Fajemisin, Wole           | M&E PA                    | ENR                              |
| Feyikemi, Terebao         | Programme Assistant       | NACA                             |
| Idepeto, Festus           | M&E Officer               | NACA                             |
| Ikani, Samuel O           | R&M Officer               | Society for Family Health        |
| Jahun, Ibrahim            | Special Surveillance      | CDC                              |
| Morka, Mercy              | SSO                       | NASCP                            |
| Nwaokenneya, Peter        | SMO, M&E                  | Federal Ministry of Health/NASCP |
| Nzima, Masauso            | Senior SI Advisor         | UNAIDS                           |
| Obi, Oluchi .E            | M&E Officer               | NACA                             |
| Ochu, Tessy               | DDU Advisor               | MEASURE Evaluation               |
| Ogundiran, Niyi           | NPO                       | WHO                              |
| Ogungbemi, Kayode         | Director SKM              | NACA                             |
| Olusesan, Makinde         | HIS Advisor               | MEASURE Evaluation               |
| Oluwagbemiga, Jeph        | State Coordinator         | MEASURE Evaluation               |
| Salihu, Shehu             | M&E Advisor               | MEASURE Evaluation               |
| Shuaibu, Ahmend Indabawa  | AGM M&E                   | National Health Insurance Scheme |

## **Appendix 2: The 12 Components M&E System Strengthening Tool Adapted for the Case Study**

### **Break-out Group Self-Assessment Guide**

#### **General Instructions**

The purpose of this guide is to allow for a structured conversation about the status of one of the selected 12 Components of the national HIV M&E system in Nigeria. The purpose is to clearly identify a success story for whichever component you are discussing as well as to begin to provide sources of evidence for that success. Sources of evidence will include, but not be limited to, key informants, existing datasets, reports produced and/or acknowledgements from line ministries and/or development partners on the success of an HIV M&E related activity, set of activity, and/or deliverable.

This self-assessment process will be focused on the following components:

7 – Routine Monitoring

8 – Surveys and Surveillance

9 – National and Sub-national HIV Databases

10 – Supportive Supervision and Data Auditing

11 – HIV Evaluation and Research Agenda

Each group will be requested to complete a self-assessment for one of the 12 components. Participants will be asked to self-select into group based on knowledge of the component. If there are not at least two people available for a specific component, the de facto decision will be that there is no success story to explore in that specific component.

The group will need to answer each of the questions for their component. The questions are from the 12 Components Monitoring and Evaluation Systems Strengthening Tool (UNAIDS MERG, 2010), with modified answers on a likert scale of:

Yes, completely

Yes, mostly

Yes, somewhat

No, not at all

Not applicable

For any question answered “Yes, mostly” or “Yes, completely” you are asked to discuss in depth:

Why is this a “Yes, mostly” or “Yes, completely”?

What evidence may be available to support this answer?

How has this situation changed during the past 5 years – that is, 5 years ago, was this also then a “Yes, mostly” or “Yes, completely” or has improvement been made that caused this to improve from a “No, not at all” or a “Yes, somewhat”?

Each Break-out Group will then be requested to report back on the questions answered “Yes, completely” or “Yes, mostly”, followed with a plenary discussion to verify the group’s findings. Other Break-out groups will verify the presenting group’s findings and a consensus reached on what the most significant change is through a consensus building process, such as the five-dollar method.

The worksheet provided to each group will be collected at the end of the workshop and used to guide next steps of the Case Study.

## Break-out Group 7: Routine HIV Program Monitoring Worksheet

NOTE: Please provide an explanation for questions 16 and 17, regardless of the answer.

| # | Question                                                                                                                                                                                                             | Answer<br>(Only select an answer after consensus has been reached)                  | Explanation<br>(Only complete for questions answered “Yes, Completely” or “Yes, Mostly”. Use additional paper as necessary) | List Suggested Key Informants | List Suggested Documents, Datasets and Other Information Sources | List Most Relevant Indicators from Appendix I: List of Indicators |
|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|-------------------------------|------------------------------------------------------------------|-------------------------------------------------------------------|
| 1 | National guidelines exist that document the procedures for recording, collecting, collating and reporting program monitoring data from health information system, and therefore the procedures for managing routine. | Yes, completely<br>Yes, mostly<br>Yes, somewhat<br>No, not at all<br>Not applicable |                                                                                                                             |                               |                                                                  |                                                                   |
| 2 | National guidelines exist that document the procedures for recording, collecting, collating and reporting routine program monitoring data from civil society/community-based systems.                                | Yes, completely<br>Yes, mostly<br>Yes, somewhat<br>No, not at all<br>Not applicable |                                                                                                                             |                               |                                                                  |                                                                   |
| 3 | National guidelines exist that provide instructions on how data quality should be maintained from the health information system(s).                                                                                  | Yes, completely<br>Yes, mostly<br>Yes, somewhat<br>No, not at all<br>Not applicable |                                                                                                                             |                               |                                                                  |                                                                   |
| 4 | National guidelines exist that provide instructions on how data quality should be maintained (e.g., avoiding double counting, assure reliability and validity) from civil society/community-based systems.           | Yes, completely<br>Yes, mostly<br>Yes, somewhat<br>No, not at all<br>Not applicable |                                                                                                                             |                               |                                                                  |                                                                   |

| #  | Question                                                                                                                                                                     | Answer<br>(Only select an answer after consensus has been reached)                  | Explanation<br>(Only complete for questions answered “Yes, Completely” or “Yes, Mostly”. Use additional paper as necessary) | List Suggested Key Informants | List Suggested Documents, Datasets and Other Information Sources | List Most Relevant Indicators from Appendix I: List of Indicators |
|----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|-------------------------------|------------------------------------------------------------------|-------------------------------------------------------------------|
| 5  | National guidelines and a system exist for monitoring and managing the supply of drugs.                                                                                      | Yes, completely<br>Yes, mostly<br>Yes, somewhat<br>No, not at all<br>Not applicable |                                                                                                                             |                               |                                                                  |                                                                   |
| 6  | National guidelines exist to assure that individual medical records support quality and continuity of health care.                                                           | Yes, completely<br>Yes, mostly<br>Yes, somewhat<br>No, not at all<br>Not applicable |                                                                                                                             |                               |                                                                  |                                                                   |
| 7  | National guidelines exist to support reporting of health data by private sector health facilities.                                                                           | Yes, completely<br>Yes, mostly<br>Yes, somewhat<br>No, not at all<br>Not applicable |                                                                                                                             |                               |                                                                  |                                                                   |
| 8  | The same operational definitions of routine monitoring (program output) indicators (from the national M&E system) are systematically used by all groups delivering services. | Yes, completely<br>Yes, mostly<br>Yes, somewhat<br>No, not at all<br>Not applicable |                                                                                                                             |                               |                                                                  |                                                                   |
| 9  | Supplies and equipment are available for routine program monitoring.                                                                                                         | Yes, completely<br>Yes, mostly<br>Yes, somewhat<br>No, not at all<br>Not applicable |                                                                                                                             |                               |                                                                  |                                                                   |
| 10 | Entities delivering the same services use standardized data collection forms.                                                                                                | Yes, completely<br>Yes, mostly<br>Yes, somewhat<br>No, not at all<br>Not applicable |                                                                                                                             |                               |                                                                  |                                                                   |

| #  | Question                                                                                                                                                                      | Answer<br>(Only select an answer after consensus has been reached)                  | Explanation<br>(Only complete for questions answered “Yes, Completely” or “Yes, Mostly”. Use additional paper as necessary) | List Suggested Key Informants | List Suggested Documents, Datasets and Other Information Sources | List Most Relevant Indicators from Appendix I: List of Indicators |
|----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|-------------------------------|------------------------------------------------------------------|-------------------------------------------------------------------|
| 11 | Entities delivering the same services use standardized reporting forms.                                                                                                       | Yes, completely<br>Yes, mostly<br>Yes, somewhat<br>No, not at all<br>Not applicable |                                                                                                                             |                               |                                                                  |                                                                   |
| 12 | People with assigned responsibilities have been assuring data quality prior to submission to the next level.                                                                  | Yes, completely<br>Yes, mostly<br>Yes, somewhat<br>No, not at all<br>Not applicable |                                                                                                                             |                               |                                                                  |                                                                   |
| 13 | During data auditing visits conducted by MOH and/or NAC, all source documents (e.g., completed forms) have been available for auditing purposes.                              | Yes, completely<br>Yes, mostly<br>Yes, somewhat<br>No, not at all<br>Not applicable |                                                                                                                             |                               |                                                                  |                                                                   |
| 14 | Officers responsible for receiving reports from lower levels, systematically verify their completeness, timeliness and identify obvious mistakes before aggregating the data. | Yes, completely<br>Yes, mostly<br>Yes, somewhat<br>No, not at all<br>Not applicable |                                                                                                                             |                               |                                                                  |                                                                   |
| 15 | Mechanisms/procedures are in place to reconcile discrepancies in reports and to provide systematic feedback, including reconciliation of discrepancies in reports.            | Yes, completely<br>Yes, mostly<br>Yes, somewhat<br>No, not at all<br>Not applicable |                                                                                                                             |                               |                                                                  |                                                                   |
| 16 | Outputs of routine program monitoring contribute to the indicators as defined in the National M&E Plan                                                                        | Yes, completely<br>Yes, mostly<br>Yes, somewhat<br>No, not at all<br>Not applicable |                                                                                                                             |                               |                                                                  |                                                                   |

| #  | Question                                                                               | Answer<br>(Only select an answer after consensus has been reached)                  | Explanation<br>(Only complete for questions answered “Yes, Completely” or “Yes, Mostly”. Use additional paper as necessary) | List Suggested Key Informants | List Suggested Documents, Datasets and Other Information Sources | List Most Relevant Indicators from Appendix I: List of Indicators |
|----|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|-------------------------------|------------------------------------------------------------------|-------------------------------------------------------------------|
| 17 | Financial resources/investments for HIV are monitored and reported to the NACA and MOH | Yes, completely<br>Yes, mostly<br>Yes, somewhat<br>No, not at all<br>Not applicable |                                                                                                                             |                               |                                                                  |                                                                   |

## Break-out Group 8: Surveys and Surveillance

| # | Question                                                                                                                                                | Answer<br>(Only select an answer after consensus has been reached)                  | Explanation<br>(Only complete for questions answered “Yes, Completely” or “Yes, Mostly”. Use additional paper as necessary) | List Suggested Key Informants | List Suggested Documents, Datasets and Other Information Sources | List Most Relevant Indicators from Appendix I: List of Indicators |
|---|---------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|-------------------------------|------------------------------------------------------------------|-------------------------------------------------------------------|
| 1 | An inventory of all HIV related surveys and surveillance conducted already (and to be conducted) in the country has been updated within past 12 months. | Yes, completely<br>Yes, mostly<br>Yes, somewhat<br>No, not at all<br>Not applicable |                                                                                                                             |                               |                                                                  |                                                                   |
| 2 | Surveys and surveillance conducted to date have contributed to measuring indicators in the National M&E Plan.                                           | Yes, completely<br>Yes, mostly<br>Yes, somewhat<br>No, not at all<br>Not applicable |                                                                                                                             |                               |                                                                  |                                                                   |
| 3 | Biological surveillance targeting the appropriate populations is conducted every 1–2 years.                                                             | Yes, completely<br>Yes, mostly<br>Yes, somewhat<br>No, not at all<br>Not applicable |                                                                                                                             |                               |                                                                  |                                                                   |
| 4 | National surveys or surveillance with behavioral component in the general population are conducted every 2-3 years.                                     | Yes, completely<br>Yes, mostly<br>Yes, somewhat<br>No, not at all<br>Not applicable |                                                                                                                             |                               |                                                                  |                                                                   |
| 5 | National workplace surveys (public and private sectors) are conducted every 1-2 years.                                                                  | Yes, completely<br>Yes, mostly<br>Yes, somewhat<br>No, not at all<br>Not applicable |                                                                                                                             |                               |                                                                  |                                                                   |
| 6 | Health facility surveys at HIV-related service delivery points are conducted every 2-3 years.                                                           | Yes, completely<br>Yes, mostly<br>Yes, somewhat<br>No, not at all<br>Not applicable |                                                                                                                             |                               |                                                                  |                                                                   |

| #  | Question                                                                                                                                                                    | Answer<br>(Only select an answer after consensus has been reached)                  | Explanation<br>(Only complete for questions answered “Yes, Completely” or “Yes, Mostly”. Use additional paper as necessary) | List Suggested Key Informants | List Suggested Documents, Datasets and Other Information Sources | List Most Relevant Indicators from Appendix I: List of Indicators |
|----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|-------------------------------|------------------------------------------------------------------|-------------------------------------------------------------------|
| 7  | Second generation surveillance (secondary analysis of existing biological and behavioral surveillance data, and program monitoring data) is undertaken every 2-3 years.     | Yes, completely<br>Yes, mostly<br>Yes, somewhat<br>No, not at all<br>Not applicable |                                                                                                                             |                               |                                                                  |                                                                   |
| 8  | National surveys on condom availability and use are conducted every 1-2 years.                                                                                              | Yes, completely<br>Yes, mostly<br>Yes, somewhat<br>No, not at all<br>Not applicable |                                                                                                                             |                               |                                                                  |                                                                   |
| 9  | The inventory of HIV related surveys conducted in the country is accessible.                                                                                                | Yes, completely<br>Yes, mostly<br>Yes, somewhat<br>No, not at all<br>Not applicable |                                                                                                                             |                               |                                                                  |                                                                   |
| 10 | This inventory is updated on time according to an agreed upon schedule outlined in the inventory.                                                                           | Yes, completely<br>Yes, mostly<br>Yes, somewhat<br>No, not at all<br>Not applicable |                                                                                                                             |                               |                                                                  |                                                                   |
| 11 | All key surveillance and survey reports that should have been produced in country during the past 24 months produced have been produced.                                    | Yes, completely<br>Yes, mostly<br>Yes, somewhat<br>No, not at all<br>Not applicable |                                                                                                                             |                               |                                                                  |                                                                   |
| 12 | Biological Surveillance is conducted in the country according to schedule that is outlined in either the (a) HIV-related survey inventory and/or (b) national HIV M&E plan. | Yes, completely<br>Yes, mostly<br>Yes, somewhat<br>No, not at all<br>Not applicable |                                                                                                                             |                               |                                                                  |                                                                   |

| #  | Question                                                                                                                                                                                                                                    | Answer<br>(Only select an answer after consensus has been reached)                  | Explanation<br>(Only complete for questions answered “Yes, Completely” or “Yes, Mostly”. Use additional paper as necessary) | List Suggested Key Informants | List Suggested Documents, Datasets and Other Information Sources | List Most Relevant Indicators from Appendix I: List of Indicators |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|-------------------------------|------------------------------------------------------------------|-------------------------------------------------------------------|
| 13 | National surveys or surveillance with a behavioral component in the general population are conducted in the country according to schedule that is outlined in either the (a) HIV-related survey inventory and/or (b) national HIV M&E plan. | Yes, completely<br>Yes, mostly<br>Yes, somewhat<br>No, not at all<br>Not applicable |                                                                                                                             |                               |                                                                  |                                                                   |
| 14 | National level workplace surveys are conducted in the country according to schedule that is outlined in either the (a) HIV-related survey inventory and/or (b) national HIV M&E plan.                                                       | Yes, completely<br>Yes, mostly<br>Yes, somewhat<br>No, not at all<br>Not applicable |                                                                                                                             |                               |                                                                  |                                                                   |
| 15 | National level school-based surveys are conducted in the country according to schedule that is outlined in either the (a) HIV-related survey inventory and/or (b) national HIV M&E plan.                                                    | Yes, completely<br>Yes, mostly<br>Yes, somewhat<br>No, not at all<br>Not applicable |                                                                                                                             |                               |                                                                  |                                                                   |
| 16 | Health facility surveys in HIV-related services are conducted in the country according to schedule that is outlined in either the (a) HIV-related survey inventory and/or (b) national HIV M&E plan.                                        | Yes, completely<br>Yes, mostly<br>Yes, somewhat<br>No, not at all<br>Not applicable |                                                                                                                             |                               |                                                                  |                                                                   |
| 17 | Second-Generation <sup>40</sup> Surveillance is conducted in the country according to schedule that is outlined in either the (a) HIV-related survey inventory and/or (b) national HIV M&E plan.                                            | Yes, completely<br>Yes, mostly<br>Yes, somewhat<br>No, not at all<br>Not applicable |                                                                                                                             |                               |                                                                  |                                                                   |

<sup>40</sup> Second generation surveillance for HIV/AIDS is the regular, systematic collection, analysis and interpretation of information for use in tracking and describing changes in the HIV/AIDS epidemic over time that also gathers information on risk behaviors, using them to warn of or explain changes in levels of infection. Second generation surveillance includes STI surveillance to monitor the spread of STI in populations at risk of HIV and behavioral surveillance to monitor trends in risk behaviors over time (WHO, 2013: <http://www.who.int/hiv/topics/surveillance/2ndgen/en/>).

| #  | Question                                                                                                                                                                                    | Answer<br>(Only select an answer after consensus has been reached)                  | Explanation<br>(Only complete for questions answered “Yes, Completely” or “Yes, Mostly”. Use additional paper as necessary) | List Suggested Key Informants | List Suggested Documents, Datasets and Other Information Sources | List Most Relevant Indicators from Appendix I: List of Indicators |
|----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|-------------------------------|------------------------------------------------------------------|-------------------------------------------------------------------|
| 18 | Surveys on condom availability and use are conducted in the country according to schedule that is outlined in either the (a) HIV-related survey inventory and/or (b) national HIV M&E plan. | Yes, completely<br>Yes, mostly<br>Yes, somewhat<br>No, not at all<br>Not applicable |                                                                                                                             |                               |                                                                  |                                                                   |

## Break-out Group 9: National and Sub-national HIV Databases

| # | Question                                                                                                                                                                                 | Answer<br>(Only select an answer after consensus has been reached)                  | Explanation<br>(Only complete for questions answered “Yes, Completely” or “Yes, Mostly”. Use additional paper as necessary) | List Suggested Key Informants | List Suggested Documents, Datasets and Other Information Sources | List Most Relevant Indicators from Appendix I: List of Indicators |
|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|-------------------------------|------------------------------------------------------------------|-------------------------------------------------------------------|
| 1 | Database/s for electronically capturing and storing data generated for/by the national HIV M&E system is/are functional.                                                                 | Yes, completely<br>Yes, mostly<br>Yes, somewhat<br>No, not at all<br>Not applicable |                                                                                                                             |                               |                                                                  |                                                                   |
| 2 | There is a functional integrated database for electronically capturing and storing data on a wide range of health services, including but not limited to HIV/AIDS services.              | Yes, completely<br>Yes, mostly<br>Yes, somewhat<br>No, not at all<br>Not applicable |                                                                                                                             |                               |                                                                  |                                                                   |
| 3 | Structures, mechanisms procedures and time frame for transmitting, entering, extracting, merging and transferring data between databases that support the national HIV M&E system exist. | Yes, completely<br>Yes, mostly<br>Yes, somewhat<br>No, not at all<br>Not applicable |                                                                                                                             |                               |                                                                  |                                                                   |
| 4 | IT equipment and supplies are available for maintaining the national and sub national HIV databases.                                                                                     | Yes, completely<br>Yes, mostly<br>Yes, somewhat<br>No, not at all<br>Not applicable |                                                                                                                             |                               |                                                                  |                                                                   |
| 5 | Quality control mechanisms are in place to ensure that data are accurately captured.                                                                                                     | Yes, completely<br>Yes, mostly<br>Yes, somewhat<br>No, not at all<br>Not applicable |                                                                                                                             |                               |                                                                  |                                                                   |
| 6 | Human resources for maintaining and updating the national and sub national HIV databases are adequate.                                                                                   | Yes, completely<br>Yes, mostly<br>Yes, somewhat<br>No, not at all<br>Not applicable |                                                                                                                             |                               |                                                                  |                                                                   |

| # | Question                                                                                       | Answer<br>(Only select an answer after consensus has been reached)                  | Explanation<br>(Only complete for questions answered “Yes, Completely” or “Yes, Mostly”. Use additional paper as necessary) | List Suggested Key Informants | List Suggested Documents, Datasets and Other Information Sources | List Most Relevant Indicators from Appendix I: List of Indicators |
|---|------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|-------------------------------|------------------------------------------------------------------|-------------------------------------------------------------------|
| 7 | Human resources for maintaining and updating the IT equipment and infrastructure are adequate. | Yes, completely<br>Yes, mostly<br>Yes, somewhat<br>No, not at all<br>Not applicable |                                                                                                                             |                               |                                                                  |                                                                   |

## Break-out Group 10: Supportive Supervision and Data Auditing Worksheet

| # | Question                                                                                                                                                   | Answer<br>(Only select an answer after consensus has been reached)                  | Explanation<br>(Only complete for questions answered “Yes, Completely” or “Yes, Mostly”. Use additional paper as necessary) | List Suggested Key Informants | List Suggested Documents, Datasets and Other Information Sources | List Most Relevant Indicators from Appendix 1: List of Indicators |
|---|------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|-------------------------------|------------------------------------------------------------------|-------------------------------------------------------------------|
| 1 | National guidelines and tools for supportive supervision on M&E exist (as standalone or as a chapter/module of more comprehensive supervision guidelines). | Yes, completely<br>Yes, mostly<br>Yes, somewhat<br>No, not at all<br>Not applicable |                                                                                                                             |                               |                                                                  |                                                                   |
| 2 | Supportive supervision was conducted as per the national protocols, in the past 6 months.                                                                  | Yes, completely<br>Yes, mostly<br>Yes, somewhat<br>No, not at all<br>Not applicable |                                                                                                                             |                               |                                                                  |                                                                   |
| 3 | Supportive supervision results have been recorded and feedback provided to supervisees.                                                                    | Yes, completely<br>Yes, mostly<br>Yes, somewhat<br>No, not at all<br>Not applicable |                                                                                                                             |                               |                                                                  |                                                                   |
| 4 | Entities can access supervision and data auditing results, and follow up on recommendations made during supervision visits.                                | Yes, completely<br>Yes, mostly<br>Yes, somewhat<br>No, not at all<br>Not applicable |                                                                                                                             |                               |                                                                  |                                                                   |
| 5 | A protocol for auditing routine HIV service data from health service delivery points exists.                                                               | Yes, completely<br>Yes, mostly<br>Yes, somewhat<br>No, not at all<br>Not applicable |                                                                                                                             |                               |                                                                  |                                                                   |
| 6 | A protocol for auditing routine HIV service data from civil society/community-based programs exists.                                                       | Yes, completely<br>Yes, mostly<br>Yes, somewhat<br>No, not at all<br>Not applicable |                                                                                                                             |                               |                                                                  |                                                                   |

| # | Question                                                                                                  | Answer<br>(Only select an answer after consensus has been reached)                  | Explanation<br>(Only complete for questions answered “Yes, Completely” or “Yes, Mostly”. Use additional paper as necessary) | List Suggested Key Informants | List Suggested Documents, Datasets and Other Information Sources | List Most Relevant Indicators from Appendix I: List of Indicators |
|---|-----------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|-------------------------------|------------------------------------------------------------------|-------------------------------------------------------------------|
| 7 | National protocol for auditing data used in the national set of HIV indicator values exists.              | Yes, completely<br>Yes, mostly<br>Yes, somewhat<br>No, not at all<br>Not applicable |                                                                                                                             |                               |                                                                  |                                                                   |
| 8 | Data auditing is conducted as per the time frames stipulated in the national data auditing protocol.      | Yes, completely<br>Yes, mostly<br>Yes, somewhat<br>No, not at all<br>Not applicable |                                                                                                                             |                               |                                                                  |                                                                   |
| 9 | Data auditing results have been recorded and feedback provided to those entities whose data were audited. | Yes, completely<br>Yes, mostly<br>Yes, somewhat<br>No, not at all<br>Not applicable |                                                                                                                             |                               |                                                                  |                                                                   |

## Break-out Group 11: HIV Evaluation and Research Agenda Worksheet

| # | Question                                                                                                                                                                                          | Answer<br>(Only select an answer after consensus has been reached)                  | Explanation<br>(Only complete for questions answered “Yes, Completely” or “Yes, Mostly”. Use additional paper as necessary) | List Suggested Key Informants | List Suggested Documents, Datasets and Other Information Sources | List Most Relevant Indicators from Appendix 1: List of Indicators |
|---|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|-------------------------------|------------------------------------------------------------------|-------------------------------------------------------------------|
| 1 | An inventory (register/database) exists of HIV research, and evaluation institutions and their activities in the country (completed, proposed and active) and has been updated in past 12 months. | Yes, completely<br>Yes, mostly<br>Yes, somewhat<br>No, not at all<br>Not applicable |                                                                                                                             |                               |                                                                  |                                                                   |
| 2 | A mandated national team/committee and procedures exists which is responsible for coordinating and approving (new) HIV research and evaluations.                                                  | Yes, completely<br>Yes, mostly<br>Yes, somewhat<br>No, not at all<br>Not applicable |                                                                                                                             |                               |                                                                  |                                                                   |
| 3 | The team/committee mandated for coordinating and approving HIV research and evaluations has met as scheduled in the last 12 months.                                                               | Yes, completely<br>Yes, mostly<br>Yes, somewhat<br>No, not at all<br>Not applicable |                                                                                                                             |                               |                                                                  |                                                                   |
| 4 | Procedures exist for the mandated team/committee to coordinate (new) HIV research and evaluation.                                                                                                 | Yes, completely<br>Yes, mostly<br>Yes, somewhat<br>No, not at all<br>Not applicable |                                                                                                                             |                               |                                                                  |                                                                   |
| 5 | An HIV research and evaluation agenda exists that directs future HIV research and evaluation.                                                                                                     | Yes, completely<br>Yes, mostly<br>Yes, somewhat<br>No, not at all<br>Not applicable |                                                                                                                             |                               |                                                                  |                                                                   |
| 6 | The HIV research and evaluation agenda has been prioritized based on input from key HIV and research stakeholders.                                                                                | Yes, completely<br>Yes, mostly<br>Yes, somewhat<br>No, not at all<br>Not applicable |                                                                                                                             |                               |                                                                  |                                                                   |

| #  | Question                                                                                                     | Answer<br>(Only select an answer after consensus has been reached)                  | Explanation<br>(Only complete for questions answered “Yes, Completely” or “Yes, Mostly”. Use additional paper as necessary) | List Suggested Key Informants | List Suggested Documents, Datasets and Other Information Sources | List Most Relevant Indicators from Appendix I: List of Indicators |
|----|--------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|-------------------------------|------------------------------------------------------------------|-------------------------------------------------------------------|
| 7  | The HIV research and evaluations agenda is being used to approve new studies.                                | Yes, completely<br>Yes, mostly<br>Yes, somewhat<br>No, not at all<br>Not applicable |                                                                                                                             |                               |                                                                  |                                                                   |
| 8  | The HIV research and evaluations findings are being used in policy formulation, planning and implementation. | Yes, completely<br>Yes, mostly<br>Yes, somewhat<br>No, not at all<br>Not applicable |                                                                                                                             |                               |                                                                  |                                                                   |
| 9  | Research and evaluation findings are regularly disseminated and discussed.                                   | Yes, completely<br>Yes, mostly<br>Yes, somewhat<br>No, not at all<br>Not applicable |                                                                                                                             |                               |                                                                  |                                                                   |
| 10 | Financial resources are earmarked/ available for conducting planned research and evaluations.                | Yes, completely<br>Yes, mostly<br>Yes, somewhat<br>No, not at all<br>Not applicable |                                                                                                                             |                               |                                                                  |                                                                   |

## Appendix 3: List of Key Informants

| <b>Name</b>         | <b>Position</b>                                    | <b>Organization</b>                                  |
|---------------------|----------------------------------------------------|------------------------------------------------------|
| Abatta, Emanuel     | Head, SI                                           | NASCP                                                |
| Adebayo, Olufunsho  | Director, M&E                                      | Family Health International 360                      |
| Aderemi, Azeez      | Director, DPRS                                     | FMOH                                                 |
| Adeyemi, Adedayo    | Resident Advisor                                   | MEASURE Evaluation-JSI                               |
| Agbo, Francis       | Assistant Director, Strategic Knowledge Management | The Presidency-NACA                                  |
| Akpan, Raphael      | Program Specialist, HMIS                           | CDC                                                  |
| ATOBATELE, Akin     | M&E Manager                                        | USAID                                                |
| Balogun, Adeleke    | Head of ICT Branch                                 | FMOH, Dept of Health Planning, Research & Statistics |
| Bashorun, Adebobola | Senior Medical Officer; Head, Surveillance Unit    | FMOH                                                 |
| Dalhatu, Ibrahim    | Medical Epidemiologist                             | CDC                                                  |
| Fagbemi, Ayo        | Senior M&E Specialist                              | Family Health International C-Change                 |
| JAHUN, Ibrahim      | Program Specialist, HIV Surveillance               | CDC                                                  |
| Mamman, Charles     | Chief Medical Officer, M, E & Surveillance         | National Primary Health Care Development Agency      |
| Morka, Mercy        | SSO                                                | NASCP                                                |
| OGUNGBEMI, Kayode   | Director, Strategic Knowledge Management           | NACA                                                 |
| SEGILOLA, Araoye    | Director PDA                                       | NASCP                                                |
| Ugbena, Richard     | M&E Advisor                                        | Nigeria M&E Management Services II                   |
| Urua, Utibe         | Deputy Director, HISD                              | National Primary Health Care Development Agency      |

## Appendix 4: Key Informant Interview Guide

### Key Informant Interview Guide

#### COVER PAGE

[This cover page is to be completed prior to interview and verified prior to consent. Once cover page has been completed and verified, remove it and place in file prior to continuing interview.]

| #   | Question                                                                          | Response Categories                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Response |
|-----|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| i   | Name of Participant:                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |          |
| ii  | Participant contact details:                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |          |
| iii | During this interview, you plan to answer questions for the following components: | <p>___Indicator and data collection tool harmonization (7: Routine Monitoring)</p> <p>___Data quality improvement (7: Routine Monitoring)</p> <p>___Use of routine data at state level (7: Routine Monitoring)</p> <p>___Use of survey and surveillance data (8: Surveys &amp; Surveillance)</p> <p>___Second-Generation Surveillance (8: Surveys &amp; Surveillance)</p> <p>___Survey &amp; Surveillance Inventory; National HIV Research Agenda (8: Surveys &amp; Surveillance and 11: Evaluation &amp; Research)</p> <p>___Dissemination and use of evaluation/research findings (11: Evaluation &amp; Research)</p> <p>___NHMIS, PEPFAR DHIS and NACA DHIS (9: Databases)</p> <p>___Integration of paper-based NHMIS into electronic Nigerian National Routine Information Monitoring System (NNRIMS) (9: Databases)</p> |          |

| #   | Question                                         | Resonse Categories                                                                                                                                             | Response |
|-----|--------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
|     |                                                  | ___ DHIS 2.0, USG PEPFAR (9: Databases)<br>___ RDQA Tool and its role in data quality and supportive supervision (10: Data Quality and Supportive Supervision) |          |
| iv  | What is the gender of the participant?           | 1 – Female<br>2 -Male                                                                                                                                          |          |
| v   | At what organization does he or she work?        |                                                                                                                                                                |          |
| vi  | What is his/her designation (job title)?         |                                                                                                                                                                |          |
| Vii | In which department or unit does he or she work? |                                                                                                                                                                |          |

## **Introduction**

[Start at \_\_\_\_ : \_\_\_\_] NOTE: Total time to be no more than 60 minutes.

## **Welcome**

Thank you for agreeing to participate in this interview. My name is [NAME] and I will be talking with you today. This activity is being conducted by MEASURE Evaluation, a project in cooperative agreement with The United States Agency for International Development, or USAID. The purpose of this activity – Case Study to Document M&E System Strengthening – is to explore how multiple interventions delivered by a variety of partners have contributed to the strengthening of the national HIV M&E system. A stronger M&E system is one that is able to produce valid and reliable data that are put to use for planning, program management and internal (national level) and external (global level) reporting.

## **Ground Rules**

Everything you say will be kept confidential. To protect your privacy, we will not connect your name directly to statements in the final report. At any time during the interview, please feel free to let me know if you have any questions or if you would rather not answer a specific questions. You are under no obligation. You may stop the interview at any time for any reason. There are no right or wrong answers – we are attempting to understand how the M&E system has been strengthened based upon your expert opinion.

I will ask you to sign a consent form, indicating your willingness to participate. Please read this form and then sign if you agree to participate. The signed consent form will not be kept with interview notes and it will not be possible to trace any response to any question that you provide back to you through the signed consent form.

[Give the participant the consent form. Once signed, place the form in a separate folder until you return for the daily debrief.]

## CONSENT FORM – KEY INFORMANT INTERVIEW PARTICIPANTS

This consent form explains the Case Study you are being asked to join. Please review this form carefully and ask any questions about the study before you agree to join. You may also ask questions at any time after joining the study.

**Purpose of the Study:** The retrospective Case Study will seek to answer how national level commitment to its health information systems has changed, how M&E system performance improved, how the capacity of individuals and organizations improved and the degree to which the M&E system draws its data directly from national health information systems.

**Procedures:** If you decide to take part in this study, you will be asked questions about your experience working in and/or with the national HIV monitoring and evaluation system. This interview will be done in a private place and will take no more than one hour.

**Risks:** Some of the questions in the interview may be about your professional performance and you might feel uncomfortable answering them. You may skip any questions you don't want to answer. You will be named as having participated in a key informant interview and cited as a source when necessary. You may also stop the interview any time.

**Benefits:** You will help us identify what has contributed to a more successful national HIV monitoring and evaluation system. This information may be used by various development partners to guide future investments in the national HIV M&E System.

**Confidentiality:** Every effort will be made to keep confidential the answers you give and the information we take insofar as it is legally possible to do.

**Voluntariness:** It is up to you whether or not to be in this study. If you do volunteer to participate, you can stop being in this study at any time. If you decide to be in the study, or if you decide later to drop out, no one will be informed of this.

**Who to contact:** You should ask the people in charge of this study any questions you may have about this research study. If you want to talk to anyone about this research study because you think you have not been treated fairly or have been hurt by being in the study, you should contact the person in charge, Ms. Shannon Salentine (ICF International) at 308 W. Rosemary Street, Chapel Hill, NC 27707 USA; +1 919 240 4969. You may also contact Samson Bamidele (MEASURE Evaluation, Nigeria) at +234 81 08 61 02 12. Or you may call +1 703 225 2426. The people in charge of this study will answer your questions.

---

Participant signature

Date

---

Signature of witness to consent process

Date

Is it OK if I record the interview? Once transcribed, the recording will be deleted.

☐ Yes      ☐ No      ☐ Not Asked.

## Cheat Sheet Interview Key Questions

As a starting point today I would like to begin by learning from you about the about the following successes:

- Indicator and data collection tool harmonization (7: Routine Monitoring)
- Data quality improvement (7: Routine Monitoring)
- Use of routine data at state level (7: Routine Monitoring)
- Use of survey and surveillance data (8: Surveys & Surveillance)
- Second-Generation Surveillance (8: Surveys & Surveillance)
- Survey & Surveillance Inventory; National HIV Research Agenda (8: Surveys & Surveillance and 11: Evaluation & Research)
- Dissemination and use of evaluation/research findings (11: Evaluation & Research)
- NHMIS, PEPFAR DHIS and NACA DHIS (9: Databases)
- Integration of paper-based NHMIS into electronic Nigerian National Routine Information Monitoring System (NNRIMS) (9: Databases)
- DHIS 2.0, USG PEPFAR (9: Databases)
- RDQA Tool and its role in data quality and supportive supervision (10: Data Quality and Supportive Supervision)

Can you tell me about how the indicator and data collection tool harmonization and what changes have resulted to strengthen the M&E system as a result?

*Probe: Explore any change language with Who, What, Why, When, Where and How probes.*

Can you tell me about data quality improvement and what changes have resulted to strengthen the M&E system as a result?

*Probe: Explore any change language with Who, What, Why, When, Where and How probes.*

Can you tell me the use of routine data at state level and if that has resulted in a stronger M&E system?

*Probe: Explore any change language with Who, What, Why, When, Where and How probes.*

Can you tell me about the use of survey and surveillance data and what changes have resulted to strengthen the M&E system as a result?

*Probe: Explore any change language with Who, What, Why, When, Where and How probes.*

Can you tell me about how Second-Generation Surveillance has been implemented and if that has resulted in a stronger M&E system?

*Probe: Explore any change language with Who, What, Why, When, Where and How probes.*

Can you tell me about the Survey & Surveillance Inventory and/or National HIV Research Agenda have evolved and what changes have resulted to strengthen the M&E system as a result?

*Probe: Explore any change language with Who, What, Why, When, Where and How probes.*

Can you tell me about the dissemination and use of evaluation/research findings and what changes have resulted to strengthen the M&E system as a result?

*Probe: Explore any change language with Who, What, Why, When, Where and How probes.*

Can you tell me about the NHMIS, PEPFAR DHIS and NACA DHIS and what changes have resulted to strengthen the M&E system as a result?

*Probe: Explore any change language with Who, What, Why, When, Where and How probes.*

Can you tell me about the integration of paper-based NHMIS into electronic Nigerian National Routine Information Monitoring System (NNRIMS) and what changes have resulted to strengthen the M&E system as a result?

*Probe: Explore any change language with Who, What, Why, When, Where and How probes.*

Can you tell me about DHIS 2.0, USG PEPFAR and what changes have resulted to strengthen the M&E system as a result?

*Probe: Explore any change language with Who, What, Why, When, Where and How probes.*

Can you tell me about RDQA Tool and its role in data quality and supportive supervision in Nigeria's national HIV M&E system and what changes have resulted to strengthen the M&E system as a result?

*Probe: Explore any change language with Who, What, Why, When, Where and How probes.*

## Background

During a recent workshop with stakeholders a number of key successes were highlighted. These include:

- Indicator and data collection tool harmonization (7: Routine Monitoring)
- Data quality improvement (7: Routine Monitoring)
- Use of routine data at state level (7: Routine Monitoring)
- Use of survey and surveillance data (8: Surveys & Surveillance)
- Second-Generation Surveillance (8: Surveys & Surveillance)
- Survey & Surveillance Inventory; National HIV Research Agenda (8: Surveys & Surveillance and 11: Evaluation & Research)
- Dissemination and use of evaluation/research findings (11: Evaluation & Research)
- NHMIS, PEPFAR DHIS and NACA DHIS (9: Databases)
- Integration of paper-based NHMIS into electronic Nigerian National Routine Information Monitoring System (NNRIMS) (9: Databases)
- DHIS 2.0, USG PEPFAR (9: Databases)
- RDQA Tool and its role in data quality and supportive supervision (10: Data Quality and Supportive Supervision)

As a starting point today I would like to begin by learning from you about the following successes

*[Refer to cover sheet]:*

### **Component 7: Routine Monitoring**

I would like to explore with you what changes have occurred in the routine monitoring system, how those changes came about and what improvements you have witnessed as a result of those changes. I would like our conversation to stay focused on the positive – that is the successes, or most significant changes, you have seen happen to the routine monitoring system since roughly 2007. Also, keep in mind that The Case Study is concerned with what successes have been reached to date and not what is planned to happen in the future.

Three to five years ago data were aggregated at the central (national) level and then collected from partners (e.g., PEPFAR) and aggregated with national data to report on output, global indicators. These data were of poor quality – transcription errors, doubling counting and lack of standardized definitions. There was limited analysis and use at sub-national levels. Indicators and data collection tools were harmonized among partners (e.g., USG, UN and Nigerian universities) between 2010 and 2012 in order for Nigeria to report nationally. Data quality has improved as a result of training efforts and the harmonization process. States now analyze and use data, which is overseen by State Action Committees (SACs). This most significant change in the national HIV M&E system is a result of training and harmonization of tools among partners.

Can you tell me about how the indicator and data collection tool harmonization and what changes have resulted to strengthen the M&E system as a result?

*Probe: Explore any change language with Who, What, Why, When, Where and How probes.*

Can you tell me about data quality improvement and what changes have resulted to strengthen the M&E system as a result?

*Probe: Explore any change language with Who, What, Why, When, Where and How probes.*

Can you tell me the use of routine data at state level and if that has resulted in a stronger M&E system?

*Probe: Explore any change language with Who, What, Why, When, Where and How probes.*

How has the National Operational Plan put to use? How has it affected the national HIV M&E system?

*Probe: Explore any change language with Who, What, Why, When, Where and How probes.*

How are national guidelines on supply chain management in use? How were they developed? When? How have they strengthened the national HIV M&E system?

*Probe: Explore any change language with Who, What, Why, When, Where and How probes.*

### **Component 8: Surveys and Surveillance and Component 10: Evaluation and Research<sup>41</sup>**

During the self-assessment workshop, surveys, surveillance, evaluation and research were highlighted as very strong in Nigeria's national HIV M&E system.

Can you tell me about the use of survey and surveillance data and what changes have resulted to strengthen the M&E system as a result?

*Probe: Explore any change language with Who, What, Why, When, Where and How probes.*

Can you tell me about how Second-Generation Surveillance has been implemented and if that has resulted in a stronger M&E system?

*Probe: Explore any change language with Who, What, Why, When, Where and How probes.*

Can you tell me about the Survey & Surveillance Inventory and/or National HIV Research Agenda have evolved and what changes have resulted to strengthen the M&E system as a result?

*Probe: Explore any change language with Who, What, Why, When, Where and How probes.*

Is biological surveillance, national surveys or surveillance with a biological component (e.g., NARHS, DHS and MICS), national level workplace surveys, national level school-based surveys and health facility surveys are conducted in Nigeria every two years according to a schedule that is outlined in (a) the HIV-related survey inventory and/or (b) the national HIV M&E plan?

*Probe: Explore any change language with Who, What, Why, When, Where and How probes.*

Can you tell me about the dissemination and use of evaluation/research findings and what changes have resulted to strengthen the M&E system as a result?

*Probe: Explore any change language with Who, What, Why, When, Where and How probes.*

How were surveys and surveillance used in the development of M&E plan and for international reporting?

*Probe: Explore any change language with Who, What, Why, When, Where and How probes.*

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<sup>41</sup> Participants during the self-assessment workshop decided it would be clearer to combine Components 8 and Components 11 during key informant interviews.

Please describe how frequently IBBSS and ANC – have been conducted ever since 2007. Is this fully adherent to a schedule that is outlined in (a) the HIV-related survey inventory and/or (b) the national HIV M&E plan?

*Probe: Explore any change language with Who, What, Why, When, Where and How probes.*

Please describe how Second generation surveillance<sup>42</sup> (secondary analysis of existing biological and behavioral surveillance data, and program monitoring data) has been undertaken in Nigeria? How are 2 G data put to use?

*Probe: Explore any change language with Who, What, Why, When, Where and How probes.*

An HIV National Resource Center has been established at NACA. NACA and FMOH websites also act as the inventory of HIV related surveys conducted in Nigeria and are updated regularly. Bibliographies exist but are not routinely updated. How are these various “inventories” maintained and coordinated between each other? What changes have resulted to strengthen the M&E system as a result of these various inventories?

*Probe: Explore any change language with Who, What, Why, When, Where and How probes.*

Please describe how National Health Research Ethics Committee (NHREC) functions as an ethics committee. What is its mandate? Who was engaged in its formation/revision? How well does it function? What is the quality of its reviews? What is the average duration for review? What changes have resulted to strengthen the M&E system as a result of NHREC?

*Probe: Explore any change language with Who, What, Why, When, Where and How probes.*

Please describe how NACA’s research agenda was developed, how often it is updated, what organizations are involved in it, how stakeholders and committees feed into it and its level of responsiveness and functionality.

*Probe: Explore any change language with Who, What, Why, When, Where and How probes.*

Are evaluation and research findings are regularly disseminated? If yes, how, when, by whom, for what purpose? If not, why not?

*Probe: Explore any change language with Who, What, Why, When, Where and How probes.*

How are HIV research and evaluation findings used in policy formation, planning and implementation by decisions are still influenced by other factors or situations?

*Probe: Explore any change language with Who, What, Why, When, Where and How probes.*

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<sup>42</sup> Second generation surveillance for HIV/AIDS is the regular, systematic collection, analysis and interpretation of information for use in tracking and describing changes in the HIV/AIDS epidemic over time that also gathers information on risk behaviors, using them to warn of or explain changes in levels of infection. Second generation surveillance includes STI surveillance to monitor the spread of STI in populations at risk of HIV and behavioral surveillance to monitor trends in risk behaviors over time (WHO, 2013: <http://www.who.int/hiv/topics/surveillance/2ndgen/en/>).

## Component 9: Databases

There are a number of developments in national and sub-national databases contributing the national HIV M&E system. I am going to attempt to clarify the difference between NHMIS, PEPFAR DHIS, NACA DHIS, DHIS 2.0 and eNNRIMS.

What can you tell me about the databases in use in Nigeria to collate and store HIV data?

*Probe: Explore any change language with Who, What, Why, When, Where and How probes.*

How do they interact? Through, for example, the HMIS or another system?

*Probe: Explore any change language with Who, What, Why, When, Where and How probes.*

How were they developed?

*Suggested probes: What specifically happened? What was Government's role? How much external technical and/or financial support was needed? Could this have been accomplished without this external support? What capacity development activities were required? What was the role of development partners (e.g., PEPFAR, The UN Family, The World Bank and other bi-laterals)? What were critical lessons learnt? What are the plans for sustaining this overtime?*

How did the process of link these databases with HMIS gone?

*Suggested probes: What specifically happened? What was Government's role? How much external technical and/or financial support was needed? Could this have been accomplished without this external support? What capacity development activities were required? What was the role of development partners (e.g., PEPFAR, The UN Family, The World Bank and other bi-laterals)? How would you describe the integration of these three databases? What were critical lessons learnt? What are the plans for sustaining this overtime?*

What is significant about this development?

*Probe: Explore any change language with Who, What, Why, When, Where and How probes.*

Is there anything else that these databases have caused to change in the HIV M&E system?

*Probe: Explore any change language with Who, What, Why, When, Where and How probes.*

Is there anything else that these databases have caused to change in the overall health M&E system?

*Probe: Explore any change language with Who, What, Why, When, Where and How probes.*

Are there any other databases in use that are data sources for the HIV or overall health sector M&E System?

*Suggested probes: What are they? When did they come online? What value have they added to the M&E system?*

How have these databases affected data quality?

*Probe: Explore any change language with Who, What, Why, When, Where and How probes.*

## Component I0: Supportive Supervision and Data Quality

Nigeria currently uses the RDQA Tool for national DQA assessments, according to the self-assessment workshop participants.

*[Gear the conversation towards discussing how supervision to strengthen the M&E system has been implemented and not how supervision has strengthen the actual program.]*

Can you explain how the RDQA Tool is implemented?

*Suggested probes: What specifically happened? What was Government's role? How much external technical and/or financial support was needed? Could this have been accomplished without this external support? What capacity development activities were required? What was the role of development partners (e.g., PEPFAR, The UN Family, The World Bank and other bi-laterals)? What were critical lessons learnt? What are the plans for sustaining this overtime?*

How is it used for supportive supervision?

*Probe: Explore any change language with Who, What, Why, When, Where and How probes.*

How is it used for data quality assurance?

*Probe: Explore any change language with Who, What, Why, When, Where and How probes.*

How has the national HIV M&E system been strengthened as a result of implementing the RDQA Tool?

*[For each intervention repeat the following questions.]*

Who provides the supervision?

Who receives the supervision?

What organization funds these visits? From where are resources mobilized to fund such visits?

Who reports on these visits?

What is supposed to happen during a supportive supervision visit? Is there a guideline that describes this?

What actually typically happens during a supportive supervision visit?

Have you ever participated in a supportive supervision visit? (If no, skip to question 41)

What happened during your visit?

How is information from supportive supervision visits normally put to use?

What change have you seen in the national HIV M&E system that you attribute to these visits?

What value has that change added to the national HIV M&E system?

What change have you seen in the national health M&E system that you attribute to these visits?

What value has that change added to the national health M&E system?

Is there anything else you would like to add about how supportive supervision has strengthened the M&E system for HIV, health or both HIV and health?

## Conclusion

Thank you for your time and contribution to this activity. I would like to ask four more short questions to double check that I have captured everything you deem most important about what we discussed today.

What is the most important message that you want us to take away from this interview?

Is there anything else that you would like to add about any of the topics that we've discussed?

*Probe by highlighting areas you thought were critical. If you noted specific questions, comments and/or concerns about those areas, use those to probe now.*

Are there any documents you suggested we should review?

Is there anyone else you think we need to talk to about this topic?

Is there anything last thought you would like to share?

Thanks for all of this very useful information. We will be holding a Stakeholder Validation Meeting on Friday, 07 February. During this meeting we will be presenting the synthesized findings from this interview and others along with data extracted from the national HIV M&E system. We will ask participants at this meeting to validate these initial findings. I would like to invite you to this meeting and hope that you can participate. I will send you an email with all of the details this evening. [Confirm participant's email and telephone number(s).]

Nigeria will benefit from The Case Study by it highlighting sound, evidence-based recommendations and guidance for future M&E systems strengthening activities. The Case Study will also contribute to the development of a body of knowledge on systematic approaches and best practices for measuring M&E system strengthening by documenting how activities intended to build and/or strengthen M&E systems have resulted in improved data quality and availability that has led to greater data use.

Again, thank you for your time.

[End at \_\_\_\_ : \_\_\_\_]

## Appendix 5: List of Verification Workshop Participants

| Name                 | Position                                        | Organization                         |
|----------------------|-------------------------------------------------|--------------------------------------|
| Abatta, Emanuel      | Head, SI                                        | NASCP                                |
| Adebayo, Olufunsho   | Director, M&E                                   | Family Health International 360      |
| ADEGOKE, Adekunle    | Office Manager                                  | MEASURE Evaluation                   |
| Adeoye, Ronke        | Principal Program Officer                       | NACA                                 |
| Aderemi, Azeez       | Director, DPRS                                  | FMOH                                 |
| Agbo, Francis        | M&E; Program Unit (AD SKM)                      | NACA                                 |
| Akpan, Raphael       | Program Specialist, HMIS                        | CDC                                  |
| AMADIEGWU, Stanley   | Senior Resident OVC Advisor                     | MEASURE Evaluation                   |
| Aminu                | Administrator                                   | FMOH/NHREC                           |
| Atobatele, Akin      | M&E Manager                                     | USAID-Nigeria                        |
| Balogun, Adeleke     | Head of ICT Branch                              | FMOH/DPRS                            |
| BAMBIDELE, Samson    | Country Lead                                    | MEASURE Evaluation                   |
| Bashorun, Adebobola  | Senior Medical Officer; Head, Surveillance Unit | FMOH                                 |
| Dalhatu, Ibrahim     | Medical Epidemiologist                          | CDC                                  |
| DARE, Ms., Elizabeth | Administration and Communication Assistant      | MEASURE Evaluation                   |
| Adeyemo, Olufunke    | MO/SI/ART-MIS                                   | FMOH/NASCP                           |
| Ekong, Eunice        | P.O SI                                          | IHVN                                 |
| Fagbemi, Ayo         | Senior M&E Specialist                           | Family Health International C-Change |
| Fajemisin, Wole      | M&E PA                                          | ENR                                  |
| Idepeto, Festus      | M&E Officer                                     | NACA                                 |
| Ikani, Samuel        | R&M Officer                                     | Society for Family Health            |
| JAHUN, Ibrahim       | Special Surveillance                            | CDC                                  |

| <b>Name</b>        | <b>Position</b>                            | <b>Organization</b>                             |
|--------------------|--------------------------------------------|-------------------------------------------------|
| Jalingo, Mr.       | Lead, DHS                                  | National Population Commission                  |
| Kawu, Dr., Issa    | Director, SI Department                    | FMOH                                            |
| KOGUNA, Nafysah    | Finance & Administration Officer           | MEASURE Evaluation                              |
| Mamman, Charles    | Chief Medical Officer, M, E & Surveillance | National Primary Health Care Development Agency |
| Morka Mercy        | SSO                                        | NASCP                                           |
| Ngige, Evelyn      | National Coordinator                       | FMOH/HAD                                        |
| NWAJIAKU, Joy      | Administrative Assistant                   | MEASURE Evaluation                              |
| Nwaokenneya, Peter | SMO, M&E                                   | FMOH/NASCP                                      |
| Nzima, Masauso     | Senior SI Advisor                          | UNAIDS                                          |
| Obi, Oluchi        | M&E Officer                                | NACA                                            |
| Ochu, Tessy        | DDU Advisor                                | MEASURE Evaluation                              |
| Odunlami, Adepeju  | Research                                   | NACA                                            |
| Ogundiran, Niyi    | NPO                                        | WHO                                             |
| Ogungbemi, Kayode  | Director SKM                               | NACA                                            |
| Oloyode            | Pharmacist, Logistics Unit                 | NASCP                                           |
| OLUSESAN, Makinde  | HIS Advisor                                | MEASURE Evaluation                              |
| Oluwagbemiga, Jeph | State Coordinator                          | MEASURE Evaluation                              |
| SALIHU, Dr., Shehu | OVC M&E Advisor                            | MEASURE Evaluation                              |
| SEGILOLA, Araoye   | Director PDA                               | NASCP                                           |
| Shuaibu Indabawa   | AGM M&E                                    | National Health Insurance Scheme                |
| Terebao, Feyikemi  | Programme Assistant                        | NACA                                            |
| Terpase, Aluka     |                                            | HISP                                            |
| Ugbena, Richard    | M&E Advisor                                | Nigeria M&E Management Services II              |
| Urua, Utibe        | Deputy Director, HISD                      | National Primary Health Care Development Agency |

## Appendix 6: List of Indicators, Nigeria

| #                                                                                                                                                                                                                             | Indicator                                                                                                                                                                                                                            | In Use | Data Available |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|----------------|
| Research Question #1: How do key stakeholders perceive national level commitment to its health information systems (a subset of the M&E system) to have changed during the course of M&E systems strengthening interventions? |                                                                                                                                                                                                                                      |        |                |
| 4                                                                                                                                                                                                                             | Instances where country organizations or programs request and/or secure funding for M&E or HIS staff and/or activities <sup>43</sup>                                                                                                 | YES    | NO             |
| 5                                                                                                                                                                                                                             | Percentage of activities in the national M&E work-plan that are allocated to at least one lead host-country agency for implementation (line ministry, etc.) <sup>44</sup>                                                            | YES    | NO             |
| 6                                                                                                                                                                                                                             | Percentage of total cost of the current year national M&E work plan which has been secured <sup>45</sup>                                                                                                                             | YES    | NO             |
| 7                                                                                                                                                                                                                             | Percentage of total budget for the current year national HIV M&E work plan which will be funded by government <sup>46</sup>                                                                                                          | YES    | NO             |
| 8                                                                                                                                                                                                                             | Percentage of total program budget allocated to M&E <sup>47</sup>                                                                                                                                                                    | YES    | NO             |
| Research Question #2: How has M&E system performance improved as a result of M&E systems strengthening interventions?                                                                                                         |                                                                                                                                                                                                                                      |        |                |
| 33                                                                                                                                                                                                                            | Percentage of regional, national, or sub-national institutions assisted in M&E/HIS strengthening by MEASURE Evaluation that demonstrate increased capacity to independently carry out M&E/HIS activities independently <sup>48</sup> | YES    | NO             |

<sup>43</sup> Source: MEASURE Evaluation 2012, Indicator 1.1.

<sup>44</sup> Source: UNAIDS MERG 2010, page 27, question 1.4.

<sup>45</sup> Source: UNAIDS MERG 2010, page 31, question 4.2.

<sup>46</sup> Source: UNAIDS MERG 2010, page 31, question 4.3.

<sup>47</sup> Source: The Global Fund et al. 2007.

<sup>48</sup> Source: MEASURE Evaluation, Indicator 2.1, 2012.

| #                                                                                                                                                                                                                                 | Indicator                                                                                                                                   | In Use | Data Available |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|--------|----------------|
| I                                                                                                                                                                                                                                 | Percentage of M&E plan indicators reported against (for strategic period or fixed year as defined by the National M&E Plan) <sup>49</sup>   | YES    | YES            |
| 20                                                                                                                                                                                                                                | Percentage of expected reports received from districts on time <sup>50</sup>                                                                | YES    | NO             |
| 22                                                                                                                                                                                                                                | % of expected reports received from service sites (facilities or NGOs/CBOs) <sup>51</sup>                                                   | YES    | NO             |
| 26                                                                                                                                                                                                                                | Percentage of districts receiving feedback from data submitted through RHIS <sup>52</sup>                                                   | YES    | NO             |
| 29                                                                                                                                                                                                                                | Joint reviews of the HIV response takes place during annual reporting, mid-term and end-of term NSP reviews <sup>53</sup>                   | YES    | NO             |
| 30                                                                                                                                                                                                                                | The HIV research and evaluations findings are being used in policy formulation, planning and implementation <sup>54</sup>                   | YES    | NO             |
| 31                                                                                                                                                                                                                                | There are guidelines to support the analysis, presentation and use of data (e.g. graphs on walls showing cumulative coverage) <sup>55</sup> | YES    | NO             |
| NG 4                                                                                                                                                                                                                              | The number of states that submit their reports on timely basis                                                                              | YES    | YES            |
| NG 5                                                                                                                                                                                                                              | Percentage of subnational reports submitted that are complete and submitted on time                                                         | YES    | NO             |
| Research Question #3: How has capacity of individuals – and organization's ability to absorb and put to use that capacity – improved as a result of M&E capacity development interventions designed to strengthen the M&E system? |                                                                                                                                             |        |                |

<sup>49</sup> Source: UNAIDS MERG 2010, page 39, question 16, and page 40, question 2.

<sup>50</sup> Source: Aqil et al. 2009; The Global Fund et al. 2007.

<sup>51</sup> Source: Aqil et al. 2009; The Global Fund et al. 2007.

<sup>52</sup> Source: Aqil et al. 2009.

<sup>53</sup> Source: UNAIDS MERG 2010, page 48, question 2.1.

<sup>54</sup> Source: UNAIDS MERG 2010, page 47, question 1.8.

<sup>55</sup> Source: UNAIDS MERG 2010, page 49, question 5.

| #                                                                                                                                  | Indicator                                                                                                                                                                                             | In Use | Data Available |
|------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|----------------|
| 9                                                                                                                                  | Percentage of surveys and surveillance activities planned for in the research inventory implemented within past 12 months <sup>56</sup>                                                               | YES    | NO             |
| 15                                                                                                                                 | Percentage of required DC points with computers to support capture <sup>57</sup>                                                                                                                      | YES    | NO             |
| 16                                                                                                                                 | Percentage of human resources required to support IT efforts available <sup>58</sup>                                                                                                                  | YES    | NO             |
| 17                                                                                                                                 | Percentage of identified sites receiving a supervision visit in the last 6 months as per national standards <sup>59</sup>                                                                             | YES    | NO             |
| 32                                                                                                                                 | Percentage of evaluation agenda implemented during the past completed year that have been disseminated and discussed by identified key stakeholders <sup>60</sup>                                     | YES    | NO             |
| Research Question #4: What is the degree to which the M&E system draws its data directly from national health information systems? |                                                                                                                                                                                                       |        |                |
| 14                                                                                                                                 | There is a functional integrated database for electronically capturing and storing data on a wide range of health services (including but not necessarily limited to HIV/AIDS services) <sup>61</sup> | YES    | NO             |

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<sup>56</sup> Source: UNAIDS MERG 2010, page 40, question 1.

<sup>57</sup> Source: UNAIDS MERG 2010, page 43, question 4.

<sup>58</sup> Source: UNAIDS MERG 2010, page 43, question 6.

<sup>59</sup> Source: UNAIDS MERG 2010, page 44, question 2.

<sup>60</sup> Source: UNAIDS MERG 2010, pages 46-48.

<sup>61</sup> Source: UNAIDS MERG 2010, page 43, question 2.

## Appendix 7: Timeline of Key Achievements

| Year | Event                                                                                                                                                                                                                                                                                                                                                                                         |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2007 | Rapid scale-up of HIV program required revision to the Nigerian National Routine Information Management System<br>HIV Nigerian National Routine Information Management System National Operational Plan I, 2007–2010 developed<br>Antiretroviral therapy, HIV testing and counseling, and prevention of mother-to-child (PMTCT) transmission of HIV/AIDS indicators selected to be harmonized |
| 2008 | HIV, tuberculosis, and malaria facility-based data harmonized and integrated into one form for use by health centers<br>National Joint Routine Data Quality Assessment Tool <sup>62 63</sup> implemented<br>Antenatal clinic surveillance begins to use routine PMTCT data to estimate HIV prevalence                                                                                         |
| 2009 | 12 Components Assessment using the 12 Components M&E Systems Strengthening Tool <sup>64</sup> led to indicator harmonization, DHIS 2.0, implementation of a joint routine data quality assessment tool, and development of the national research agenda                                                                                                                                       |
| 2010 | HIV program indicator harmonization process kicked off with stakeholder meetings<br>Electronic Nigerian National Routine Information Management System rolled out to 200 health service delivery points in 20 states                                                                                                                                                                          |
| 2011 | National HIV and AIDS Monitoring and Evaluation Plan, 2011–2016 adapted<br>National HIV/AIDS data collection tools review meeting<br>Quarterly data validation meetings first conducted by Federal Ministry of Health's Strategic Information unit to meet the Global Fund and World Bank mandate                                                                                             |
| 2012 | Agreement among partners and stakeholders on 70 operationally defined indicators and data collection tools developed for antiretroviral therapy, HIV testing and counselling, and PMTCT of HIV                                                                                                                                                                                                |

<sup>62</sup> MEASURE Evaluation. (2009). Performance of Routine Information System Management, PRISM Tools for Assessing, Monitoring, and Evaluating RHIS Performance.

<sup>63</sup> The Global Fund to Fight Aids, Tuberculosis and Malaria, Office of the Global AIDS Coordinator, PEPFAR, USAID, WHO, UNAIDS, MEASURE Evaluation. Routine Data Quality Assessment Tool, Guidelines for Implementation for HIV, TB & Malaria Programs, June 2008.

<sup>64</sup> UNAIDS Monitoring and Evaluation Reference Group (MERG). (2010). The 12 components monitoring and evaluation systems strengthening tool. Geneva (Switzerland): UNAIDS.

## Appendix 8: List of Indicators Reported against in Annual Reports

$$51\% = \frac{36}{70}$$

(# of NOP II Indicators with data in AR)  
(# of Indicators in NOP II)

**Table I: NOP II Indicators Not Listed in the Draft 2011 Annual Report**

| NOP II Indicator                                                                                                                                          | Count |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|-------|
| PMI: Percentage of infants born to HIV-infected mothers who are infected with HIV                                                                         | 1     |
| ICMI: Percentage of exposed persons provided with post-exposure prophylaxis (PEP)                                                                         | 2     |
| HRHI: Number of health care workers who successfully completed an in-service training program within the reporting period according to national guideline | 3     |
| T3: Percentage of HIV-infected pregnant women receiving ART for their own health during the reporting period                                              | 4     |
| T4: Number of adults and children on ART a) newly enrolled b) ever started                                                                                | 5     |
| LAB1: Percentage of HIV reference laboratories that are accredited according to national standards                                                        | 6     |
| LAB2: Number of health facilities that provide virological testing services (e.g. PCR) for infant diagnosis on site or through dried blood spots (DBS)    | 7     |
| LAB3: Number of facilities providing ART that use CD4 monitoring in line with national guidelines/policies, on site or through referral                   | 8     |
| HSG1: Number of States with costed annual workplan derived from State Strategic Plan                                                                      | 9     |
| HSG2: Number of LGAs with costed annual workplan derived from State Strategic Plan                                                                        | 10    |
| HSF1: Total domestic and international AIDS spending by categories and financing sources out                                                              | 11    |

|                                                                                                                                                                                                    |    |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| of total AIDS spending <sup>65</sup>                                                                                                                                                               |    |
| HSF2: Percentage of total public expenditure (health, communication, education, defence) dedicated to HIV/AIDS <sup>66</sup>                                                                       | 12 |
| HSD1: Percentage of pregnant women MAKING AT LEAST 4 ANC visits according to the national protocol                                                                                                 | 13 |
| HCT1: Percentage of women and men who received HIV C&T and received their results through HCT sites in the reporting period                                                                        | 14 |
| HCT2: Percentage of women and men with Sexually Transmitted Infection (STI) who received HCT and received their results in the reporting period                                                    | 15 |
| HCT5: Percentage of women and men who tested positive for HIV during the reporting period                                                                                                          | 16 |
| HCT6: Number of facility that experienced a stock-out of any test kits during the reporting period                                                                                                 | 17 |
| HCT7: HIV Prevalence in the general population                                                                                                                                                     | 18 |
| OVC1: Percentage (number) of vulnerable children with improved wellbeing per a standardized instrument (Child Status Index-CSI) as related to the service areas <sup>67</sup>                      | 19 |
| OVC3: Ratio of school attendance of orphans to school attendance of non-orphans aged 10-14 years                                                                                                   | 20 |
| OVC4: Percentage of orphans and vulnerable children whose households received free basic external support in caring for the child <sup>68</sup>                                                    | 21 |
| OVC5: Number of organizations and agencies that provide services to OVC demonstrating at least one score improvement in at least one area of capacity building, as measured by a OVC national tool | 22 |
| TB/HIV3: Percentage of TB patients Screened for HIV in TB care or treatment settings.                                                                                                              | 23 |

<sup>65</sup> Sections 5.1 – Summary of 2011 Appropriations and Expenditures, 5.2.1 – GFATM Grant, and 5.2.2 World Bank HPDP begin to2 provide data required for this indicator.

<sup>66</sup> Sections 5.1 – Summary of 2011 Appropriations and Expenditures, 5.2.1 – GFATM Grant, and 5.2.2 World Bank HPDP begin to provide data required for this indicator.

<sup>67</sup> Indicator listed in Draft 2011 Annual Report but data were not reported against it

<sup>68</sup> Indicator listed in Draft 2011 Annual Report but data were not reported against it

|                                                                                                                                                                                                                   |    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| TB/HIV4: Number of HIV patients currently in care who commenced TB Treatment                                                                                                                                      | 24 |
| SBC4: Percentage of People Living with HIV/AIDS (PLWHA) reached with individual and/or small group level minimum prevention package (MPP) interventions                                                           | 25 |
| SBC13: Percentage of men aged 15-64 reporting sex with a sex worker in the last 12 months who used a condom during last sexual intercourse                                                                        | 26 |
| SBC14: Percentage of most-at-risk populations who both correctly identify ways of preventing the sexual transmission of HIV and who reject major misconceptions about HIV transmission                            | 27 |
| SBC15: Percentage of women and men aged 15-49 who have had sex with a non-marital, non-cohabiting sexual partner in the last 12 month                                                                             | 28 |
| SBC19: Number of states with anti-stigma and discrimination law                                                                                                                                                   | 29 |
| BSI: Percentage of donated blood units screened for HIV according to National guidelines                                                                                                                          | 30 |
| CSI: Number of people living with HIV and people affected with HIV/AIDS provided with a minimum of one clinical care service (PLWH, PABA)                                                                         | 31 |
| CS2: Number of adult and children enrolled in HIV care: (a) new and (b) current (c) ever enrolled in the facility.                                                                                                | 32 |
| GI: Number of male and female reached by an individual, small-group, or community-level intervention or service that explicitly addresses the legal rights and protection of women and girls impacted by HIV/AIDS | 33 |
| OTI: National Composite Policy Index                                                                                                                                                                              | 34 |

**Table 2: List of Indicators Reported in Draft 2011 Annual Report that are Identical to NOP II Indicators**

| NOP II Indicator                                                               | Count |
|--------------------------------------------------------------------------------|-------|
| CS4: Number of People Living with HIV/AIDS (PLHIV) receiving Adherence Support | 1     |

**Table 3: Difference between AR Draft Listed Indicators and NOP II Indicators**

| NOP II Indicator                                                                                                                                                                                          | AR §6.1 Universal Access Indicators                                                                                                                                                                                             | AR §6.2 UNGASS Indicators                                                                                                | AR §6.3 Other Key National Statistics 2011 Indicators |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|
| PM2: Percentage of HIV positive pregnant women who receive antiretroviral medicines to reduce the risk of mother-to-child transmission (according to the national guidelines) during the reporting period | Percentage of HIV-positive pregnant women who receive antiretrovirals to reduce the risk of mother-to-child transmission                                                                                                        | Percentage of HIV-positive pregnant women who receive antiretrovirals to reduce the risk of mother-to-child transmission | Not reported in this section                          |
| PM3: Percentage of pregnant women who received HIV counseling and testing, and received their test results during pregnancy, labour, delivery and the post-partum                                         | Percentage of pregnant women who were tested for HIV and received their results - during pregnancy, during labour and delivery, and during the post-partum period (<72 hours), including those with previously known HIV status | Not reported in this section                                                                                             | Not reported in this section                          |
| PM4: Percentage of infants born to HIV-infected women (HIV-exposed                                                                                                                                        | Percentage of infants born to HIV-infected women receiving ARV for                                                                                                                                                              | Not reported in this section                                                                                             | Not reported in this section                          |

| NOP II Indicator                                                                                                                                       | AR §6.1 Universal Access Indicators                                                                                                                                                                                                                                                                            | AR §6.2 UNGASS Indicators                                                                                      | AR §6.3 Other Key National Statistics 2011 Indicators |
|--------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|
| infants) receiving antiretroviral prophylaxis to reduce the risk for mother-to-child transmission                                                      | <p>prophylaxis for the prevention of mother-to-child transmission (PMTCT) in the first 6weeks.</p> <p>-and-</p> <p>Percentage of infants born to HIV infected women who are provided with antiretrovirals(either mother or infant) to reduce the risk of HIV transmission during the breast feeding period</p> |                                                                                                                |                                                       |
| PM5: Number of infants born to HIV-infected women, who were started on cotrimoxazole (CTX) prophylaxis                                                 | Percentage of infants born to HIV-infected women started on co-trimoxazole (CTX) prophylaxis within two months of birth                                                                                                                                                                                        | Not reported in this section                                                                                   | Not reported in this section                          |
| PM6: Percentage of infants born to HIV-infected women, who received virological test for HIV within 2 months of birth                                  | Percentage of infants born to HIV-positive women receiving a virological test for HIV within 2 months of birth                                                                                                                                                                                                 | Percentage of infants born to HIV-positive women receiving a virological test for HIV within 2 months of birth | Not reported in this section                          |
| PM7: Percentage of HIV infected pregnant women assessed for ART eligibility through either clinical staging or CD4 testing during the reporting period | Percentage of HIV-infected pregnant women assessed for ART eligibility through either clinical staging or CD4 testing                                                                                                                                                                                          | Not reported in this section                                                                                   | Not reported in this section                          |

| NOP II Indicator                                                                                                                                | AR §6.1 Universal Access Indicators                                                                                                                                             | AR §6.2 UNGASS Indicators                                                                                                | AR §6.3 Other Key National Statistics 2011 Indicators |
|-------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|
| T1: Percentage of HIV positive adults and children who are eligible and currently receiving ART                                                 | Percentage of eligible adults and children currently receiving antiretroviral therapy                                                                                           | Percentage of eligible adults and children currently receiving antiretroviral therapy                                    | Not reported in this section                          |
| T2: Percentage of adults and children enrolled in HIV care currently receiving CTX prophylaxis                                                  | Percentage of adults and children enrolled in HIV care and eligible for co-trimoxazole (CTX) prophylaxis (according to national guidelines) currently receiving CTX prophylaxis | Not reported in this section                                                                                             | Not reported in this section                          |
| T5: Percentage of adults and children with HIV known to be on treatment 12, 24, 36, 48, 60 months after initiation of antiretroviral therapy    | Percentage of adults and children with HIV known to be on treatment 12 months after initiation of antiretroviral therapy                                                        | Percentage of adults and children with HIV known to be on treatment 12 months after initiation of antiretroviral therapy | Not reported in this section                          |
| HSM1: Percentage of health facilities dispensing ARVs that experienced a stock-out of at least one required ARV in each quarter                 | Percentage of health facilities dispensing ARVs that have experienced a stock-out of at least one required ARV in the last 12 months                                            | Not reported in this section                                                                                             | Not reported in this section                          |
| HCT3: Percentage of women and men aged 15 and above who received an HIV Counseling and testing in the last 12 months and who know their results | Number of women and men aged 15 and older who received testing and counseling in the past 12 months and know their results                                                      | Percentage of women and men aged 15-49 who received an HIV test in the past 12 months and know their results             | Not reported in this section                          |

| NOP II Indicator                                                                                                                                                | AR §6.1 Universal Access Indicators                                                                                                                                                                                                                                                                                                                                                       | AR §6.2 UNGASS Indicators                                                                                                                                                                                                                                                                                                                                                                 | AR §6.3 Other Key National Statistics 2011 Indicators                                                                                                                  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| HCT4: Percentage of most-at-risk populations (IDU, MSM, FSW) who received an HCT in the last 12 months and who know their results                               | <p>Percentage of sex workers who have received an HIV test in the past 12 months and know their results</p> <p>-and-</p> <p>Percentage of men who have sex with men that have received an HIV test in the past 12 months and know their results</p> <p>-and-</p> <p>Percentage of people who inject drugs that have received an HIV test in the past 12 months and know their results</p> | <p>Percentage of sex workers who have received an HIV test in the past 12 months and know their results</p> <p>-and-</p> <p>Percentage of men who have sex with men that have received an HIV test in the past 12 months and know their results</p> <p>-and-</p> <p>Percentage of people who inject drugs that have received an HIV test in the past 12 months and know their results</p> | Not reported in this section                                                                                                                                           |
| HCT8: Percentage of young women and men aged 15-24 who are HIV infected                                                                                         | Not reported in this section                                                                                                                                                                                                                                                                                                                                                              | Percentage of young people aged 15-24 who are living with HIV                                                                                                                                                                                                                                                                                                                             | Not reported in this section                                                                                                                                           |
| OVC1: Percentage (number) of vulnerable children with improved wellbeing per a standardized instrument (Child Status Index-CSI) as related to the service areas | Not reported in this section                                                                                                                                                                                                                                                                                                                                                              | Not reported in this section                                                                                                                                                                                                                                                                                                                                                              | Number of OVC who have improved quality of life per a standardized instrument as related to the service areas e.g. one score improvement on child status <sup>69</sup> |

<sup>69</sup> No data were reported for this indicator and not counted in the numerator

| NOP II Indicator                                                                                                                        | AR §6.1 Universal Access Indicators                                                                                     | AR §6.2 UNGASS Indicators                                                                          | AR §6.3 Other Key National Statistics 2011 Indicators                                                                                 |
|-----------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| OVC2: Number of vulnerable children provided with social services                                                                       | Not reported in this section                                                                                            | Not reported in this section                                                                       | Number of orphans and vulnerable children (OVC) receiving services                                                                    |
| OVC4: Percentage of orphans and vulnerable children whose households received free basic external support in caring for the child       | Not reported in this section                                                                                            | Not reported in this section                                                                       | Number of orphans and vulnerable children whose households received free basic external support in caring for the child <sup>70</sup> |
| TB/HIV1: Percentage of estimated HIV-positive incident TB cases that received treatment for TB and HIV                                  | Percentage of estimated HIV-positive incident TB cases that received treatment for both TB and HIV                      | Percentage of estimated HIV-positive incident TB cases that received treatment for both TB and HIV | Not reported in this section                                                                                                          |
| TB/HIV2: Percentage of HIV-positive patients who were screened for TB in HIV care or treatment settings                                 | Percentage of adults and children enrolled in HIV care who had TB status assessed and recorded during their last visit. | Not reported in this section                                                                       | Not reported in this section                                                                                                          |
| TB/HIV5: Number of patients newly enrolled into HIV care and are given treatment for latent TB infection (isoniazid preventive therapy) | Percentage of adults and children newly enrolled in HIV care starting isoniazid preventive therapy (IPT)                | Not reported in this section                                                                       | Not reported in this section                                                                                                          |

<sup>70</sup> No data were reported for this indicator and not counted in the numerator

| NOP II Indicator                                                                                                                                                          | AR §6.1 Universal Access Indicators | AR §6.2 UNGASS Indicators                                                                                                                                           | AR §6.3 Other Key National Statistics 2011 Indicators                                                   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|
| SBC1: Percentage of young women and men who have had sexual intercourse before the age of 15                                                                              | Not reported in this section        | Percentage of young women and men who have had sexual intercourse before the age of 15                                                                              | Not reported in this section                                                                            |
| SBC2: Percentage of schools that provided life skills-based HIV education within the last academic year (yearly)                                                          | Not reported in this section        | Not reported in this section                                                                                                                                        | Number of schools that provide life skills-based HIV education within the last academic year            |
| SBC3: Percentage of schools implementing FLHE curriculum                                                                                                                  | Not reported in this section        | Not reported in this section                                                                                                                                        | Number of school implementing FLHE curriculum                                                           |
| SBC5: Percentage of MARPs reached with individual and/or small group level MPP interventions                                                                              | Not reported in this section        | Not reported in this section                                                                                                                                        | Total number of MARPS reached with individual and /or small group level MPP intervention                |
| SBC6: Percentage of people aged 15-24 who correctly identify ways of preventing the sexual transmission of HIV and who reject major misconceptions about HIV transmission | Not reported in this section        | Percentage of people aged 15-24 who correctly identify ways of preventing the sexual transmission of HIV and who reject major misconceptions about HIV transmission | Not reported in this section                                                                            |
| SBC7: Total number of condoms distributed by social marketing outlets in the country                                                                                      | Not reported in this section        | Not reported in this section                                                                                                                                        | Total number of condoms (male) distributed in the country.<br>-and-<br>Total number of condoms (female) |

| NOP II Indicator                                                                                                                                                                | AR §6.1 Universal Access Indicators                                                                 | AR §6.2 UNGASS Indicators                                                                                                                                                 | AR §6.3 Other Key National Statistics 2011 Indicators |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|
|                                                                                                                                                                                 |                                                                                                     |                                                                                                                                                                           | distributed in the country.                           |
| SBC8: Percentage of women and men aged 15–49 who have had more than one sexual partner in the last 12 months reporting the use of a condom during their last sexual intercourse | Not reported in this section                                                                        | Percentage of women and men aged 15–49 who have had more than one sexual partner in the last 12 months reporting the use of a condom during their last sexual intercourse | Not reported in this section                          |
| SBC9: Percentage of respondents aged 15–49 who have had sexual intercourse with more than one partner in the last 12 months                                                     | Not reported in this section                                                                        | Percentage of women and men aged 15–49 who have had more than one sexual partner in the last 12 months                                                                    | Not reported in this section                          |
| SBC10: Percentage of males reporting the use of a condom the last time they had anal sex with a male partner                                                                    | Percentage of men reporting the use of a condom the last time they had anal sex with a male partner | Percentage of men reporting the use of a condom the last time they had anal sex with a male partner                                                                       | Not reported in this section                          |
| SBC11: Percentage of female sex workers reporting the use of a condom with their last client                                                                                    | Percentage of sex workers reporting the use of a condom with their most recent client               | Percentage of sex workers reporting the use of a condom with their most recent client                                                                                     | Not reported in this section                          |
| SBC12: Percentage of injecting drug users reporting the use of a condom the last time they had sexual intercourse                                                               | Percentage of people who inject drugs who report the use of a condom at last sexual intercourse     | Percentage of people who inject drugs who report the use of a condom at last sexual intercourse                                                                           | Not reported in this section                          |

| NOP II Indicator                                                                                                                                      | AR §6.1 Universal Access Indicators                                                                                                                                                                                                                                                                                                                                                       | AR §6.2 UNGASS Indicators                                                                                                                                                                                                                                                                                                                                                                 | AR §6.3 Other Key National Statistics 2011 Indicators |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|
| SBC16: Percentage of most-at-risk populations (IDU, MSM, FSW) who received an HIV test in the last 12 months and who know their results <sup>71</sup> | <p>Percentage of sex workers who have received an HIV test in the past 12 months and know their results</p> <p>-and-</p> <p>Percentage of men who have sex with men that have received an HIV test in the past 12 months and know their results</p> <p>-and-</p> <p>Percentage of people who inject drugs that have received an HIV test in the past 12 months and know their results</p> | <p>Percentage of sex workers who have received an HIV test in the past 12 months and know their results</p> <p>-and-</p> <p>Percentage of men who have sex with men that have received an HIV test in the past 12 months and know their results</p> <p>-and-</p> <p>Percentage of people who inject drugs that have received an HIV test in the past 12 months and know their results</p> | Not reported in this section                          |
| SBC17: Percentage of most-at-risk populations (IDU, MSM, FSW) who are HIV positive                                                                    | <p>Percentage of people who inject drugs who are living with HIV</p> <p>-and-</p> <p>Percentage of men who have sex with men who test positive for HIV</p> <p>-and-</p> <p>Percentage of sex workers who are</p>                                                                                                                                                                          | <p>Percentage of people who inject drugs who are living with HIV</p> <p>-and-</p> <p>Percentage of sex workers who are living with HIV</p>                                                                                                                                                                                                                                                | Not reported in this section                          |

<sup>71</sup> Duplication of Indicator HCT4: Percentage of most-at-risk populations (IDU, MSM, FSW) who received an HCT in the last 12 months and who know their results

| NOP II Indicator                                                                                                                              | AR §6.1 Universal Access Indicators                                                                                                                         | AR §6.2 UNGASS Indicators                                                                                                                                   | AR §6.3 Other Key National Statistics<br>2011 Indicators                                                                                |
|-----------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                               | living with HIV                                                                                                                                             |                                                                                                                                                             |                                                                                                                                         |
| SBC18: Number of high risk groups (female sex workers) reached with HIV/AIDS prevention programs.                                             | Percentage of sex workers reached with HIV prevention programmes<br>-and-<br>Percentage of men who have sex with men reached with HIV prevention programmes | Percentage of sex workers reached with HIV prevention programmes<br>-and-<br>Percentage of men who have sex with men reached with HIV prevention programmes | Not reported in this section                                                                                                            |
| WPI: Percentage of enterprises with an HIV/AIDS workplace policy and implementing programs according to the minimum prevention package        | Not reported in this section                                                                                                                                | Not reported in this section                                                                                                                                | Number of enterprises implementing an HIV/AIDS workplace program, (prevention /care and support treatment) according to minimum package |
| WP2: Percentage of MDAs with HIV/AIDS workplace policy and implementing an HIV/AIDS workplace program (prevention/care and support/treatment) | Not reported in this section                                                                                                                                | Not reported in this section                                                                                                                                | Number of MDAs that have HIV/AIDS policy and programs<br>-and-<br>Number of MDAs that have HIV/AIDS workplace                           |
| ISI: Percentage of injecting drug users reporting the use of sterile injecting equipment the last time they injected                          | Percentage of people who inject drugs who reported using sterile injecting equipment the last time they injected                                            | Percentage of people who inject drugs who reported using sterile injecting equipment the last time they injected                                            | Not reported in this section                                                                                                            |

| NOP II Indicator                                                             | AR §6.1 Universal Access Indicators | AR §6.2 UNGASS Indicators    | AR §6.3 Other Key National Statistics<br>2011 Indicators |
|------------------------------------------------------------------------------|-------------------------------------|------------------------------|----------------------------------------------------------|
| CS3: Number of People Living with HIV/AIDS (PLHIV) receiving home based care | Not reported in this section        | Not reported in this section | Number of HIV/Positive people receiving Home based care  |

**Table 4: Indicators Reported in the Draft 2011 Annual Report but not Listed in the NOP II, 2011–2016**

| Reported Indicators Not in NOP II, 2011–2016                                                                                                                                                                                                 | Where Reported                                                   | Count |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------|-------|
| Percentage of pregnant women attending ANC whose male partner was tested for HIV in the past 12months                                                                                                                                        | AR §6.1 Universal Access Indicators                              | 1     |
| Distribution of feeding practices (exclusive breastfeeding, replacement feeding, mixed feeding/other) for infants born to HIV-infected women at DPT3 visit (Number of infants assessed for and whose infant feeding practices were recorded) | AR §6.1 Universal Access Indicators                              | 2     |
| Number of health facilities providing PMTCT services <sup>72</sup>                                                                                                                                                                           | AR §6.1 Universal Access Indicators                              | 3     |
| Number of pregnant women aged 15 and older who received HIV testing and counseling in the past 12months and know their results                                                                                                               | AR §6.1 Universal Access Indicators                              | 4     |
| Percentage of Health facilities that provide HIV testing and counseling services                                                                                                                                                             | AR §6.1 Universal Access Indicators                              | 5     |
| Number of syringes distributed per person who injects drugs per year by needle and syringe programmes                                                                                                                                        | AR §6.1 Universal Access Indicators<br>AR §6.2 UNGASS Indicators | 6     |
| Number of health facilities that offer ART (i.e. prescribe and/or provide clinical follow-up)                                                                                                                                                | AR §6.1 Universal Access Indicators                              | 7     |
| Mother-to-child transmission of HIV (modelled)                                                                                                                                                                                               | AR §6.2 UNGASS Indicators                                        | 8     |
| Domestic and international AIDS spending by categories and financing with sources                                                                                                                                                            | AR §6.2 UNGASS Indicators                                        | 9     |
| National Commitments and Policy Instruments                                                                                                                                                                                                  | AR §6.2 UNGASS Indicators                                        | 10    |

<sup>72</sup> No data were reported for this indicator in the draft 2011 Annual Report

| Reported Indicators Not in NOP II, 2011–2016                                                                                                                              | Where Reported                                        | Count |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|-------|
| (prevention, treatment, care and support, human rights, civil society involvement, gender, workplace programmes, stigma and discrimination and monitoring and evaluation) |                                                       |       |
| Proportion of ever-married or partnered women aged 15–49 who experienced physical or sexual violence from a male intimate partner in the past 12 months                   | AR §6.2 UNGASS Indicators                             | 11    |
| Current school attendance among orphans and non-orphans aged 10–14*                                                                                                       | AR §6.2 UNGASS Indicators                             | 12    |
| Proportion of the poorest households who received external economic support in the last 3 months                                                                          | AR §6.2 UNGASS Indicators                             | 13    |
| Number of persons trained to provide HIV/AIDS peer education                                                                                                              | AR §6.3 Other Key National Statistics 2011 Indicators | 14    |
| Number of teachers trained to teach FLHE in schools                                                                                                                       | AR §6.3 Other Key National Statistics 2011 Indicators | 15    |
| Number of schools that provide life-skills based HIV education in the last academic year                                                                                  | AR §6.3 Other Key National Statistics 2011 Indicators | 16    |
| Number of students/pupils reached with FLHE                                                                                                                               | AR §6.3 Other Key National Statistics 2011 Indicators | 17    |
| Number of out of school youth reach with prevention education                                                                                                             | AR §6.3 Other Key National Statistics 2011 Indicators | 18    |
| Number of MARPs (female sex workers) reached with individual and/or small group level MPP intervention.                                                                   | AR §6.3 Other Key National Statistics 2011 Indicators | 19    |
| Number of MARPs (armed forces) reached with individual and/or small group level MPP intervention                                                                          | AR §6.3 Other Key National Statistics 2011 Indicators | 20    |
| Number of MARPs (transport workers) reached with individual and/or small group level MPP intervention                                                                     | AR §6.3 Other Key National Statistics 2011 Indicators | 21    |

| Reported Indicators Not in NOP II, 2011–2016                                                | Where Reported                                        | Count |
|---------------------------------------------------------------------------------------------|-------------------------------------------------------|-------|
| Number of MARPs (IDUs) reached with individual and/ or small group level MPP intervention   | AR §6.3 Other Key National Statistics 2011 Indicators | 22    |
| Number of MARPs (MSMs) reached with individual and/or small group level MPP intervention    | AR §6.3 Other Key National Statistics 2011 Indicators | 23    |
| Number of high risk groups (female sex workers) reached with HIV/AIDS prevention programs.  | AR §6.3 Other Key National Statistics 2011 Indicators | 24    |
| Number of high risk groups (armed forces) reached with HIV/AIDS prevention programs         | AR §6.3 Other Key National Statistics 2011 Indicators | 25    |
| Number of high risk groups (transport workers) reached with HIV/AIDS prevention programs.   | AR §6.3 Other Key National Statistics 2011 Indicators | 26    |
| Number of People Living with HIV reached with a minimum package of Prevention with positive | AR §6.3 Other Key National Statistics 2011 Indicators | 27    |
| Number of SACAs that are agencies                                                           | AR §6.3 Other Key National Statistics 2011 Indicators | 28    |
| Number of Donors                                                                            | AR §6.3 Other Key National Statistics 2011 Indicators | 29    |
| Number of Implementing partners                                                             | AR §6.3 Other Key National Statistics 2011 Indicators | 30    |
| Number of network organizations                                                             | AR §6.3 Other Key National Statistics 2011 Indicators | 31    |
| Number of Civil society organizations implementing HIV programmes                           | AR §6.3 Other Key National Statistics 2011 Indicators | 32    |