



HIV EPIDEMIC APPRAISALS IN NIGERIA:
**EVIDENCE FOR PREVENTION
PROGRAMME PLANNING
AND IMPLEMENTATION**
DATA FROM THE FIRST EIGHT STATES

2013



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Evidence for Prevention Programme
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Abbreviations

AIDS	Acquired Immune Deficiency Syndrome
ART	Antiretroviral Therapy
BBF FSW	Brothel-Based-Female Sex Worker(s)
FCT	Federal Capital Territory
FMoH	Federal Ministry of Health
FSW	Female Sex Worker(s)
GARPR	Global AIDS Response Progress Report
HIV	Human Immunodeficiency Virus
IBBSS	Integrated Biological and Behavioural Surveillance Survey
IDU	Injecting Drug User(s)
KI	Key Informants
LGA	Local Government Authorities
MARP	Most At Risk Population
MSM	Men who have Sex with Men
MSW	Male sex workers
NACA	National Agency for the Control of AIDS
NBBF SW	Non-Brothel-Based female Sex Worker(s)
NGO	Non-Governmental Organization
NPTWG	National Prevention Technical Working Group
NSW	Non sex worker
PLWHA	People living with HIV and AIDS
SACA	State Agency for the control of AIDS

Foreword

The National Agency for the Control of AIDS (NACA) has been very pro-active in addressing HIV/AIDS prevention issues by undertaking various syntheses and modeling processes. These processes are based on effective research methodology and have revealed useful planning information on the HIV epidemic in Nigeria. These processes have contributed significantly to the development of the National HIV/AIDS Strategic Plan (NSP, 2010 – 2015) and State HIV/AIDS Strategic Plans.

Research continues to play a vital role in planning for dynamic epidemics. Through research, the NSP (2010 – 2015) has enabled Nigeria deliver targeted interventions resulting in expanded access and uptake of HIV-related services; wider stakeholders participation; increased coverage of more groups with communication interventions; increased attention to vulnerable populations and Most At Risk Populations (MARPs); increased awareness and knowledge of HIV/AIDS; and increased adoption of safer sexual behaviour among young people.

In order to sustain HIV/AIDS prevention, it has become necessary to periodically update repository information on the relevant drivers of HIV transmission within the local context. This would strengthen the coordination of interventions by Agencies responsible for planning HIV response efforts at all levels. It is in this light that NACA has adopted the Programme Science Approach as a means of improving HIV prevention at national, state and local government levels. The Programme Science Approach is based on three pivotal principles—Programme Intelligence, Programme Implementation and Programme Evaluation. This ensures that new information is continually ploughed back into the planning and design of HIV/AIDS programmes.

The Local HIV Epidemic Appraisal is a study which provides useful information for planning HIV prevention programmes at the local level. It enables programme implementers understand the nature and size of the venue-based casual sexual networks; the location, size and typology of risk populations; measure the prevalence of risks for HIV in general population in the selected rural areas; and determine the contextual factors associated with variability in HIV risk in rural areas.

This information has improved the coordination of HIV/AIDS programmes by State Agencies for Control of AIDS (SACAs) through the efficient allocation of resources and prior-

itisation of target populations. This report presents the results of a pioneer Local HIV Epidemic Appraisal conducted in eight states. The significance of this study is drawn from the important results which provide SACAs and their partners with the critical intelligence needed to plan, prioritise and scale up HIV prevention programmes. As NACA strives to strengthen her coordination and collaboration efforts for an effective HIV/AIDS response, it is our expectation that with the support of our partners, this important study may be extended to more states in the nearest future.

A handwritten signature in black ink, appearing to read 'J. Idoko', with a stylized, cursive script.

Professor John Idoko
Director General, National Agency for the Control of AIDS

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The report “HIV Epidemic Appraisals in Nigeria: Evidence for Prevention Programme Planning and Implementation” was produced by the National Agency for the Control of AIDS with technical and financial support from the World Bank. The document provides highly strategic and intelligent surveillance information for the prevention of HIV infection amongst key target and vulnerable populations.

The National Agency for the Control of AIDS (NACA) would like to express its deep appreciation for the efforts and contributions of numerous individuals and organisations to the success of this report. I will like to appreciate the leadership role of the Director General of NACA, Professor John Idoko throughout the period of this project. The contributions of the Director of Programme Department of NACA; Dr Akudo Ikpeazu, the Director of Strategic Knowledge Management Department; Dr Kayode Ogungbemi, the Director of Partnership Coordination; Hajia Maimuna Mohammed and the staff of the three departments are highly appreciated.

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Executive Summary

The World Bank has been providing technical support to Nigeria's National Agency for the Control of AIDS (NACA) and the National Prevention Technical Working Group (NPTWG) to improve the efficiency and effectiveness of HIV prevention services (by improving the planning, design, implementation and evaluation). The World Bank contracted the University of Manitoba to execute, under NACA's leadership, the design of local epidemic appraisal tools for use in all States in the country, as well as technical support for the implementation of local epidemic appraisals. The Government of Nigeria financed the implementation of the epidemic appraisals. The aim of the epidemic appraisals commissioned by the Government of Nigeria is to better characterize the drivers of the HIV epidemic in the country and inform more targeted and efficient programming. This report provides detailed results of the local HIV epidemic appraisals as applied to the first eight states where the appraisals were completed in Nigeria. These results show the relevance and applicability of the method to national and state level planning and provide a robust foundation upon which effective responses can be planned and delivered.

The appraisals were undertaken first in the states of Anambra, Benue, Cross River, FCT Abuja, Gombe, Lagos, Nassarawa and Ondo. The states were selected according to their HIV prevalence, zonal representation and effective World Bank HIV/AIDS Programme Development Project credit. State Agencies for the Control of AIDS (SACAs) in these states used the World Bank credit to finance the epidemic appraisals.

The main purpose of the appraisals in urban areas is to determine who are those most at risk of HIV transmission, the size of the populations concerned and the places where they can be reached with HIV prevention programmes. This includes both most at risk populations, including female sex workers (FSWs), injecting drug users (IDU) and high risk men who have sex with men (MSM), along with others in the general population that are seeking casual sexual partners. In rural areas the appraisals are designed to provide an insight into risk behaviours and sexual networking that occur in villages and small towns. The 'programme intelligence' emerging from the appraisals provides essential evidence upon which strategic HIV prevention programmes can be based. The breadth of coverage of the appraisals and their reach down to the local level are particularly relevant for Nigeria's mixed and heterogeneous epidemic as they provide physical maps of urban 'hot spots' for high risk activities and insights into sexual behaviours and levels of risk at the rural level. This information is being used to focus HIV prevention efforts to key populations and key locations in urban areas, and to direct HIV prevention priorities in rural areas of the respective states.

The methodology comprises three major components:

- **Mapping** is used to obtain information about the locations where ‘most at risk populations’ or MARPs (Female Sex Workers, Injecting Drug Users, Male Sex Workers and other high risk Men who have sex with men) congregate. This identifies priority geographic areas and provides an understanding of the number of individuals most at risk at those locations.
- **Venue Profiling** identifies venues and locales in urban areas where men and women from the general population go to meet new sexual partners, and characterises the patrons of these establishments, their sexual behaviours and networking patterns.
- **Rural Appraisals and Polling Booth Surveys** are used among the rural general population to obtain information about geographic areas in which to focus HIV prevention programmes and to learn about behaviours and sexual networks which drive and sustain more generalized transmission in those locations. Anonymous surveys on sexual behaviour and perceptions of risk which further inform programming at a local level.

Key findings from the eight states are presented below.

A total of 18,661 interviews were conducted with key informants across the eight states to ascertain where MARPs congregate. The mapping process identified a total of 11,523 ‘hot spots’ across all the eight states. Lagos was found to have over a third (38%) of the sites for all MARPs. However, Gombe had the highest number of IDU sites at 254, representing over half of all IDU sites in the 8 states.

Mapping of sex workers resulted in an estimated population of more than 125,000 FSWs across the states. There was wide variation between sizes and densities of FSW populations reflecting the heterogeneous profile of Nigeria’s epidemic as a whole. Of further note is the fact that most FSW in the study were not brothel based, with the study showing that 60% of these women are working from bars, nightclubs and hotels and lodges.

Mapping of IDUs and MSM identified locations (“hot spots”) where they congregate to inject drugs or meet new sexual partners, respectively. This yielded a total of almost 6000 IDUs at defined hot spots, with over 60% of these in Gombe suggesting the need for a targeted harm reduction programme in that state. Over 7,500 MSM were mapped across 500 hotspots. Although the population estimate only reflects those congregating at hot spots, the mapping of the spots and estimates of how many high risk MSM (including male sex workers) can be reached at those spots provides a useful entry point for reaching this marginalized and vulnerable population.

A profiling of different types of social venues in urban areas showed that a high proportion of venues in all states were sites where sexual networking occurred. There was also a considerable overlap between venues where female sex workers went to find clients and where men and women from the general population went to find casual sexual partners. Although bars, night-clubs and hotels/lodges were the most common sites of sexual networking across all states, there were localized differences. In Gombe, for example, beauty salons and internet cafés accounted for 20% of the sexual networking venues reported.

These findings are of immense value to programming since it is clear that by focusing only on these profiled venues, prevention programmes would reach both a high proportion of at risk men and women in urban areas as well as female sex workers.

Condom availability was also investigated and found to be notably low with only 18% of high risk venues having condoms available on site. Although the rate was higher in FSW spots it still represented just more than 30% across the eight states. This represents a timely opportunity for state level programmes to enhance consistent condom supplies, particularly at high risk sites.

At the rural level, the rapid appraisal and polling booth surveys (PBS) revealed a high level of extra marital relationships, together with a low level of condom use. Unlike previous surveys, the PBS revealed high rates sexual risk behaviour and multiple partnerships among both men and women. Of particular concern is the relatively low rate of condom use among married men having sex with sex workers when compared to higher levels among unmarried men. In addition, a significant proportion of both unmarried men and women were involved in multiple sexual partnerships with transactional sex common among women.

The utility of these data for programming is already being realized. While the National HIV prevention plan provides the guiding framework for action, implementation takes place at state level and below. As the Global AIDS Response Progress Report (2012) states 'mapping a local epidemic requires a local response'. To this end, the findings presented from this study are already enabling states to specify the target population which needs to be reached, where it can be reached and with what package of intervention activities.

Furthermore, the estimates generated allow for realistic coverage targets to be set at a macro level. For example, a 60% coverage rate of estimated number of FSWs and at a micro level 80% of sex workers in a given location to be reached with a whole or partial range of proven effective interventions. The generation of these evidence-based targets in turn facilitates more effective results-based approaches which maximise programme efficiency.

There are several ways in which the specific information emerging from the local epidemic appraisals are being used by the SACAs to efficiently scale up their prevention programmes. The urban mapping of MARPs has enabled them to identify and describe locations where sex work is conducted at high densities, thus ensuring optimal distribution and reach of HIV prevention services at these sites. It has also enabled them to employ a more strategic and systemic approach in prioritizing locations for FSW interventions. By assessing the distribution of FSW populations SACAs have prioritised Local Government Areas (LGAs), and this has been central to the development of the implementation roll out plan for the targeted FSW prevention programmes within the states. It ensures that locations where sex work may be a significant driver of the HIV epidemic in terms of the large FSW population or FSW density per thousand men are sufficiently saturated with interventions before other areas. Furthermore, in most of these states where the majority of the HIV prevention response is provided by external donors, the information has strengthened NACA and the SACAs in their coordination of implementation roll out among the multiple donor agencies implementing HIV prevention programmes for FSWs. This improved coor-

dination effort has markedly reduced duplication of efforts among partners implementing programmes in the field.

Knowledge about the typologies and operational dynamics of female sex work within their states is also enabling the SACAs to determine which strategy to employ in designing targeted FSW programmes that are applicable to their own local context. States such as Nassarawa and Cross River, where a significant proportion of sex workers operate from street/public places emphasize peer outreach and provision of appropriate clinical services while states where most sex workers solicit at hotels/lodges and bars/night clubs (e.g., Lagos, Ondo, Benue) use alternate strategies such as engaging pimps, hotel staff and bar/night club staff to facilitate outreach and services. The SACAs are also using the population estimates provided by the urban mapping of MARPs to estimate the resources required to provide the necessary services to a high proportion of FSWs in a catchment area, and allocate resources to implementing organisations accordingly. Furthermore, the mapping data has been instrumental in the design of the impact evaluation that will evaluate the impact of Nigeria's targeted HIV prevention programme on averting new HIV infections among FSWs, their clients and communities. The mapping data served as the sampling frame for the random allocation of the units of intervention.

NACA and the SACAs are also using the urban venue profiling data to plan their HIV prevention interventions for the general population in urban areas. By understanding the types of venues where men and women who are seeking sexual partners can be found, SACAs are developing specific plans for targeting these types of "hot spots" where they can efficiently reach a significant proportion of the high risk segments of the general population. Of note, the venue profiling has shown that in some states (especially FCT, Abuja and Lagos), a high proportion of the assessed venues facilitate both FSW and casual sexual networking, so interventions can be targeted to these locations with overlapping sexual networks. In contrast, in other states such as Benue with more generalized epidemics, there is a wider range of venues where men and women seek new sexual partners, and these more often do not have sex workers present, necessitating a more broad-based targeting to reach high risk networks within the general population.

The rural assessment component of the epidemic appraisals has also yielded valuable information for programming. The rapid village profiling has shown that sex work is not confined to urban areas and that programmes for FSWs need to be incorporated into rural HIV prevention programmes. This is particularly true in some states such as Benue, where a very high proportion of villages were found to have clusters of FSWs working within. The rural assessments also provided important information about the sexual behaviour patterns among those living in villages and small towns in the different states. Of note, the "polling booth surveys", which reduce levels of social desirability bias, found much higher levels of sexual risk than has been reported from previous behavioural surveys in Nigeria. This is congruent with the persistently high HIV prevalence levels in many of the states, particularly considering the high levels of male circumcision in Nigeria. Key sexual behaviours that will need to be addressed by HIV prevention programmes in rural areas include; substantial proportions of men (married and unmarried) visiting FSWs, high proportions of both men and women reporting multiple sex partners in the past six months, and very high levels of transactional sex reported by women in a few states. It is not that the highest levels of sexual risk behaviour were found in Benue and Cross River, which are states that have persistently had among the most severe HIV epidemics in Nigeria. The results of the

rural appraisals will now be used to design HIV interventions, both in terms of regional focus and intervention strategies.

In summary, the results of the epidemic appraisals have provided NACA and the SACAs with new and timely information which can be used to design and focus HIV prevention programmes. They also provide an important basis for future monitoring and evaluation efforts to provide ongoing guidance to prevention strategies.

Chapter 1

Background and Overview

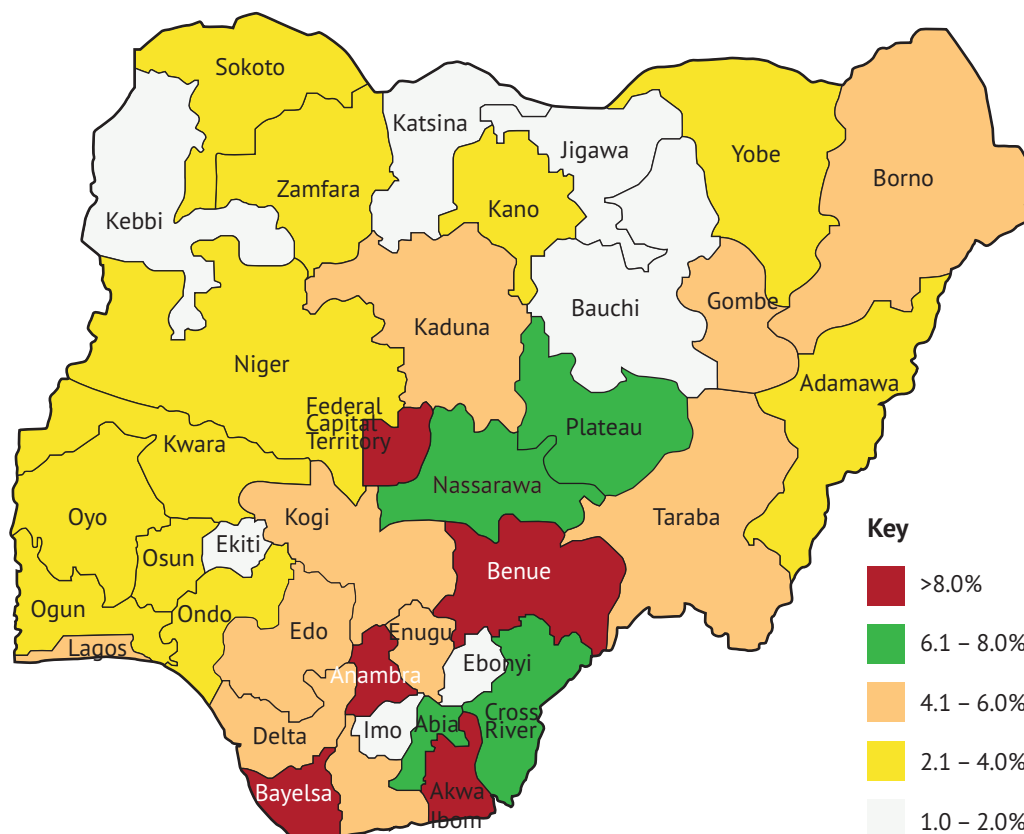
1.1 HIV Epidemic Heterogeneity in Nigeria

Nigeria is the most populous country in Africa with an estimated population of over 162 million in mid-2011 comprising over 250 ethnic groups with more than 500 indigenous languages. Approximately 50% of the population live in urban areas with the rate of urbanization estimated at 3.5% annual rate of change. The country is organised into 36 states and the Federal Capital Territory (FCT), which are grouped into six geopolitical zones based on geopolitical considerations; North-East (NE), North-West (NW), North-Central (NC), South-West (SW), South-East (SE) and South-South (SS). Each zone is distinct in character in terms of size, composition of population, ecology, language, norms, settlement patterns, economic opportunities and historical background. For administrative purposes the states are further divided into 774 Local Government Areas (LGAs).

The first case of AIDS in Nigeria was recorded in 1986. Between 1991 and 2001, Nigeria witnessed an increase in the prevalence of HIV, peaking in 2001 at 5.8% and stabilising at around 4.1% in 2010. In December 2011 it was estimated that 3, 459,363 people were living with HIV and an estimated 1.5 million requiring Anti-retroviral Therapy (ART). In the same year an estimated 388,864 new infections occurred. Records show an annual total of 217,148 AIDS related deaths and an estimated 2,193,745 children orphaned by AIDS (NACA 2012)¹.

In spite of a stabilising of HIV prevalence, Nigeria has a high and persistent burden of HIV. The epidemic is highly complex with substantial heterogeneity across the regions and States (1.1). Most recent data shows that five states had prevalence of 8.0% and above, and five other states had a low prevalence ranging 1.0 to 2.0%. The three states with the highest rates were Benue, Akwa-Ibom and Bayelsa (GARPR 2012).

1 National Agency for the Control of AIDS. Global AIDS Response : country progress report 2012

Figure 1.1 Geographic Distribution of HIV Prevalence by States

Source: Nigeria HIV Epidemic Appraisal 2013 Data.

As is the pattern globally, in Nigeria HIV prevalence is highest among most at risk populations (MARPs); these populations include female sex workers (FSWs), injecting drug users (IDU) and men who have sex with men (MSM), particularly those who have multiple sexual partners. In 2007 and 2010, Integrated Biological and Behavioural Surveillance (IBBS) surveys were completed among MARPs in 6 and 10 states respectively (FMoH 2007, 2010)². These surveys showed high HIV prevalence in these groups, particularly those engaged in high risk sexual behaviours. The average prevalence of HIV among brothel-based FSWs was 37.4% in 2007 and 27.4% in 2010. The prevalence was found to be 30.2% and 21.7% among non brothel-based FSWs, 13.6% and 17.2% among men who have sex with men (MSM), and 5.6% and 4.2% among injection drug users (IDU) in 2007 and 2010, respectively (Figure 1.2).

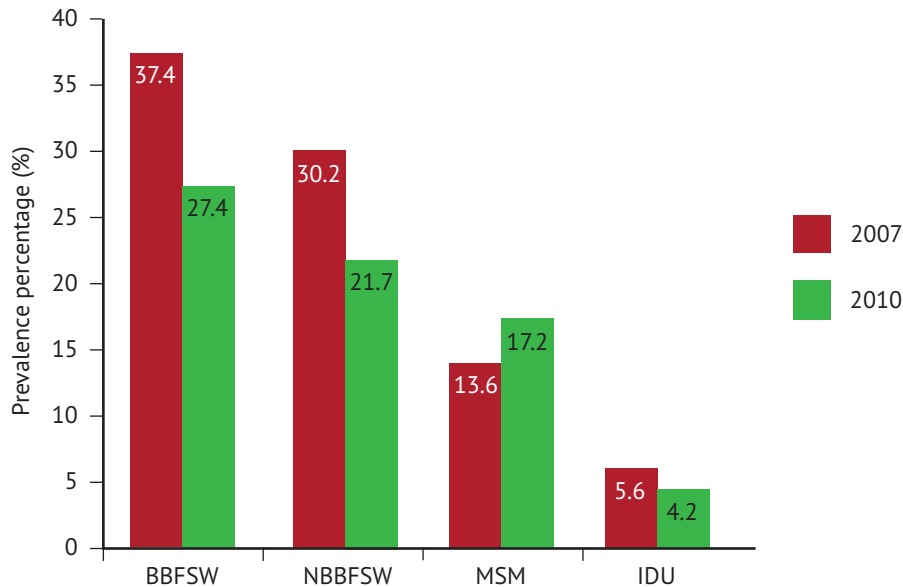
An important finding was the considerable heterogeneity in HIV prevalence across the different states. For example, the HIV prevalence among brothel-based FSWs ranged from 23.5% in Lagos to 49.2% in Abuja. Among MSM the prevalence ranged from 3% in Cross River to 25% in Lagos, and among IDU from 3% in Cross River and Lagos to 10% in Kano. While MARPs account for only an estimated 3.4% of the national population they account for as much as 40% of new HIV infections (GARPR 2012).

Two key points emerge from previous assessments of the HIV epidemic in Nigeria. First, the epidemic appears to be “mixed” in many regions, meaning that the epidemic is driven by HIV transmission both within networks involving MARPs and also within segments of the wider “general” population who have multiple partners and/or belong to sexual

² Federal Ministry of Health, 2007, 2010. HIV Integrated Biological and Behavioural Surveillance Survey 2010. http://www.popcouncil.org/pdfs/2011HIV_IBBSS2010.pdf

networks that facilitate the spread of HIV. Second, the HIV epidemic in Nigeria appears to be highly heterogeneous with respect to its geographic distribution. This suggests that there are important differences in the distribution of sexual behaviours and sexual networks that facilitate the spread of HIV.

Figure 1.2 HIV Prevalence among Most at Risk Populations in Nigeria in 2007 and 2010



Source: Nigeria HIV Epidemic Appraisal 2013 Data.

Notes: BBFSW = brothel based sex worker; NBBFSW = non brothel based sex worker; MSM = men who have sex with men; IDU = Injecting drug user.

These findings have important implications for planning an effective and efficient HIV prevention strategy. Focused prevention programmes for MARPs are necessary to curb transmission within those populations, and minimise transmission beyond those groups to the general population. Effective HIV prevention programmes are also required for segments of the general population engaging in high-risk behaviour, particularly where there are overlaps with MARPs networks. Furthermore, the geographic heterogeneity of the epidemic demands that prevention efforts need to be targeted to those locations where there are more people engaging in higher risk behaviour and more active sexual networks. To this end, a series of epidemic appraisals were undertaken, with the results from the first eight states presented in this report³.

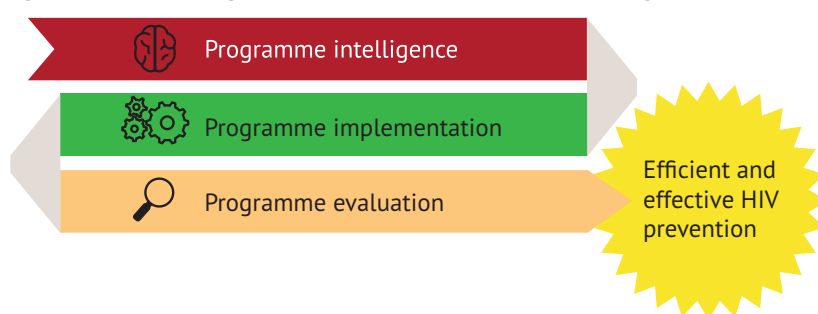
1.2 Context and Purpose of the Epidemic Appraisals

The Government of Nigeria has declared HIV prevention as a national health sector and development priority. There is recognition of the need to intensify, scale up and accelerate prevention efforts in order to reduce the incidence of HIV infections. The goal of the national response is to reduce HIV transmission through the implementation of high impact, efficient and comprehensive prevention programmes. Challenges to date have included a lack of adequate evidence for programme planning, including gaps in knowledge of what is driving the HIV epidemics in different regions of Nigeria and inadequate knowledge of the geographic distribution of key populations, thus hindering the targeting of HIV prevention resources to those areas and populations where they will have the highest impact.

³ Results from the other States in Nigeria will be added to this report as soon as the next phase of the Epidemic Appraisals in those 2nd phase states have been undertaken.

To address these issues Nigeria's National Agency for the Control of AIDS (NACA) has engaged in a series of activities to bring greater evidence and rigour to the planning and implementation of HIV prevention programmes. In support of this work, the World Bank has collaborated with NACA to provide integrated technical assistance to improve the efficiency and effectiveness of the response. The framework for this technical support has been the "Programme Science" approach, which entails the systematic application of scientific knowledge and approaches to improve the design, implementation and evaluation of public health programmes. This process is illustrated in Figure 1.3, which shows that to optimize the HIV prevention response it is necessary to generate high quality "programme intelligence", which is used to support effective implementation and high quality programme evaluation.

Figure 1.3 The Programme Science Approach Applied to Nigeria's HIV Prevention Response



Source: Nigeria HIV Epidemic Appraisal 2013 Data.

- **Programme intelligence** involves local epidemic appraisals, an assessment of HIV transmission dynamics, and the definition of major sources of transmission. Data gathered through epidemic appraisals is used to determine the strategic focus and timing of interventions (who to target, when, and for how long) and to define the optimal mix of interventions.
- **Programme implementation** involves the implementation of evidence-based programmes at high population scale in order to cover a large proportion of the target area or population. This component also ensures the use of standard operating procedures and quality assurance systems, and the establishment of effective training, support, and supervision chains.
- **Programme evaluation** involves monitoring programme effectiveness and allocative efficiency in real time, assessing the programme's impact, and using monitoring and evaluation data to inform frequent programme improvements and adaptations.

This report focuses mainly on the programme intelligence component, presenting the methods used for epidemic appraisals, key results in the first phase of States where the work was undertaken, and the implications for FSW programme design, implementation and evaluation.

1.3 Epidemic Appraisals—Conceptual Framework

The main purpose of the epidemic appraisals was to provide critical information for planning and targeting HIV prevention programmes, considering the mixed and heterogeneous nature of Nigeria's epidemic. Four key considerations influenced the design of the epidemic appraisals.

- **Programme information needs and gaps**—Since the appraisals were meant primarily to guide the response, they focused on key information needs and gaps, particularly highlighting where to target prevention efforts, what the scale of the response should be, and the key behaviours and networks that should be addressed.
- **Relevance for local planning**—The appraisals were intended to provide very specific information at a local level that could help planners at state and local levels to scope, target and roll out their programmes in a coordinated manner. This meant very wide geographic coverage of the appraisals, extending down to the LGA, town and village levels.
- **Focus on key prevention issues**—Considering existing knowledge of Nigeria’s epidemics, the appraisals were designed to address key prevention issues. This meant providing information on both MARPs and on behavioural patterns and networks in the wider general population that would contribute substantially to HIV transmission. A key aspect was to segment geographically, including both urban and rural contexts.
- **Rapid and efficient**—Since the appraisals were designed to provide guidance to HIV prevention programme planning, the approaches and methods used were rapid and efficient to provide timely information.

Based on these considerations, the epidemic appraisals concentrate on three key contexts for HIV prevention (Figure 1.4). These are 1) urban MARPs, 2) casual sexual networks in urban areas and; 3) casual sexual networks in rural towns and villages. This approach was endorsed and recommended by Nigeria’s National HIV Prevention Technical Working Group.

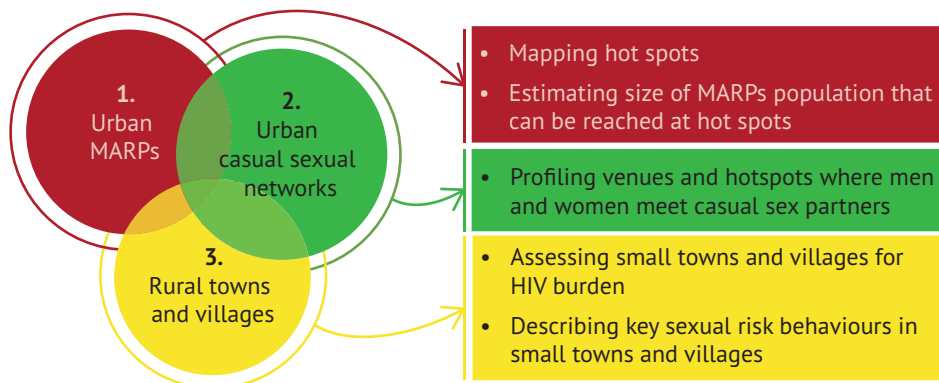
The appraisals involve three components i) mapping MARPs, ii) urban venue profiling and iii) rural appraisals through polling booth surveys.

Mapping is used to obtain information about the locations where MARPs (FSWs, IDUs, and MSW and other high risk MSM) congregate, thus identifying the highest priority geographic areas, and to obtain an understanding of the number of individuals most at risk at those locations.

Venue profiling identifies venues and locales in urban areas where men and women go to meet new sexual partners, and characterises the patrons of these establishments, their sexual behaviours and networking patterns. This approach is conceptually similar to the PLACE (Priorities for Local AIDS Control Efforts) method⁴, but is conducted more rapidly and on a larger scale, while omitting some of the more in-depth behavioural assessments. Venue Profiling is meant to help programme planners to select and prioritise the types of venues and locales where they can reach those in the urban population who are seeking casual partners.

Rural appraisals and Polling booth surveys are used among the rural general population to obtain information about geographic areas in which to focus HIV prevention programmes and to learn about behaviours and sexual networks which drive and sustain more generalized transmission in those locations. The surveys allow for members of the general population to answer questions about their sexual practices anonymously, reducing the social desirability bias. These answers are then reported at the aggregate level.

4 Weir et al. 2003. From people to places: focusing AIDS prevention efforts where it matters most. AIDS. Vol 17 issue 6. Pp895 – 903

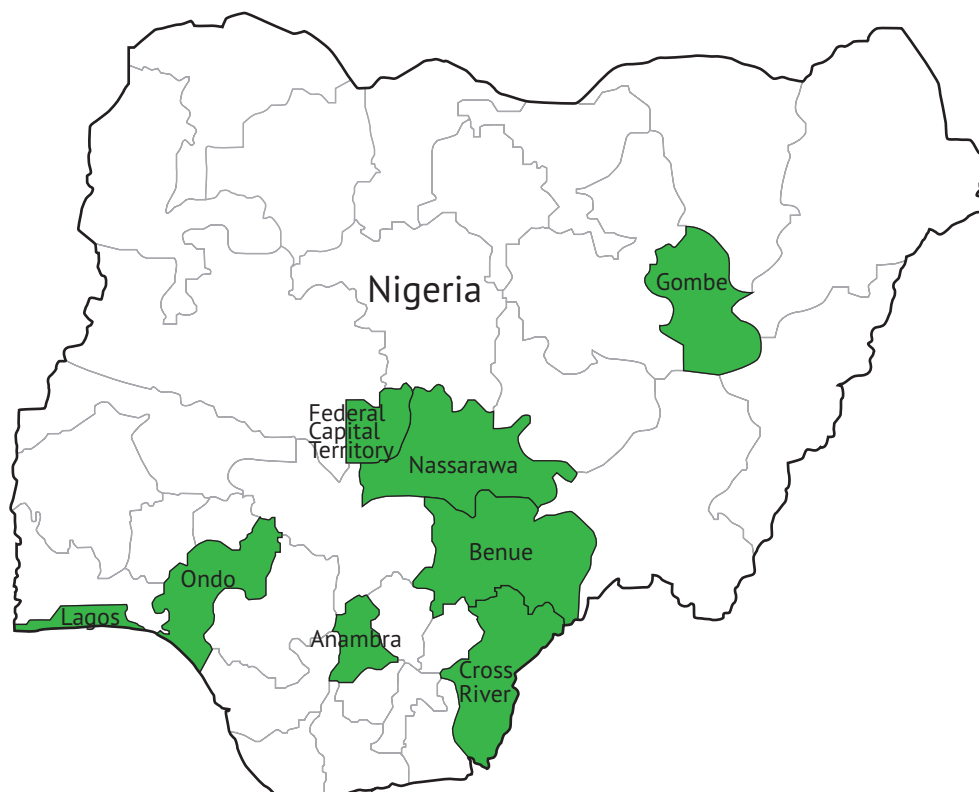
Figure 1.4 Components of the Epidemic Appraisals

Source: Nigeria HIV Epidemic Appraisal 2013 Data.

1.4 State Selection for the First Phase of the Epidemic Appraisals

Although epidemic appraisals (or components thereof) are planned for all Nigeria's states, eight States were prioritised initially in close collaboration with the respective State Agencies for the Control of AIDS (SACA). The SACAs have been essential partners in the collection and analysis of epidemic appraisal data and the application of this data to improve HIV prevention policy and programmes. These States were selected according to three criteria: i) effective World Bank HIV/AIDS Programme Development Project II credit ii) HIV prevalence and iii) zonal representation. Towns and cities for the urban components were selected according to their population size and commercial activity.

The map in Figure 1.5 shows the eight states that are included in this report: Federal Capital Territory (Abuja), Anambra, Benue, Cross River, Gombe, Lagos, Nassarawa and Ondo.

Figure 1.5 States Included in Epidemic Appraisal Report

Source: Nigeria HIV Epidemic Appraisal 2013 Data.

Chapter 2

Epidemic Appraisal Methods

As described earlier the epidemic appraisal approach consists of three discrete but inter-linked components: mapping, venue profiling and rural appraisals. The methods used for each component are described briefly below.

2.1 Mapping Most At Risk Populations (MARPs)

The mapping exercise aims to provide accurate information on the size, locations and operational characteristics of MARPs in key urban (and semi-urban) areas of Nigeria, with a view to improving the scale, quality and impact of HIV prevention programmes among these populations.

The mapping approach is a valuable planning tool in that it focuses on three high-risk activities: Female Sex Work, Injecting Drug Use, and men having sex with multiple male partners. It determines “who” is involved in high risk activities, “where” they meet partners, as well as providing information on “how many” people are involved. From this information further estimates can be generated. Samples of the mapping format can be found in Annex 1.

The methodology identifies venues or ‘hot spots’ where high-risk activity takes place as well as when it takes place. It also identifies gate-keepers to these populations and provides information on the operational dynamics of each group. Information derived from mapping is of particular benefit to planners as it can illustrate the extent of the issue, support epidemic projections in different areas to show where services might best be provided. This information can assist more efficient allocation of resources through carefully targeted scale-up.

It should be noted that while the mapping approach can provide fairly comprehensive assessments of the population size for some MARPs groups such as FSWs, and IDUs in some settings, it is not a suimeans for all MARPs. It is not able to estimate the total size of the MSM population, given the sensitivity of the issue. Instead, it attempts to identify all of the locations (“hot spots”) where these people congregate to meet new sexual partners, thereby providing effective entry points for prevention programmes.

The population estimates can provide an indication of how many MARPs could be reached at the mapped locations thereby assisting states in determining coverage targets.

The mapping approach involved two sequential levels of data collection, as described below.

2.1.1 Mapping Level 1—Key Informant Interviews

For Level 1, information was systematically gathered from carefully selected secondary key informants (KIs)⁵ regarding locations or spots (“hot spots”) where MARPs congregate for the purpose of meeting casual or paying sexual partners, and/or gather for the purposes of buying or injecting drugs. A spot was considered active even if only one or a few most at risk individuals frequented it. The key informants provided the physical addresses of these spots together with the estimated minimum, maximum and usual number of individuals at risk that could be found there.

To facilitate Level 1 data collection, all of the states except FCT and Lagos selected major towns in the state and divided these into smaller zones based on population estimates and physical landmarks. In Lagos and FCT, the whole state was divided into zones, as there are no well-defined towns in these states. Typically, 60 key informant interviews were conducted in each zone, depending on the size. Key informants were asked about spots where MARPs could be found and their estimated minimum, maximum and usual numbers within a specific zone rather than the entire town.

2.1.2 Mapping Level 2—Spot Validation And Assessments

In the second stage, the spots identified in Level 1 were visited and interviews with primary key informants⁶ were conducted in order to characterise and estimate the size of the MARPs.

FSW were recruited in each of the towns mapped to assist data collectors with identifying the members of their groups at the identified spots for validation interviews. The validation process determined the existence of a spot, whether or not the spot was frequented by sex workers, MSM or IDUs (in other words, if the spot was active or inactive), the estimated minimum, maximum and usual number of FSW, MSM and IDU who frequented active spots and the presence of other spots in the vicinity that had not been identified in level one.

To improve the validity of the spot lists, spots that were mentioned by the least number of secondary key informants at Level 1 were given priority, because these were the most likely to have been incorrectly identified. MARPs spots that were mentioned by three or fewer key informants at Level 1, regardless of their frequency of mention, were visited and validated, and all MSW/MSM and IDU spots were visited and validated regardless of their frequency of mention. Wherever possible, validated data were used in generating population size estimates, but because of the volume of FSW sites, not all could be revisited. In this case, an average of the estimates from secondary key informants at Level 1 was used.

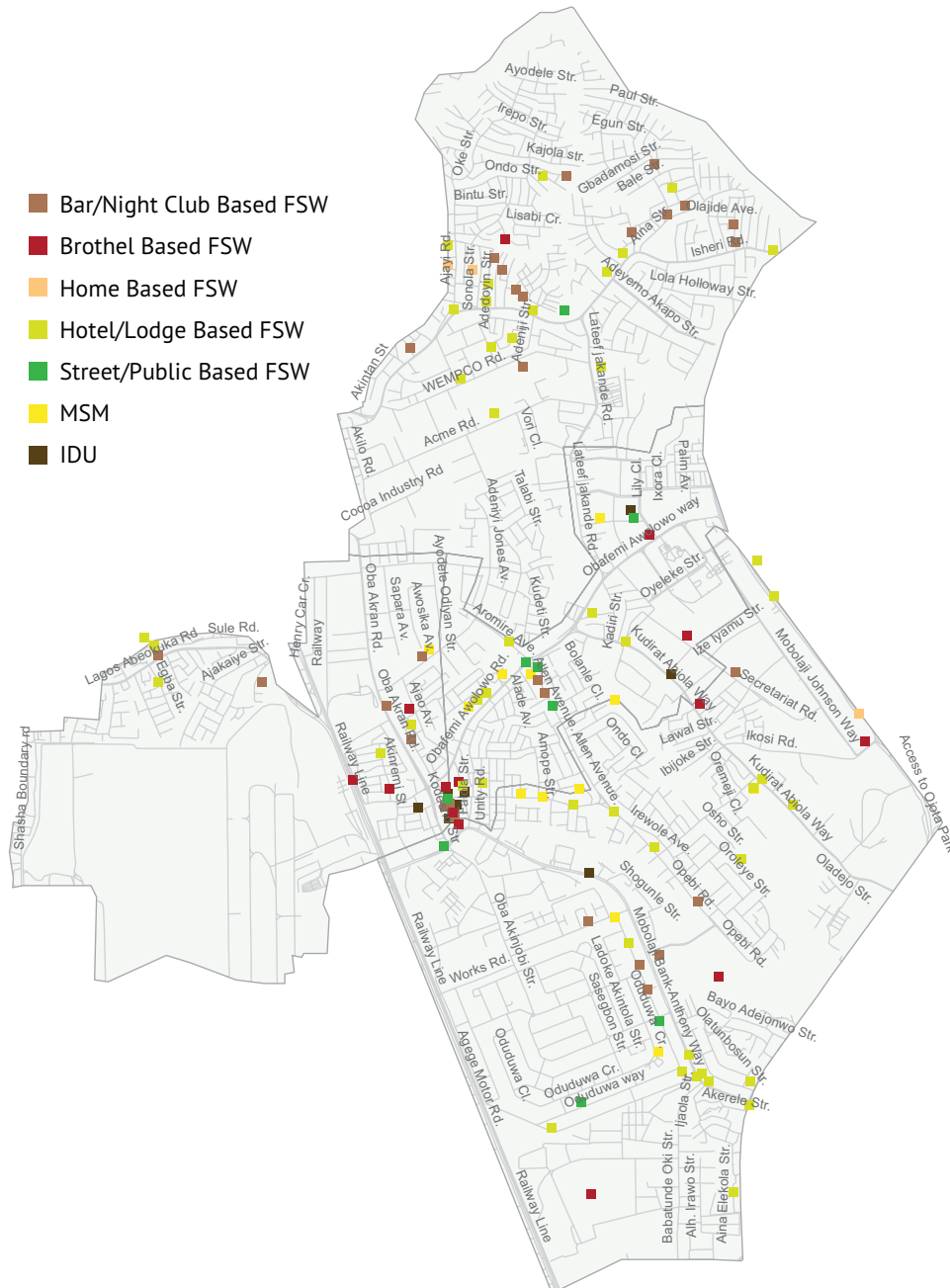
The mapping exercise produces a validated comprehensive list of spots where MARPs may be found, the typology of the spot, operational dynamics of each spot (peak and non-peak times) and estimated minimum, maximum and usual number of MARPs at each

5 Secondary key informants were individuals knowledgeable about the area such as petty traders, commercial motorcycle riders, and NGOs.

6 Primary key informants were members of the most at risk populations e.g., female sex workers.

spot. Below is an example of a completed map for one LGA (Ikeja, Lagos city), which illustrates the specificity of the data collected.

Figure 2.1 Map of Hot Spots for Most At Risk Populations (MARPs), Ikeja LGA, Lagos State, Nigeria, 2012



Source: Nigeria HIV Epidemic Appraisal 2013 Data.

Notes: FSW = female sex worker; MSM = men who have sex with men; IDU = injecting drug user.

2.2 Venue Profiling (Urban)

The primary aim of the Venue Profiling was to provide information for planners on where the most at risk members of the “general population” in urban areas could be found: that is those who have multiple partnerships and are members of high risk sexual networks. The approach is based on previous work elsewhere that has shown that individuals within the

general population congregate in certain places for the purposes of meeting new sexual partners, thereby providing concentrated “hot spots” for potential HIV transmission. In particular, the PLACE method (Priorities for Local AIDS Control Efforts) (Weir et al. 2003)⁷ has shown that targeting these venues is an efficient way of reaching much higher risk individuals in the general population.

The Venue Profiling method used in this appraisal has many similarities to the PLACE method, in that it identifies the venues and locales where these vulnerable populations gather to meet new sexual partners and then characterises the sexual networking patterns of these populations. It differs from the PLACE method in that it is less intensive and more rapid so that a much wider geographic coverage of venues can be achieved in a short time period.

The venue profiling focused mainly in urban and semi-urban towns, as these areas have the majority of venues or “geographic locations” where sexual networking occurs. Its main objectives are to: i) identify and characterise the key venues and locales where people meet new sexual partners, ii) determine the total number of patrons (men/women) visiting the venues and the total number of patrons seeking sexual partners and iii) describe sexual behaviour and networking patterns at key venues and locales.

There are four stages to venue profiling: selection of zones, venue listing, consolidation of lists, profiling venues.

2.2.1 Venue Profiling Stage 1—Selection of Zones/Sub-zones

Using the probability proportional to size sampling method, a representative sample of the zones used during the geographic mapping of MARPs was selected. To select this representative sample, a number of set rules and principles were adhered to: in regions (towns or states) where 1 or 2 zones were created, all the zones were selected. Regions with between 3 – 5 zones had at least 50% of the zones selected. For regions with 6 or more zones, the selected zones were further divided into sub-zones (population of 10,000 – 15,000 people). Following this, only 2 sub-zones were systematically selected with the first sub-zone being the zone with the highest risk activity while the second sub-zone was selected by using the addition of the interval of selection (total number of sub-zones/2) and the first selected zone (1+interval of selection). The criteria for high-risk activity were based on the number of hotspots derived from the mapping activity or local knowledge about the area.

2.2.2 Stage 2: Listing

The field workers visited the entire area (each street, public areas and commercial areas) in the zone/sub-zone and collected information from secondary key informants about venues where people congregate for social activities (Annex 2). These venues were compiled as the Venue List.

2.2.3 Stage 3: Generating the Master List of Venues

Each Venue List was merged with the list of hotspots generated earlier through MARP Mapping. The merged list is cleaned to expunge duplicates and is termed the “Master List of Venues”—which contains a complete list of the venues to be profiled.

⁷ Weir, Sharon et al. 2003. From People to Places: Focusing AIDS Prevention efforts where it matters most. AIDS. Vol 17, Issue 6 Pp895 – 903.

2.2.4 Stage 4: Profiling of Venues

Using the Master List of Venues, the field workers visited all the venues listed in each zone/sub-zone and interviewed primary key informants (venue patrons, venue manager and venue worker). Key informants were asked about the number of venue patrons (men and women that visited the venue) seeking sexual partners, the number of FSWs that solicited for sex at the venues, the operational typology of the venues (peak days and times of operation) and condom availability at the venues. Venue profiling provides detailed information on the operational typology (peak days and times of operation) of the venues, the proportion of venues which host casual, commercial or no sexual networking and the types of venues frequented by people seeking casual or commercial sexual partnerships. Furthermore, it describes where regular patrons came from, the daily average number of patrons per venue; the average number of patrons seeking commercial or casual sexual partners at each venue and the average number of female sex workers seeking clients in a venue (see Annex 3).

2.3 Rural Appraisal

This component is designed to provide a snapshot of the level of risk of HIV transmission in rural areas and involves a rapid rural assessment of villages and polling booth surveys to assess patterns of sexual risk behaviour in rural areas.

2.3.1 Rapid Rural Assessments

The rapid rural assessment of villages was focused on providing an assessment of key characteristics of the village relevant for HIV prevention programmes. The purpose was to assist programmes to focus rural prevention, care and support programmes to those local regions and villages most in need of programmes and services. The rapid assessment provides information on the proportion of villages reporting the presence of people living with HIV, female sex workers within the villages, and the mean number of female sex workers in the villages.

Each state was divided into four geographic zones with distinct and contiguous local government areas (LGAs). Using a comprehensive village list, the 20 most populous villages in each geographic zone were then selected, arriving at a target sample size of 80 villages in each state.

In each village, five key informants who were knowledgeable and had reliable information about the villages were selected. Wherever possible a sex worker was included as a key informant while the remaining four included individuals such as the Traditional Rulers, school teachers, petty traders. Each key informant was interviewed and the information collected was recorded using the rapid assessment sheet (Annex 4).

2.3.2 Data Triangulation and Documentation

Where there was no consensus in a response, the team selected the response that they judged to be most likely to be accurate. For example, a health worker would be most likely to give an accurate answer to a health question and a sex worker most likely to give an accurate response to a sex work related questions.

Each village had only one village profile format, which served as the final data collection tool in the process.

2.3.3 Assessing Sexual Behaviours—Polling Booth Survey

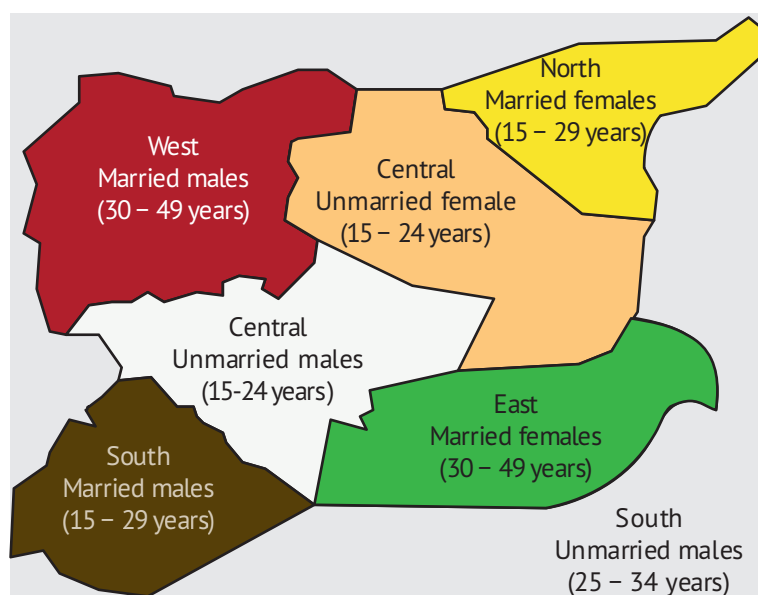
The methodology is designed to determine the level of HIV risk within specific demographic groups in rural areas. Firstly, demographic groups were selected as described below (2.1).

Table 2.1 Demographic Groups for Sampling for Polling Booth Surveys

Married female (15 – 29 years)	Married male (15 – 29 years)
Married female (30 – 49 years)	Married male (30 – 49 years)
Unmarried female (15 – 24 years)	Unmarried male (15 – 24 years)
Unmarried female (25 – 34 years)	Unmarried male (25 – 34 years)

Using the complete list of villages for each geographic zone obtained from the Rapid Assessment, the 17 most populous villages were selected to reach a total number of 68 villages. Sampling of the different demographic groups for the polling booth surveys was done by segmenting each selected village geographically, and then sampling the respondents for each of the demographic groups from within one of the segments. The first 14 villages within a geographic zone were assigned for the first six demographic group sampling, as illustrated in the below.

Figure 2.2 Segmentation of Villages by Demographic Groups for Sampling



Source: Nigeria HIV Epidemic Appraisal 2013 Data.

The last 3 villages are assigned to the unmarried females and males aged 25 – 34, and segmented into 2 segments—North and South. The reason for separating out unmarried individuals aged 25 – 34 is their relatively smaller population size, which necessitates a wider geographic area for the sampling.

Each field team was assigned to a segment to begin the household listing process (Annex 5) by randomly selecting a house where they enlisted an eligible participant; that is someone who met the demographic group criteria. Next, the teams continued in a clockwise

direction to the next household to recruit an eligible participant and so on until 12 eligible participants were assembled and accompanied to the Polling Booth Survey location.

Each respondent was allocated a private polling booth, in this case cardboard boxes, and the process was explained to them: different coloured cards represent YES, NO, and NOT APPLICABLE and no card is polled where the participant does not wish to respond. A series of closed-ended questions was then asked (Annex 6). Cards are collated according to their colour, tallied and totalled for each question.

Figure 2.3 Polling Booth Survey Illustration



Source: Nigeria HIV Epidemic Appraisal 2013 Data.

The Polling Booth Survey provides information on the level of awareness and comprehensive knowledge about HIV, the proportion of the unmarried and married population involved in multiple casual sexual partnerships and transactional sex, the proportion of males who visit female sex workers and the level of condom use during these sexual acts across all the demographic groups.

2.4 Limitations of the Methodology

This methodology is designed to gather intelligence rapidly from a large geographic area. As such it provides estimates of populations not actual numbers. In this regard, it can be seen to be indicative rather than absolute. This is of particular relevance with regard to marginalized populations such as IDU and MSM.

The local epidemic appraisal method was adapted for local use in Nigeria from the methods followed in India and other countries at the start of their FSW programme roll out. One of the unique changes to the method was adding the casual sexual networks component and the rural town component. Another difference is that Nigeria also already had a sex worker programme in place (although it was not uniform), with a range of implementers and service providers. This variation in what was implemented, and the lack of uniformity in what was being implemented, meant that understanding where service delivery would take place and where FSW would access services, as well as existing service providers, would be very important. Since this epidemic appraisal did not map existing service providers or existing service delivery spots, additional efforts are required to (a) align

hotspots and how they were coded with existing hotspots where service providers operate from, (b) determine service provision by different implementers and (c) identify facilities where biomedical HIV prevention services would be provided.

The local epidemic appraisals focused on epidemiology and service coverage, but could have been extended to have also provided a picture into service delivery—who is currently doing what and where, as a basis for implementation planning.

Another limitation of the mapping method is that it focuses on the most visible FSWs and other MARPs. Whereas this is likely to identify the key locations and populations of FSWs, it is less effective at identifying networks of high-risk MSM due to their highly stigmatized situation and discreet ways of interacting. Therefore, the mapping focused primarily on the most visible locations and contexts where MSM congregate, and programmes will need to use these as starting points for outreach into the wider MSM population.

Another potential limitation is that although a common protocol and training approach was used, the epidemic appraisals were carried out by different implementing organisations. Therefore, variations in results could be explained, in part, by differences in the field implementation of the appraisals.

The rapid nature of the approach also means that it can only provide limited insight into sexual behaviours and should be seen rather to highlight areas which merit further and more in depth social and behavioural research.

Chapter 3

Key Findings: National Level

The following chapter describes the main results of each of the three components and their implications at a national level.

3.1 Mapping of Urban Marps

Across the eight states 18,661 interviews were conducted with key informants to identify locations where members of most-at-risk populations gathered. Lagos had the highest number of interviews at 4,190 (24.3%) and Ondo, the lowest, at 1,501 (8.7%).

The mapping process identified a total of 11,523 hot spots across all the eight states. Lagos was found to have over a third (38%) of the sites for all MARPs. However, Gombe had the highest number of IDU sites at 254, representing over half of all IDU sites in the 8 states sampled. A total of 495 spots frequented by MSM were identified, with Lagos (39%) and Abuja FCT (24%) accounting for the largest share (3.1).

Table 3.1 Number of High Risk Spots by Type of Most At Risk Population in Eight States, Nigeria, 2012

Number of Hot Spots by Most-at-Risk Population Group				
State	FSW (%)	IDU (%)	MSM (%)	Total (%)
Abuja FCT	1,446 (14%)	22 (5%)	120 (24%)	1,588 (14%)
Anambra	618 (6%)	24 (5%)	50 (10%)	692 (6%)
Benue	825 (8%)	32 (7%)	57 (12%)	914 (8%)
Cross River	692 (7%)	8 (2%)	15 (3%)	715 (6%)
Gombe	348 (3%)	254 (57%)	36 (7%)	638 (6%)
Lagos	4,056 (38%)	95 (21%)	191 (39%)	4,342 (38%)
Nassarawa	1,409 (13%)	12 (3%)	19 (4%)	1,440 (12%)
Ondo	1,187 (11%)	0	7 (1%)	1,194 (10%)
Total	10,581 (100%)	447 (100%)	495 (100%)	11,523 (100%)

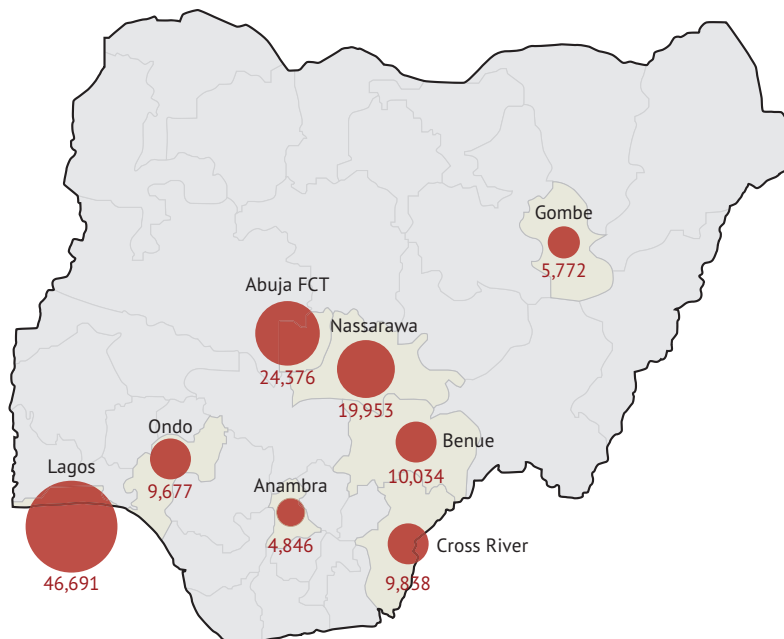
Source: Nigeria HIV Epidemic Appraisal 2013 Data.

Note: FCT = Federal Capital Territory

3.1.1 Female Sex Workers

The estimated average population of FSWs in the states mapped was 131,187. Lagos State had the majority of FSWs (36%), followed by Abuja FCT (19%) and Nassarawa (15%) (Figure 3.1).

Figure 3.1 Estimated Size of Female Sex Worker (FSW) Population at Mapped Urban Hot Spots in Eight States, Nigeria, 2013

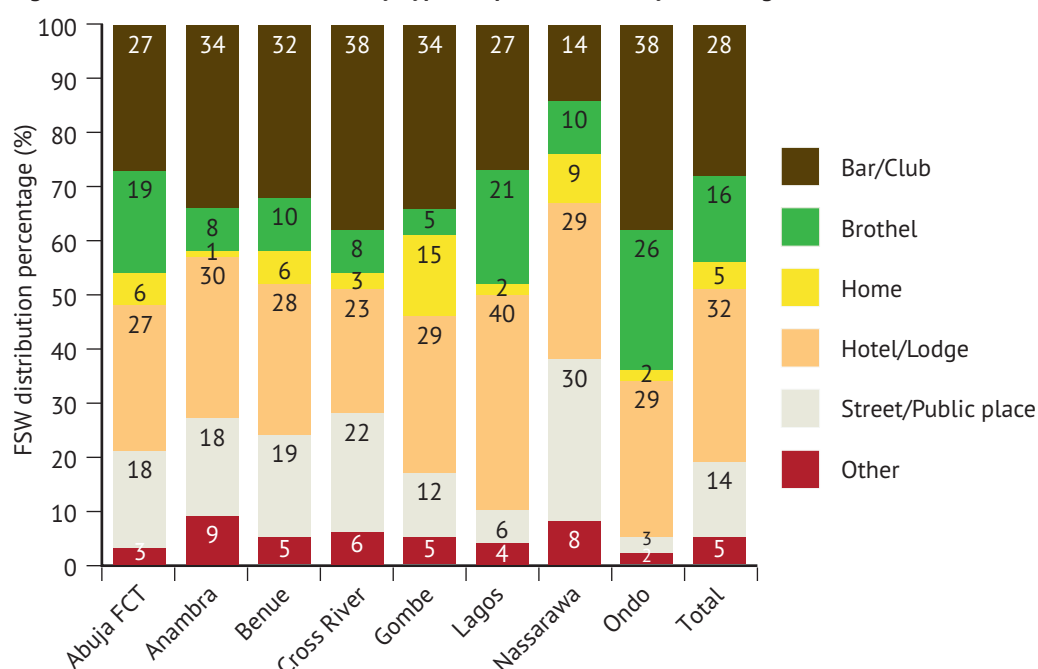


Source: Nigeria HIV Epidemic Appraisal 2013 Data.

To design programmes effectively, information is required concerning the different types of venues which are frequented by FSW. Programmes outreach and service delivery approaches may vary by the type of spots from which sex workers operate. Venue-based sex workers, for example, may be more easily reached than home-based sex workers, who may require peer based outreach programmes.

The mapping study thus analysed the distribution of the FSW population by the type of spots from which they most commonly operated. The majority (32%) of FSWs in all the eight states mapped, operated from hotel/lodge-based spots while 28 % were bar/club-based. Brothel-based and street/public places-based FSWs represented 16 and 14 per cent, respectively, while home-based and other types of spots, each accounted for only 5 per cent of all FSWs in the eight states mapped. It should be noted that these more discreet locations could be under-represented due to the mapping methodology.

Lagos had the lowest percentage of bar/club-based sex workers (14%) but the highest percentage of sex workers operating from streets/public places (30%). Gombe had the largest proportion (40%) of hotel/lodge-based sex workers. Brothel-based sex work was more common in Nassarawa (26%), Gombe (21%) and Ondo (19%) than in the other states. Home-based sex workers as a proportion of all sex workers was higher in Cross River state (15%) than in all the other states (Figure 3.2.), suggesting specially tailored outreach may be appropriate here.

Figure 3.2 Distribution of FSWs by Type of Spot/Location, by State, Nigeria, 2012

Source: Nigeria HIV Epidemic Appraisal 2013 Data.

3.1.2 IDU and MSM

Injecting drug use is a risk factor for HIV and the risk is heightened among those who share injecting equipment. The estimated IDU population in all the states mapped was 5,870, with Gombe being the home to nearly two thirds of them (62%). Overall, 35 per cent of the IDU population were estimated to be sharing needles, with this practice being more common in Benue (81%), Abuja FCT (53%), Nassarawa (48%) and Lagos (38%).

Table 3.2 Estimated Number of Injecting Drug Users and High Risk Men Who Have Sex With Men (MSM) at Mapped Urban Hot Spots in Eight States, Nigeria, 2013

State	Injecting Drug Users		High Risk MSM		
	Share Needles (% of total)	Total (%)	Male Sex Workers (% of total)	Other MSM	Total (%)
Abuja FCT	109 (53%)	205 (4%)	1,039 (55%)	853	1,892 (25%)
Anambra	51 (29%)	173 (3%)	22 (8%)	237	260 (3%)
Benue	180 (81%)	221 (4%)	462 (45%)	556	1,018 (13%)
Cross River	10 (19%)	54 (1%)	138 (50%)	138	276 (4%)
Gombe	1,062 (29%)	3,617 (62%)	374 (55%)	307	681 (9%)
Lagos	446 (38%)	1,186 (20%)	1,396 (47%)	1,550	2,946 (39%)
Nassarawa	200 (48%)	414 (7%)	217 (49%)	223	440 (6%)
Ondo	0 (0%)	0	40 (39%)	62	102 (1%)
Total	2,098 (36%)	5,827 (100%)	3,686 (48%)	3,927	7,613 (100%)

Source: Nigeria HIV Epidemic Appraisal 2013 Data.

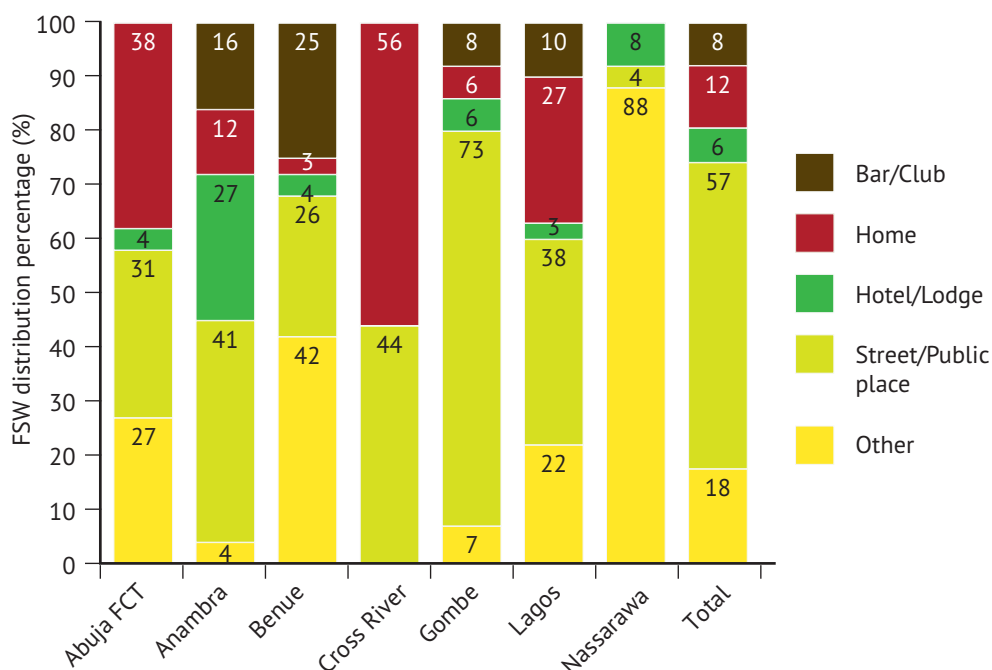
Notes: FCT = Federal Capital Territory; MSM = men who have sex with men; % = percentage.

Sex between men has also been shown to increase the risk for HIV, and this risk may be higher among men who sell sex to other men (male sex workers). The mapping exercise sought to identify and map “hot spots” where men who have sex with men, including men who sell sex to other men (i.e., male sex workers, MSW) congregate to seek sexual partners. In addition, the mapping estimated the size of the population of MSM and MSW that congregates at the mapped hot spots. It should be noted at the outset that the mapping is not intended to estimate the overall size of the MSM population, but rather to provide information to assist HIV prevention programme planners to establish programmes and services for this high-risk subset of MSM. An estimated total of 7,613 MSM (including MSW) frequent the hot spots mapped across the eight states, with the majority of these MSM being in Lagos (39%) and Abuja FCT (25%). About half (48%) of all high-risk MSM which were mapped were sex workers, with this practice being more common in Abuja FCT (55%), Gombe (55%), Cross River (50%) and Nassarawa (49%) (3.3).

3.1.3 Distribution of Estimated IDU Population by Spot Typology

The estimated IDU population was also analysed by the type of spots from which they operated. The same spot typologies used for FSWs were applied. Overall, 56 per cent of IDUs in the eight states mapped were street/public place-based. However, Gombe state had the highest proportion (73%) of its IDU population operating from streets/public places. Home-based IDUs were more common in Cross River (56%), Abuja FCT (37%) and Lagos (27%) than in the other states. The majority of IDUs in Ondo (94%) and Nassarawa (97%) operated from spots other than those included in our typologies. These were different depending on the state and locality and represented a wide range of places including, markets, beaches and public squares.

Figure 3.3 Distribution of Injecting Drug Users (IDU) by Type of Spot, by State, Nigeria, 2012



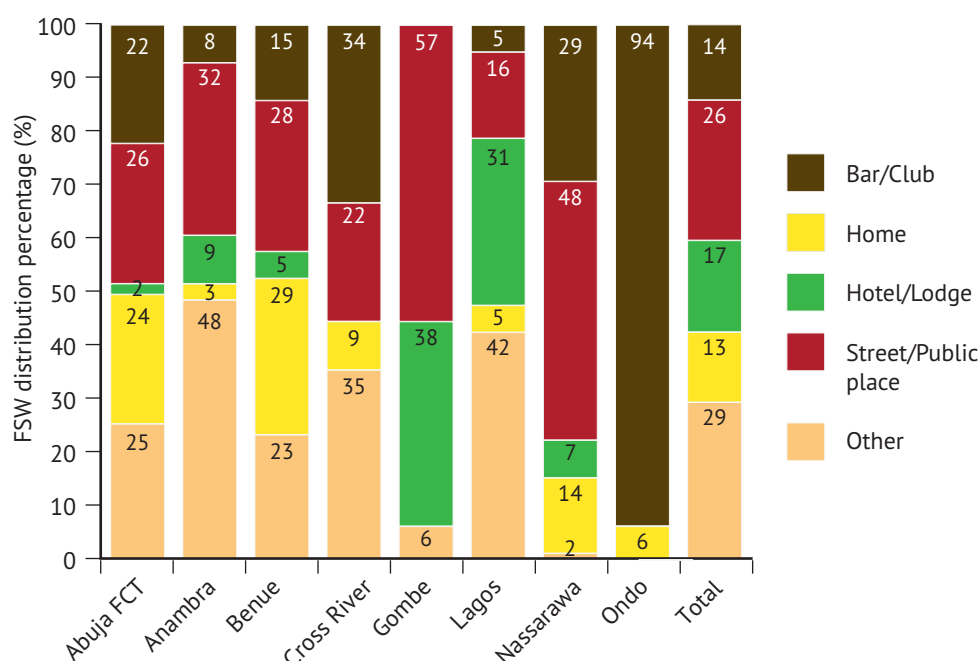
Source: Nigeria HIV Epidemic Appraisal 2013 Data.

3.1.4 Distribution Of Estimated MSM Population by Spot Typology

Nearly a third (29%) of all MSM in the states mapped were bar/club-based and 26 per cent were street/public place-based spots. The proportion of street-based MSM was higher in Gombe (57%) and Nassarawa (48%) than in all the other states. Anambra (48%) and Lagos (42%) had the highest proportions of their estimated MSM population that was bar/club-

based. The majority of the MSM in Ondo state did not operate from clearly defined spots (Figure 3.4) and developing appropriate programmes for this population will require more in depth research to gain a better understanding of how and where to reach them.

Figure 3.4 Distribution of High Risk Men Who Have Sex With Men (MSM) by Type of Spot, Eight States, Nigeria, 2012



Source: Nigeria HIV Epidemic Appraisal 2013 Data.

3.1.5 Size of Key Populations per Spot

The estimated number of all MARPs, or key populations, per spot was calculated based on the number of active spots identified and the estimated number of people from each category. The mean number of FSWs, MSM and IDU per spot in all the states mapped was 12.5, 15.4 and 13.0, respectively. Abuja FCT and Gombe had the highest mean number of FSWs per spot, with 16.9 and 16.6, respectively. Nassarawa had the highest number of both MSM (23.2) and IDU (34.5) per spot (3.3).

This information can be used to set targets for prevention efforts both in terms of coverage of venues as well as of populations.

Table 3.3 Mean Number of Members of Key Populations Per Spot by State, Nigeria, 2012

State	FSW	MSM	IDU
Abuja FCT	16.9	15.8	9.3
Anambra	9.6	5.2	7.2
Benue	12.2	17.9	5.6
Cross River	14.2	18.4	6.7
Gombe	16.6	18.9	14.2
Lagos	11.5	15.4	12.5
Nassarawa	14.2	23.2	34.5
Ondo	8.2	14.5	Na
Total	12.5	15.4	13.0

Source: Nigeria HIV Epidemic Appraisal 2013 Data.

Notes: FSW = female sex worker; IDU = injecting drug user; MSM = men who have sex with men.

3.2 Venue Profiling

As outlined in the Methods section, this exercise was conducted in urban areas and is designed to determine where and when sexual networking is most likely to occur and to estimate the size of population that frequents identified venues.

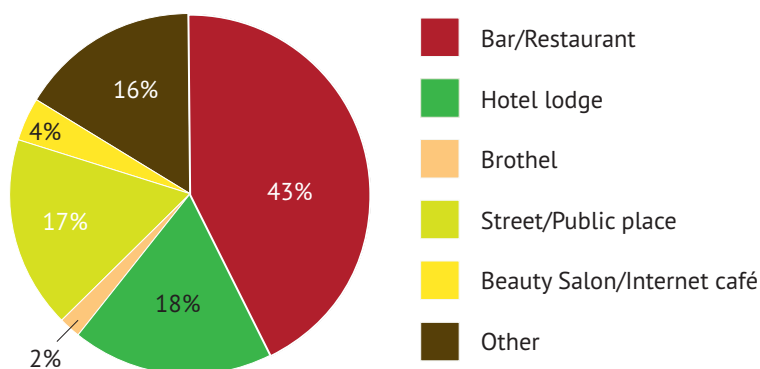
Each study team visited designated sites in their state and, from observation and discussion with secondary key informants, drew up a list of all venues where men and women congregate socially. Primary key informant interviews were then conducted to assess the profile of the venues and characteristics of the venue patrons.

A total of 6,788 venues were listed, and on average 2 key informants were interviewed per venue. In total 13,466 primary key informants were interviewed of whom 31% were venue managers, 26% venue staff, 42% patrons and 1% 'others'. This mix of key informants was selected to provide perspectives from both those working in venues and those frequenting the venues as patrons.

3.2.1 Characteristics of Venues

As noted above, the list of venues profiled was determined through initial discussions with key informants to assess where men and women congregate socially. A large proportion of the venues profiled were characterised as 'bar/restaurant' (43%), followed by 'hotel/lodges' (18%) and public places (17%) (Figure 3.5). A small percent of the venues profiled were 'beauty salon/internet cafe' (4%) and brothels (2%). A further 16% of venues profiled were 'other' as discussed earlier.

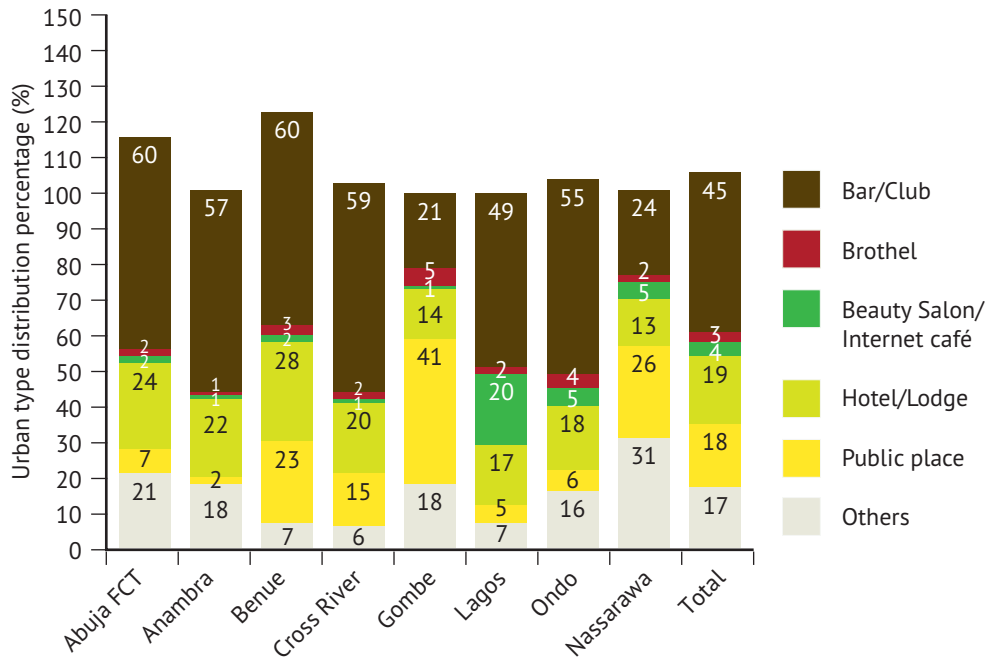
Figure 3.5 Distribution of Urban Venue Types Profiled, Eight States, Nigeria, 2012



Source: Nigeria HIV Epidemic Appraisal 2013 Data.

The type of venue most frequented varied (Figure 3.6) across States, although overall 'bar/club/restaurant' predominated constituting between 49 – 60% of venues in Abuja FCT, Anambra, Benue, Cross River, Gombe and Nassarawa. Of these six States, all except Gombe featured hotels and lodges as next most common. In Lagos, venues were more evenly distributed with 31% of the venues described as 'other' followed by 26% of 'public places' and bar/club restaurant 24%. Gombe was the only site where a significant percent of the venues were 'beauty salon/internet café' (20%).

Figure 3.6 Distribution of Urban Venue Types Profiled, by State, Nigeria, 2012

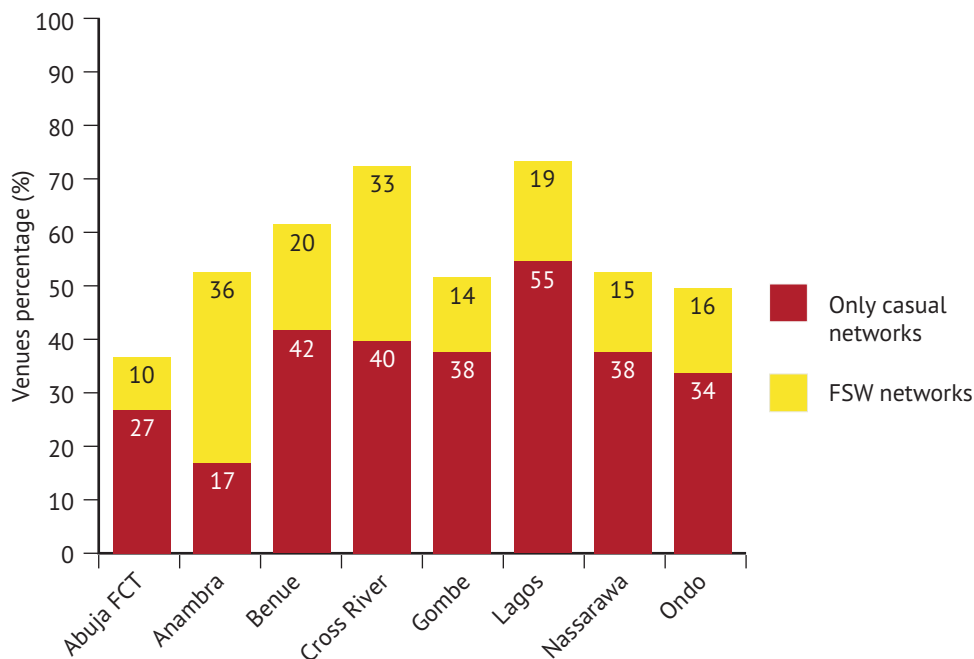


Source: Nigeria HIV Epidemic Appraisal 2013 Data.

3.2.2 Sexual Networking in Venues

Once the venue types were established, in-depth interviews were conducted to reveal the extent to which sexual networking occurred in the different places and whether this was casual or commercial (i.e., female sex work). The study revealed wide variations across states. While a large proportion of the venues in Lagos (55%), Benue (42%), Cross River and Nassarawa (38% each) facilitated FSW networks, this was the case for only 17% of venues in Anambra (Figure 3.7).

Figure 3.7 Percent Distribution of Profiled Venues by Type of Sexual Networking Occurring, by State



Source: Nigeria HIV Epidemic Appraisal 2013 Data.

Again the variation is of interest as almost 64% of venues profiled in FCT Abuja do not facilitate any sexual networking, while in Cross River and Lagos 75% of the venues profiled were sites of sexual networking.

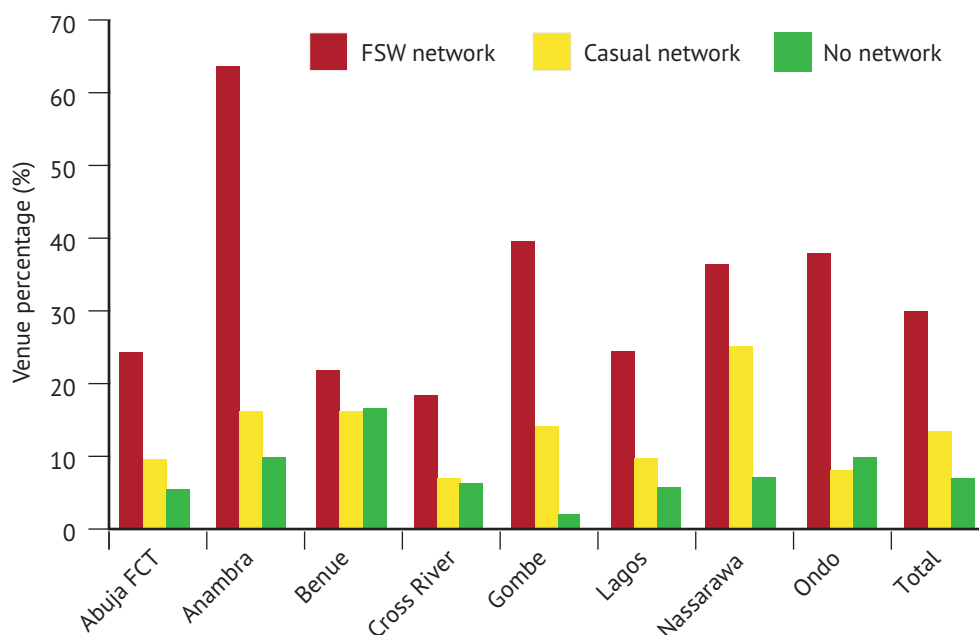
The venue profiling also mapped different sexual networking patterns against type of venue. While all the brothels are FSW networks, in addition about 50% and 36% of 'hotel/lodge' and 'bar/club/restaurant' also facilitate FSW networks. This is of particular importance as it indicates an overlap between sites for casual and commercial sexual networks and consequently higher risk. The least sexual networking is seen on the streets, beauty salon/internet café and other public places.

3.2.3 Condom Availability at Venues

The availability of condoms is critical for effective HIV prevention programmes, particularly in high risk network venues. This study revealed that condom availability at venues was very low with an average of only 18% of all venues profiled having condoms available. Availability ranged from a low of 12% each in FCT Abuja and Cross River to a maximum of 22% in Nassarawa and 26% in Anambra.

Figure 3.8 shows the percent of venues, where condoms were available by state and by sexual network type. Overall, only 32% of the FSW network venues had condoms available. In venues which hosted casual sexual networks only 15% had condoms and 7% of venues which did not facilitate any sexual networking did provide condoms. Thus only about one-third of the high risk venues identified had condoms in place, and even fewer in the casual network venues.

Figure 3.8 Percent of Venues, Where Condoms Are Available by Type of Sexual Network and by State, Nigeria, 2012



Source: Nigeria HIV Epidemic Appraisal 2013 Data.

State wise, condoms were available in 68% of the FSW venues in Anambra, and in about 40% of the same venues in Ondo, Nassarawa and Gombe states. Cross River had the least availability of condoms at under 20%.

Condom availability is significantly lower in casual network venues. Nassarawa reported the highest rate of condom availability in almost 25% of venues where casual sexual networking occurs. Although this is low, the other States fared worse. Lagos, Cross River and Ondo had fewer than 10% of sites with condoms available. As mentioned earlier, the appraisal also found that certain venues, which do not facilitate sexual networking, do possess condoms.

This is essential information for planning purposes as it shows the need for better targeting of condoms and the need to align social marketing programmes with those sites most likely to facilitate sexual networks.

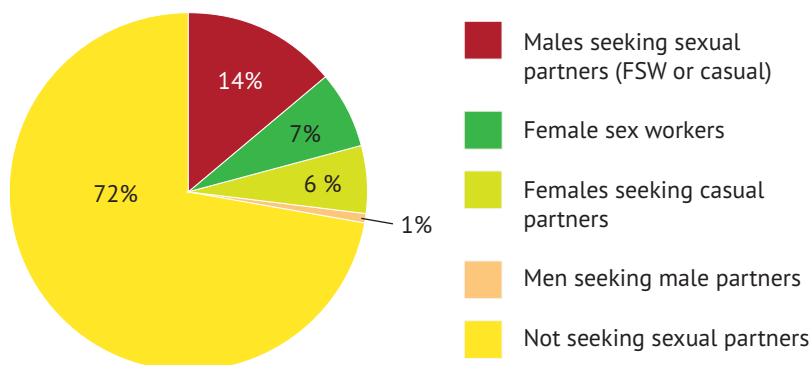
3.2.4 Characteristics of Venue Patrons

In this section, we describe the characteristics of the patrons visiting various types of venues and by state. Particular consideration is given to the extent to which venue patrons engage in sexual networking.

As described earlier, 56% of the venues profiled facilitated some form of sexual networking. In order better to understand the nature of this networking, the study looked at the extent to which patrons at these venues were seeking sexual partners and engaging in high risk sexual activities.

Overall, an estimated 28% of the patrons/visitors to all venues were seeking sexual partners; 14% were men seeking either casual or commercial sexual partners (FSW), 6% were women seeking casual partners (Figure 3.9), 7% were female sex workers, and about 1% of the total patrons were men seeking male sexual partners.

Figure 3.9 Percentage of All Patrons at Profiled Venues Who Are Seeking Sexual Partners, by Sex and Type of Partner Sought, Eight States, Nigeria, 2012



Source: Nigeria HIV Epidemic Appraisal 2013 Data.

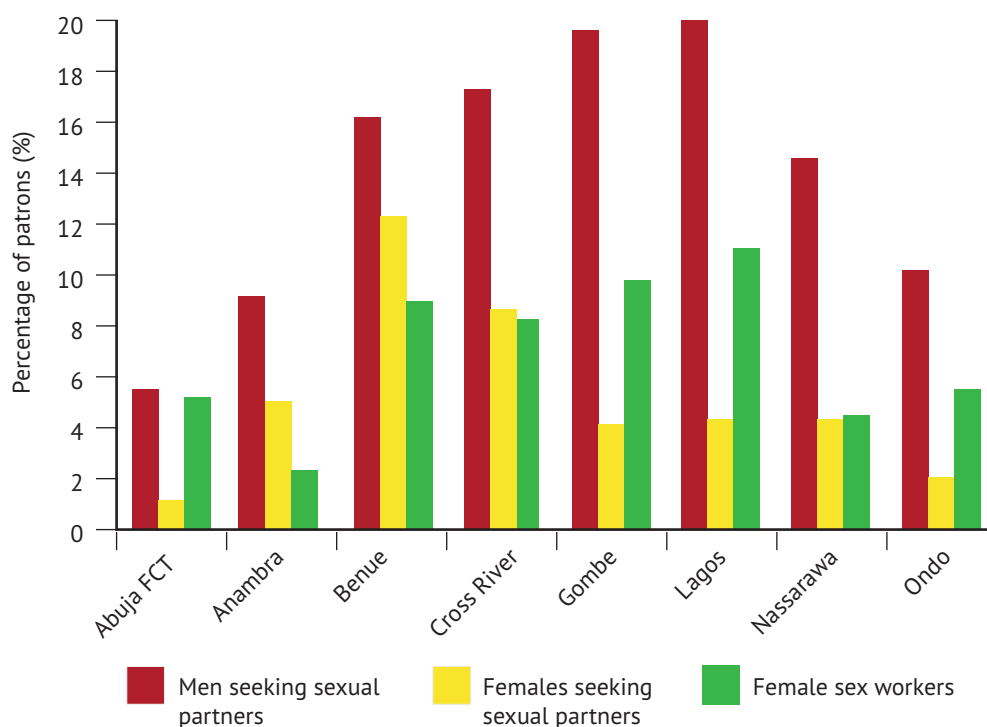
Figure 3.10 presents the percentage of all patrons at venues who seek sexual partners, by sex and type of partner sought across the 8 States.

States are quite different as far as sexual networking is concerned. In Abuja FCT only about 12% of all venue patrons were seeking sexual partners: this percentage was made up of 5% men seeking casual partners or female sex workers, 5% FSWs seeking clients and 2% women seeking casual partners. In contrast, Benue, Cross River, Gombe, Lagos and Nassarawa all had over 30% of patrons seeking sex.

In all states, there were significantly more men seeking sexual partners than women. The highest rates of women seeking casual male sexual partners were found in Benue (13%), Cross River (9%) and Nassarawa (8%). The highest rates of female sex workers as patrons were found in descending order in Lagos (11%), Gombe (10%) and Benue, Cross River and Nassarawa (9% each). This overlap of patronage is important in terms of planning interventions and it was interesting to see that it was less prevalent in Ondo (6%) FCT Abuja (5%) Anambra (2%).

3.2.5 Profile of Venue Patrons

Figure 3.10 Percentage of All Patrons At Profiled Venues That Are Seeking Sexual Partners, by Sex and Type of Partner Sought, by State, Nigeria, 2012

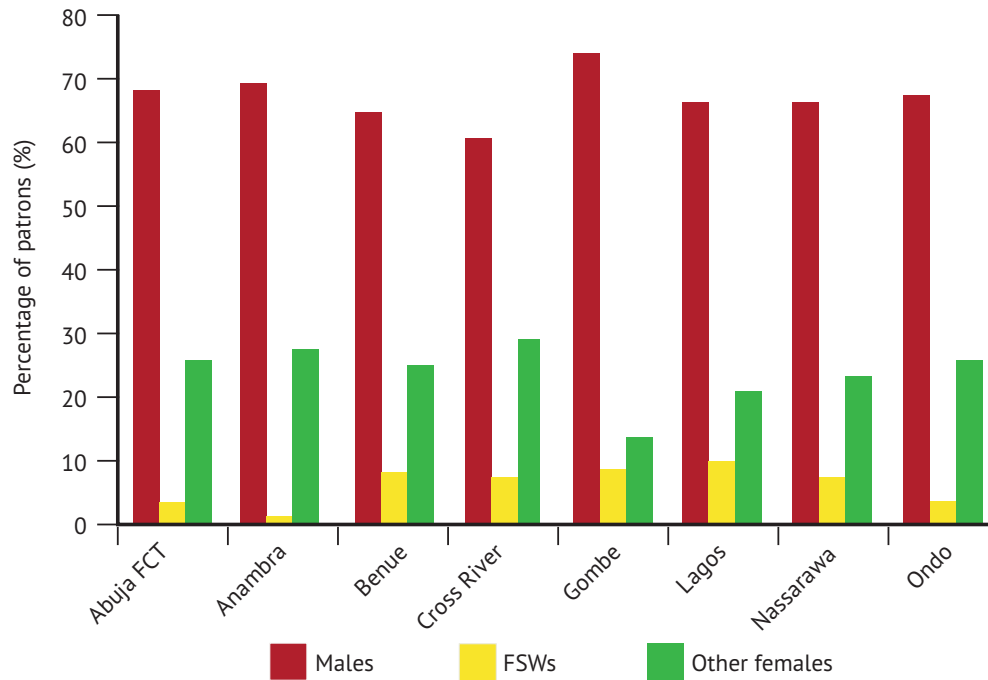


Source: Nigeria HIV Epidemic Appraisal 2013 Data.

When mapped next to the national average, Lagos, Gombe, Benue, Cross River and Nassarawa had slightly higher representation of sex workers at each venue, while Anambra, FCT Abuja and Ondo had the lowest (Figure 3.10). Figure 3.11 shows the distribution of the different types of individuals who visit the venues seeking sexual partners. In all states, the majority of patrons who visit venues to meet sexual partners are men, who are seeking either casual female or FSW partners. In all states, the next largest group that visit these venues is FSWs, followed by other females who are seeking casual partners.

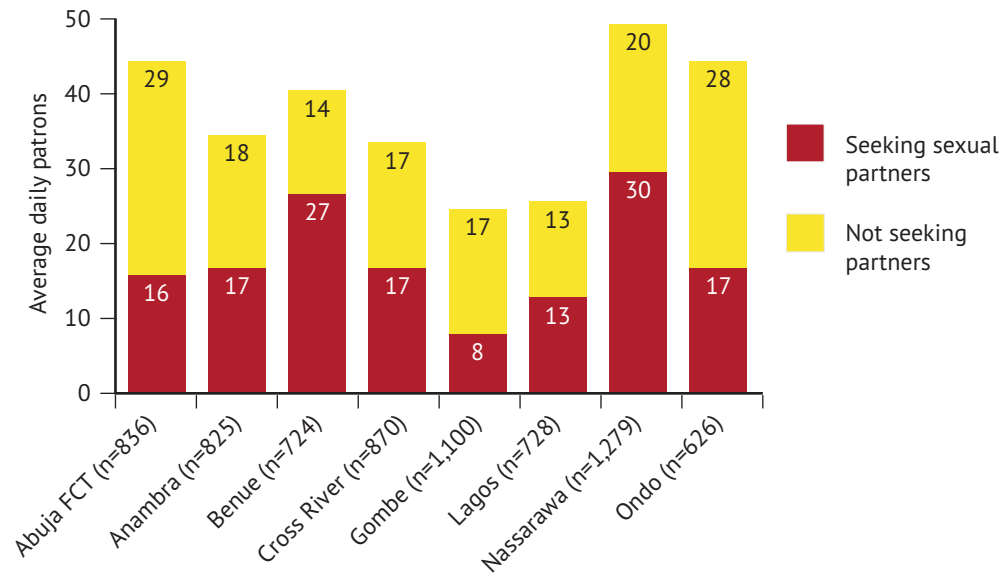
A national average of 38 patrons was calculated to visit each venue across 8 states every day (Figure 3.12). Of this total, 17 are seeking sexual partners. This amounts to a significant number in aggregate. When broken down by state interesting variations can be seen: in Benue and Nassarawa there were significantly more than the national average of patrons seeking sexual partners daily across venues at 27 and 30 respectively, estimated (Figure 3.12), while in Gombe the average was only 8.

Figure 3.11 Percentage Distribution of Venue Patrons Who Are Seeking Sexual Partners, Disaggregated by Sex and FSW or Non FSW



Source: Nigeria HIV Epidemic Appraisal 2013 Data.

Figure 3.12 Average Number of Patrons Visiting Venues Daily Seeking and Not Seeking Sexual Partners by State Nigeria 2012



Source: Nigeria HIV Epidemic Appraisal 2013 Data.
 Note: n = sample size.

Finally, the venue profiling exercise sought to ascertain the extent to which the different types of venues facilitated casual sexual networking. As 3.4 shows, almost 88% of sexual networking across the eight states takes place in about 47% of the types of venues profiled, including bars and clubs (25.6% of venues), hotels and lodges (12.1% of venues), street and

public places (6.9% of venues) and brothels (2.3% of venues). Similarly, this analysis illustrates the relative importance of venues where FSWs are found. Of the venues listed in 3.4, 31.4% had FSWs, and these accounted for 56% of the estimated number of males and females who frequent venues seeking sexual partners. This suggests that targeting these types of venues where FSWs frequent would be an efficient strategy for targeting those seeking casual partners.

Table 3.4 Percentage of All Males and Females Seeking Casual Partners That Are Patrons of Different Types of Venues, Eight States, Nigeria, 2012

Venue Characteristic	Percentage of Venues (n=6,865)	Percentage of Population Seeking Casual Partners		
		Males (n=35,043)	Female (n=15,775)	Total (n=59,818)
Bar / Club				
FSWs	15.6%	27.1%	25.5%	26.6%
Only Casual Network	10.0%	14.7%	24.5%	17.7%
Hotel/Lodge				
FSWs	9.0%	14.7%	13.4%	14.3%
Only Casual Network	3.1%	3.5%	7.3%	4.7%
Street / Public Places				
FSWs	4.5%	8.8%	8.6%	8.7%
Only Casual Network	2.4%	7.9%	12.8%	9.4%
Brothel				
FSWs	2.3%	10.3%	0.0	6.4%
Only Casual Network	n/a	0.0%	0.0%	0.0%
Subtotal	46.9%	87%	92.1%	87.8%
All Other Venues	53.1%	13.0%	7.9%	12.2%

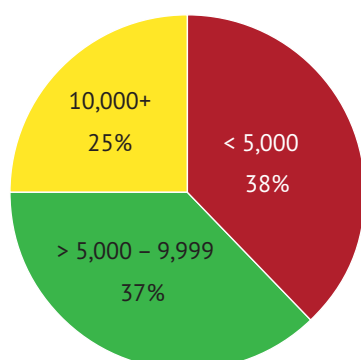
Source: Nigeria HIV Epidemic Appraisal 2013 Data.

Notes: FSWs = female sex workers; n = sample size.

3.3 Rural Appraisal

Rural appraisal was conducted among the rural general population to learn about behaviours and sexual networks which drive and sustain more generalized HIV transmission.

Figure 3.13 Distribution of Villages/Towns Assessed in the Rural Appraisal Based on Population Size



Source: Nigeria HIV Epidemic Appraisal 2013 Data.

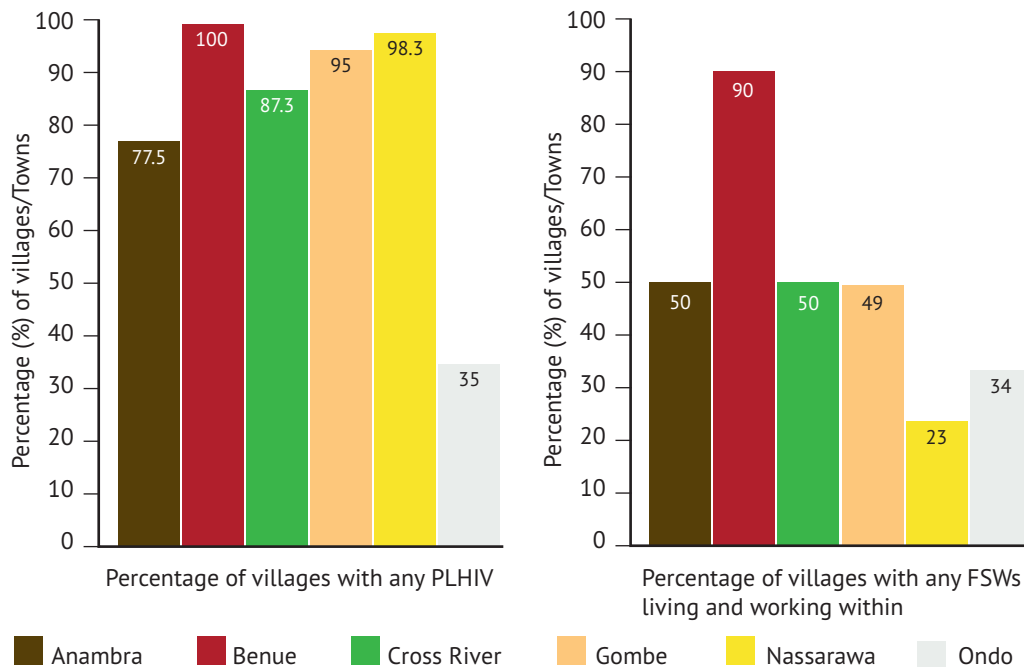
The first stage of the appraisal is a rapid assessment at village level. This provides information on the proportion of villages reporting the presence of people living with HIV and female sex workers, and the mean number of female sex workers in the villages.

The rural appraisal was conducted in six states, namely: Anambra, Benue, Cross River, Gombe, Nassarawa and Ondo. Towns and villages were selected according to population size so that almost one third had fewer than 5000 inhabitants, a third had between 5,000 and 10,000 and a third had over 10,000 inhabitant (Figure 3.13).

3.3.1 Village Profiles

Awareness of people living with HIV (PLHIV) and of the existence of female sex workers in rural settings may influence individual-level risk perception and receptivity to HIV prevention interventions. In the rural appraisals, participants were asked if they knew of any PLHIV or female sex workers working or living within their locality. With the exception of Ondo state, at least three-quarters of respondents reported awareness of PLHIV within their villages. However, far fewer people knew if there were FSWs working or living within their villages, except in Benue, which had universal acceptance of the presence of PLHIV and 90 per cent of responses acknowledging that there were FSWs working or living within the villages. While nearly all (98.3%) respondents in Nassarawa state acknowledged the presence of PLHIV in their midst, only (23%) of them reported there were FSWs working or living within their locality (Figure 3.14).

Figure 3.14 Proportion of Villages and Towns Reporting Any PLHIV and FSWs Living Within, by State, Nigeria, 2012



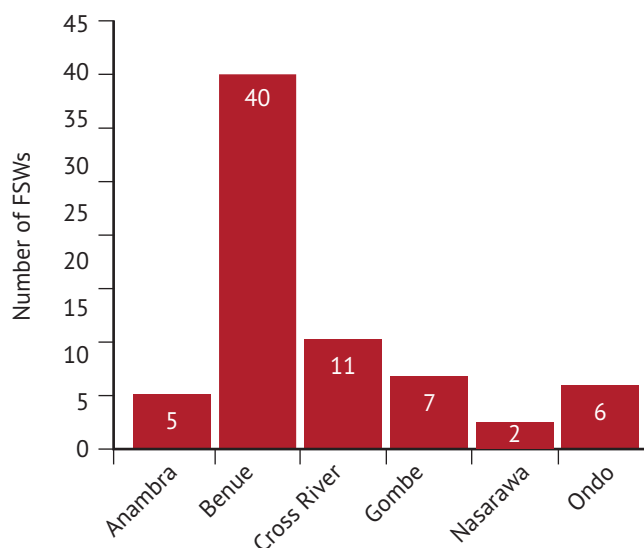
Source: Nigeria HIV Epidemic Appraisal 2013 Data.

3.3.2 FSWs in The Villages and Towns

Participants in the states reporting the presence of FSWs were also asked to estimate the number of female sex workers working or living within their villages. Benue state reported the highest average number (40), perhaps reflecting the near-universal acceptance of the presence of FSWs in its villages. While only a small percentage (34%) of Ondo participants reported the presence of FSWs in their villages, they estimated a higher number of FSWs

in those villages (6) than Anambra (5), where a higher proportion of respondents (50%) acknowledged the presence of FSWs (Figure 3.15).

Figure 3.15 Estimated Number of FSWs Working in Towns and Villages With Any FSWs, by State, Nigeria, 2012.



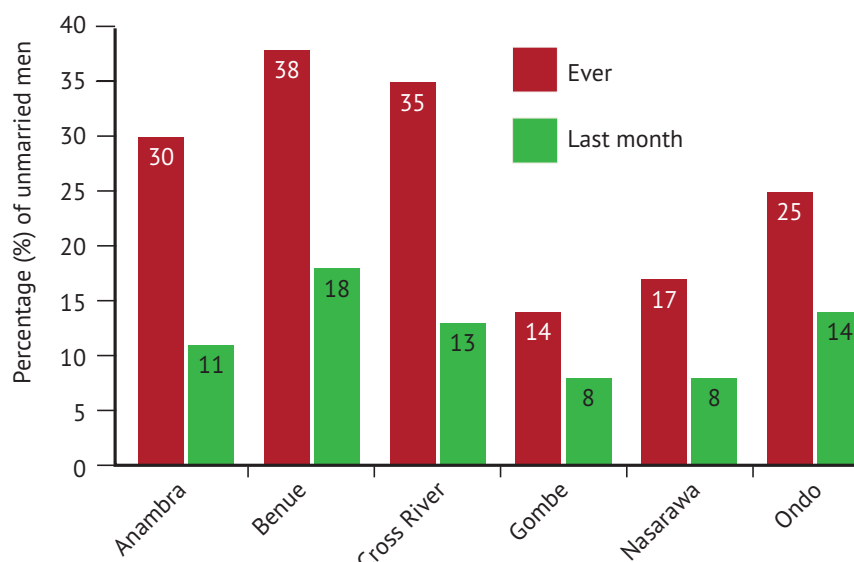
Source: Nigeria HIV Epidemic Appraisal 2013 Data.
Note: FSWs = female sex workers.

3.3.3 High-risk Sexual Behaviour

Because female sex workers tend to have multiple sexual partners and may not consistently use condoms with all their sexual partners, men who have sex with female sex workers are considered to be at high risk. In the rural appraisal, therefore, we sought to understand the extent to which both unmarried and married men had sex with female sex workers.

Benue state had the highest proportion (38%) of unmarried men who had ever had sex with a female sex worker, with about half of that number (18%) having done so within the last month, followed by Cross River (35%) and Anambra (30%) states (Figure 3.16).

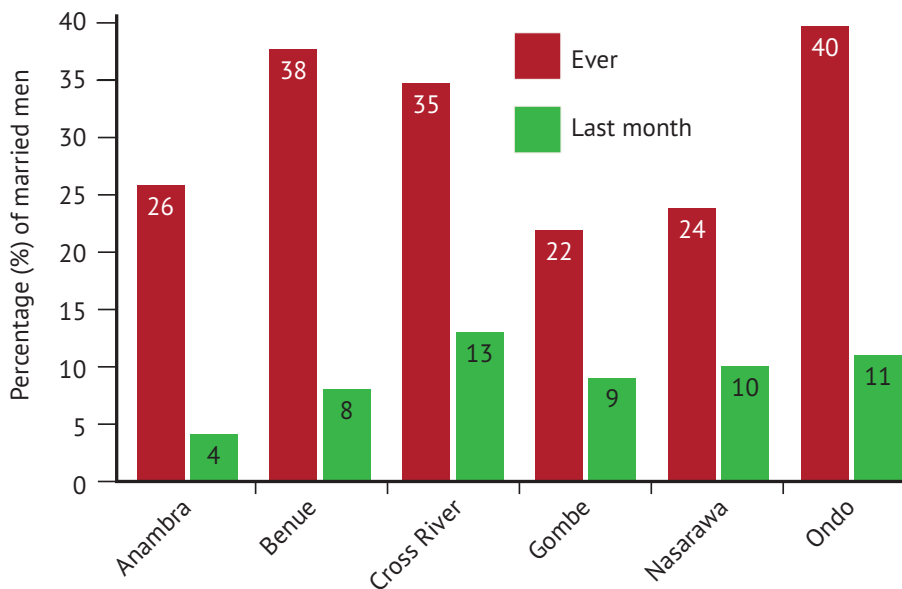
Figure 3.16 Proportion of Unmarried Men Who Have Visited a Female Sex Worker (FSW), by State, Nigeria, 2012



Source: Nigeria HIV Epidemic Appraisal 2013 Data.

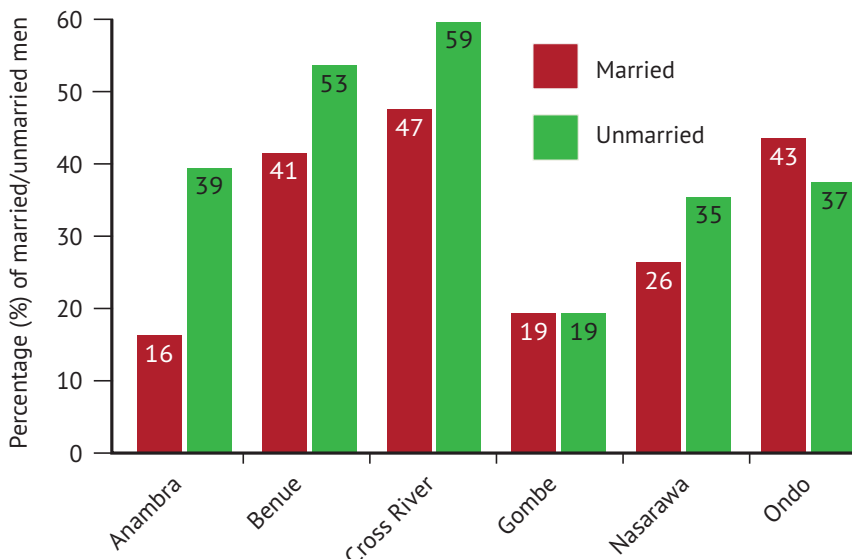
Among married men, Ondo state had the highest proportion (40%) of those who had ever had sex with a female sex worker, followed by Benue (38%) and Cross River (35%) (Figure 3.17). Regarding the regularity of this practice, the highest percentages of those who visited an FSW within the past month were recorded by Cross River (13%), Ondo (10%) and Nasarawa (10%) states. It is noted that although Nasarawa had the lowest proportion (23%) of respondents acknowledging that sex workers work or live within their villages and the lowest estimated number of female sex workers in their villages (n=2), nearly half of married men who reported to have ever had sex with a female sex worker within the state had done so within the last one month, being the highest proportion in all the states. This was also the case with Ondo. This suggests that many men from the rural areas of these states visit FSWs in urban areas, but further assessments are required to better understand these behavioural patterns.

Figure 3.17 Proportion of Married Men Who Have Visited a Female Sex Worker (FSW), by State, Nigeria, 2012



Source: Nigeria HIV Epidemic Appraisal 2013 Data.

Figure 3.18 Proportion of Married and Unmarried Men With More Than One Sexual Partner in the Past 6 Months, by State, Nigeria, 2012



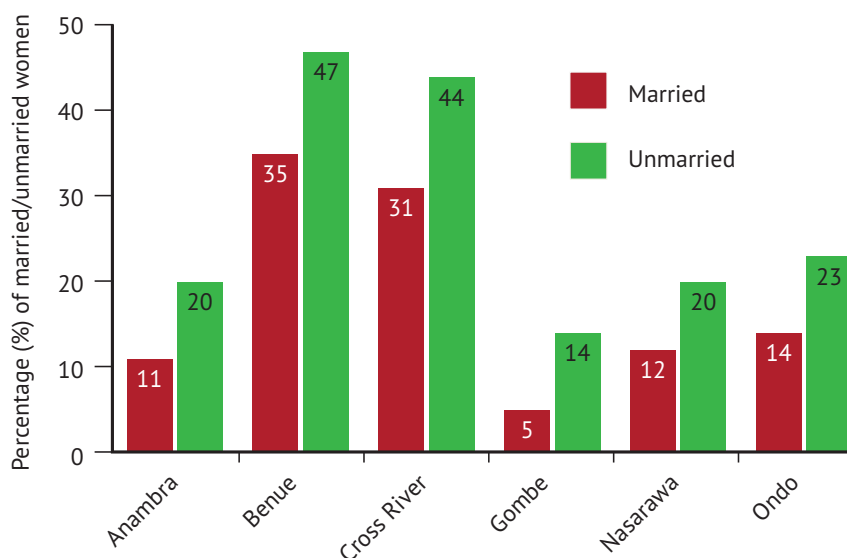
Source: Nigeria HIV Epidemic Appraisal 2013 Data.

Multiple sexual partnerships among both men and women also heighten the risk of HIV acquisition and transmission. The rural appraisal also attempted to determine the proportion of men and women who had more than one sexual partner within the past 6 months (Figure 3.18). Over half of unmarried men in Cross River (59%) and Benue states (53%) had more than one sexual partner in the past 6 months, with corresponding higher estimates among married men as well. The proportion of married men with more than one sexual partner in the past 6 months in Ondo state was close to those for Cross River and Benue states.

The exercise also determined the proportion of married and unmarried women having multiple partners in the past 6 months.

Similar to unmarried men, Benue and Cross River states had the largest proportions (47% and 44%, respectively) of unmarried women who had more than one sexual partner in the past 6 months (Figure 3.19). The two states also recorded the highest proportions of married women (35% in Benue and 31% in Cross River) who had more than one sexual partner in the past 6 months. These results together with those discussed above among married and unmarried men and women point to complex multiple and concurrent sexual networks within these two states, which can facilitate rapid spread of HIV within steady unions as well as in casual sexual liaisons.

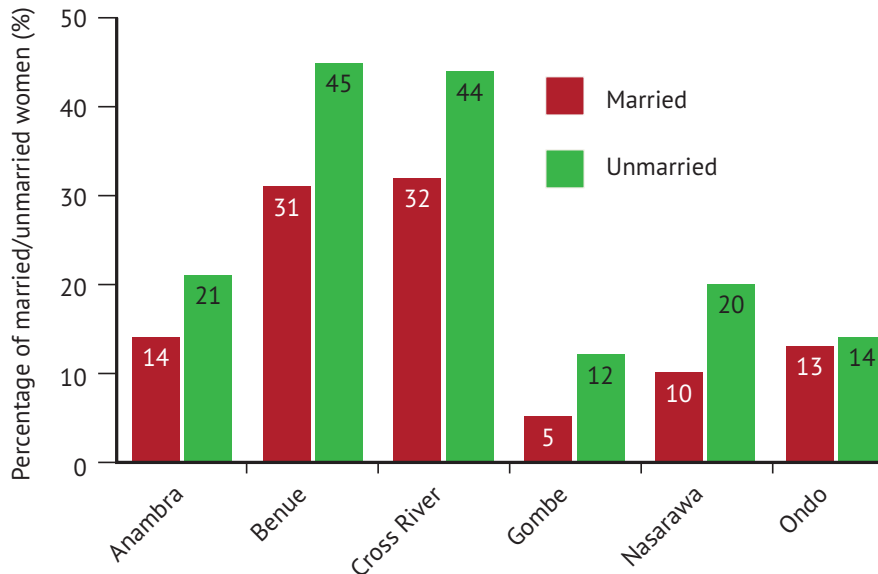
Figure 3.19 Proportion of Married and Unmarried Women With More Than One Sexual Partner in the Past 6 Months, by State, Nigeria, 2012



Source: Nigeria HIV Epidemic Appraisal 2013 Data.

The prevalence of transactional sex, that is sex in exchange for money, goods or gifts, was also explored as it is also a marker of high-risk sexual behaviour. Consistent with the findings above, Benue and Cross River had the highest proportions of both married and unmarried women who had engaged in transactional sex in the past 6 months (Figure 3.20). This is of concern since it clearly highlights greater risk and underlying vulnerabilities that could be rooted in economic need and cultural norms.

Figure 3.20 Proportion of Married and Unmarried Women Who Have Engaged in Transactional Sex in the Past 6 Months, by State, Nigeria, 2012

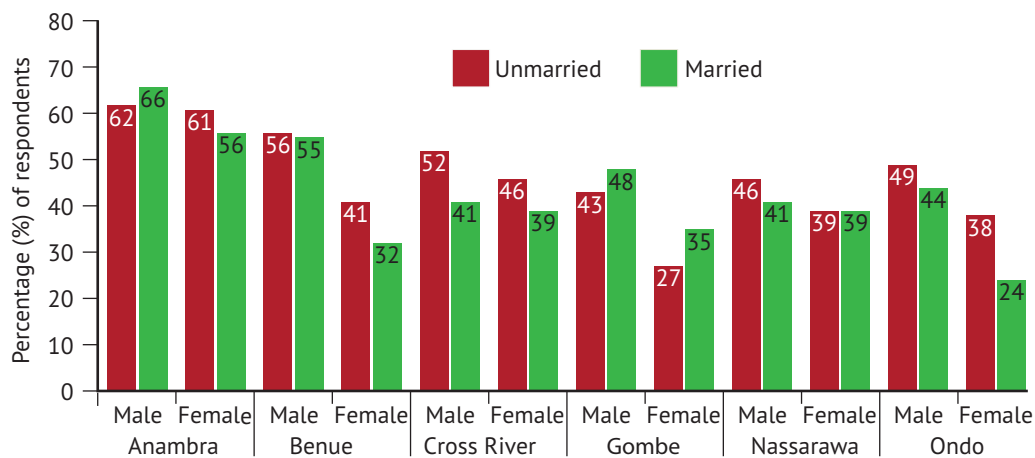


Source: Nigeria HIV Epidemic Appraisal 2013 Data.

3.3.4 Condom Use

Correct and consistent condom use remains the most effective tool for HIV prevention among people with multiple sexual partners. Reported condom use at the most recent sexual encounter with a casual partner was higher among both married and unmarried men than in married and unmarried women in all the states, with Anambra reporting the highest rates in both population groups (Figure 3.21). However, at only about 60 per cent condom use in both married and unmarried males and females even in Anambra, these results point to high-risk behaviour and high exposure to HIV across all the states, considering also the prevalence of transactional sex and multiple and concurrent sexual partnerships discussed in the foregoing sections.

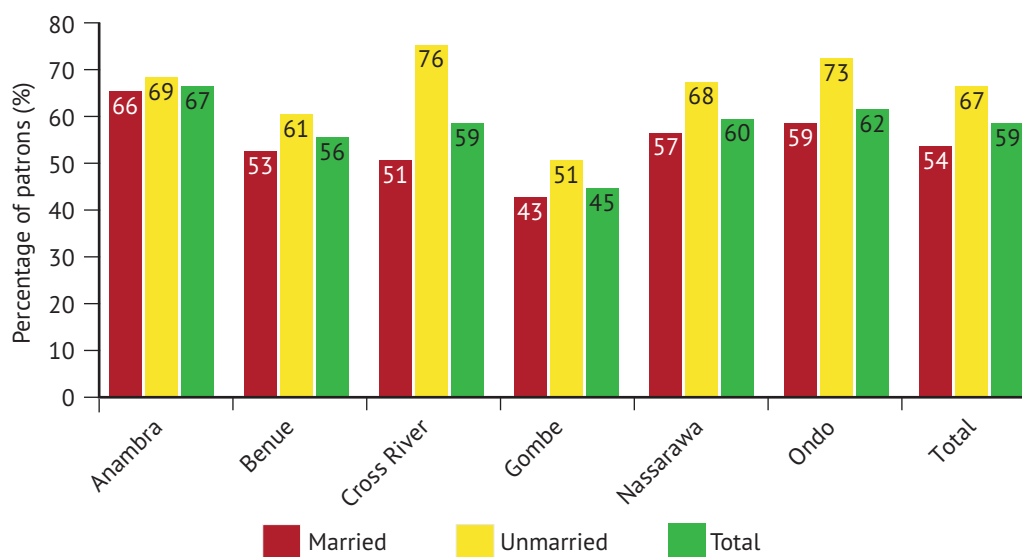
Figure 3.21 Condom Use by Married and Unmarried Men and Women During Their Most Recent Sexual Encounter With a Casual Partner, by State, Nigeria, 2012



Source: Nigeria HIV Epidemic Appraisal 2013 Data.

Similarly, condom use was suboptimal in the context of female sex work, with just over 60% of men reporting condom use during their last sexual encounter with an FSW (Figure 3.22). Lowest reported levels of condom use with FSWs were reported by men in Gombe. Condom use with FSWs was higher for unmarried men than married men in all states.

Figure 3.22 Condom Use by Married and Unmarried Males During Their Most Recent Sexual Encounter With a FSW, by State, Nigeria, 2012



Source: Nigeria HIV Epidemic Appraisal 2013 Data.

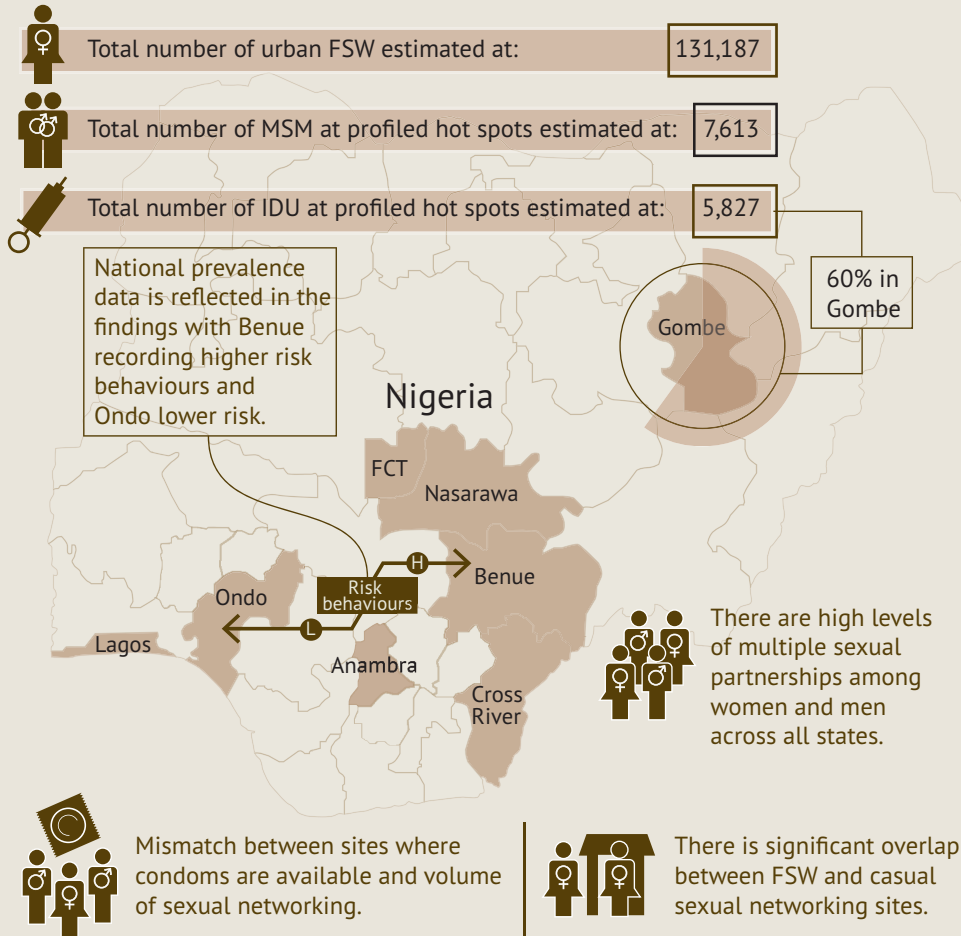
3.3.5 Summary of Key Findings

- Wide variations between and within states highlight the need for targeted local level planning
- Total number of urban FSW estimated at 131,187 across all states.
- Total number of IDU who gathered at profiled hot spots estimated at 5,827 across all states with over 60% of these in Gombe
- Total number of MSM who gathered at profiled hotspots estimated at 7,613 across all states.
- Low condom availability overall across most states highlights the need to enhance condom programming targeted at high risk sites.
- Mismatch between sites where condoms are available and volume of sexual networking.
- There is significant overlap between FSW and casual sexual networking sites.
- There are high levels of multiple sexual partnerships among women and men across all states.
- National prevalence data is reflected in the findings with Benue recording higher risk behaviours and Ondo lower risk.
- There is a high level of concentration of at risk populations at some venues; largely bars and clubs and hotels and lodges.
- Of all venues mapped, 47% hosted 88% of most at risk populations. This suggests that high coverage can be achieved using a location based approach

Source: Nigeria HIV Epidemic Appraisal 2013 Data.

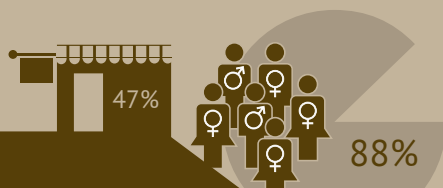
Summary of Key Findings

Data gathered for all states:



Approach

There is a high level of concentration of at-risk populations at some venues; largely bars and clubs and hotels and lodges



Of all venues mapped, 47% hosted 88% of most at risk populations. **This suggests that high coverage can be achieved using a location based approach.**

Wide variations between and within states highlight the need for targeted local level planning

Low condom availability overall across most states highlights the need to enhance condom programming targeted at high risk sites.

Chapter 4

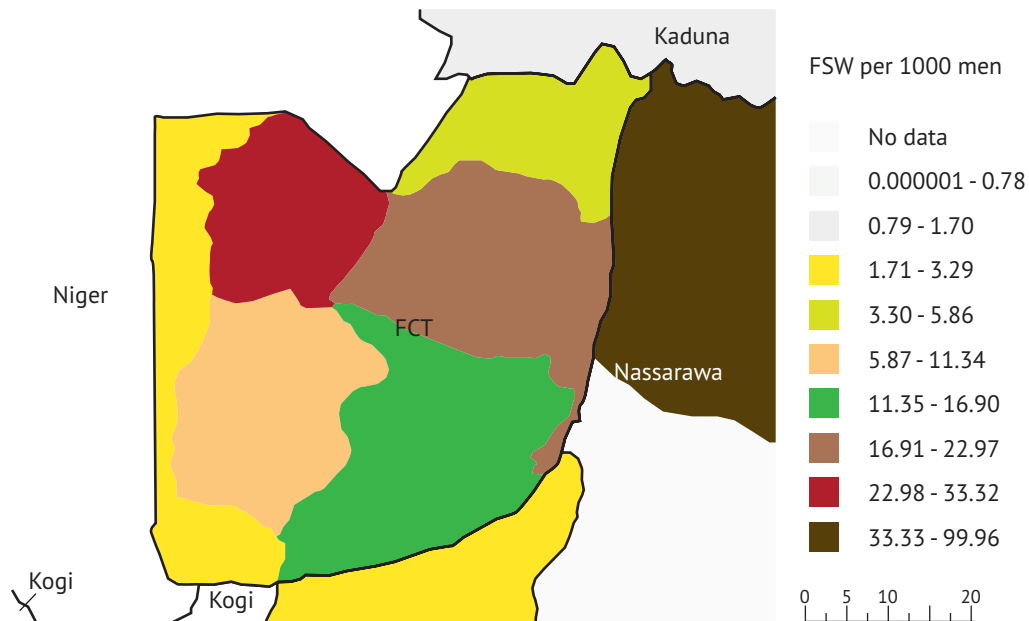
Key Findings—State Level

This chapter is designed for state level planners. It provides a snapshot of the key findings in each state, highlighting particular geographic or behavioural findings. More detailed information is available in each individual State report.

4.1 Abuja FCT

The Federal Capital Territory (FCT), which is largely comprised of Nigeria's capital city Abuja is located in Nigeria's North Central geopolitical zone. HIV prevalence for the Territory is estimated at 8.6% and the fifth the highest in the country.

Figure 4.1 Density of Female Sex Workers (FSWs per 1000 adult men) in Area Councils FCT Abuja 2012.



Source: Nigeria HIV Epidemic Appraisal 2013 Data.

4.1.1 Distribution of Most At Risk Populations (MARPS)

Mapping of MARPs was conducted in the 6 Area Councils across the territory in 74 towns, and included systematic interviews with a total of 2,190 key informants.

4.1.2 Female Sex Workers

A total of 1,446 hot spots were identified where FSWs congregated, with an estimated total of 24,376 FSWs at these hot spots. As 4.1 shows, there was variation in the estimated size and density of the FSW population across the Territory. Overall, in the urban areas that were mapped, there were approximately 70 FSWs per 1000 adult men estimated. Abuja Municipal Area Council (AMAC) had the largest estimated number of FSWs and the second highest density of FSWs, with an estimated 88 FSWs per 1000 adult men. Gwagwalada, Kuje and Kwali all had proportionately large populations and densities of FSW.

Table 4.1 Estimated Size of FSW Population by Area Council, FCT, Nigeria, 2012

Local Government Area	Estimated Number of FSWs	FSWs per 1000 Adult Men
Abaji	245	17
Bwari	1,317	23
Kuje	1,125	46
Amac	17,117	88
Gwagwalada	3,928	99
Kwali	644	30
Total	24,376	69.3

Source: Nigeria HIV Epidemic Appraisal 2013 Data.

Notes: FSWs = female sex workers.

4.1.3 IDU and MSM

The study also sought to estimate the number of MSM and injecting drug users who were to be found at the mapped hotspots in the different Area Councils. An average of 1,892 men who have sex with men (combining those who do and those who do not practice sex work) was estimated covering 120 hotspots across the area. An average of 205 IDUs was estimated at 22 spots. 4.2 shows that the majority of the MSM and IDUs were in AMAC, Bwari and Gwagwalada Area Councils.

Table 4.2 Distribution of Injecting Drug Users (IDUs) and High Risk Men Who Have Sex With Men (MSM), by Local Government Area, FCT, Nigeria, 2012

Local Government Area	Injecting Drug Users at Mapped Hot Spots	High Risk MSM at Mapped Hot Spots
Amac	135	1,554
Bwari	49	210
Gwagwalada	21	112
Kuje	Nil	6
Kwali	Nil	11
Total	205	1,892

Source: Nigeria HIV Epidemic Appraisal 2013 Data.

Notes: MSM = men who have sex with men

These differences may be related to social contexts and willingness to disclose the practice of sex work or it may reflect real differences in how common it is for MSM to practice

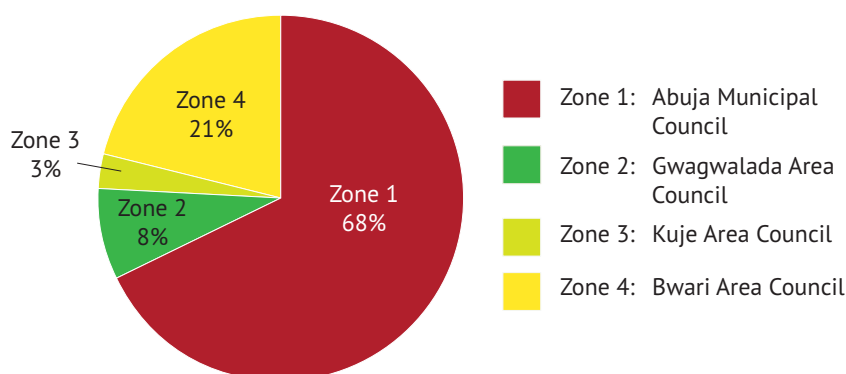
sex work in these different Area Councils. Further exploration is warranted which can shed light on this population and practice since global evidence shows that this group has an overall risk of HIV which is 13.5 fold higher than in the general population.

4.1.4 Profiling Venues for Casual Sexual Networking

Overall, 836 venues were profiled across four geographic zones in FCT, with 60.3% of venues profiled being bars, night clubs and restaurants, and a further 24.2% being hotels and lodges. On average, there were approximately 45 patrons visiting each of the profiled venues on a typical day, (higher than the 38 national average) with approximately 11% of these patrons seeking sexual partners at these venues.

Geographically, the majority of patrons seeking sexual partners were visiting venues in Zones 1 and 4 (see Figure 4.2), indicating that HIV prevention efforts targeting urban populations should focus on venues in these areas.

Figure 4.2 Distribution of Patrons Visiting Venues Seeking Casual Partners, by Zone, FCT, Nigeria 2012



Source: Nigeria HIV Epidemic Appraisal 2013 Data.

The proportion of venue patrons seeking sexual partners was then mapped by geographic zones. As 4.3 highlights, there are significantly more men seeking casual sex partners than women seeking casual partners across all zones. However, approximately 40% of patrons in all venues were FSW. Furthermore, 58.6% of patrons seeking casual sex partners at FSW networking venues were found in Zones 1 and 4. This suggests that targeting prevention programmes to these locations would reach the majority of people in urban areas who are seeking casual sex partners.

Table 4.3 Percentage of Venue Patrons Engaged in Sexual Networks by Geographic Zones, Abuja FCT, Nigeria, 2012

	Geographic Zone				
	Total	Zone 1	Zone 2	Zone 3	Zone 4
Number of venues	836	418	148	63	207
% male patrons seeking casual partners	44	44	35	20	50
% female patrons seeking casual partners	11	10	17	30	6
% patrons that are FSWs	42	42	44	38	43
% of patrons seeking casual partners at FSW networking venues	0	42.1	3.8	0	16.5

Source: Nigeria HIV Epidemic Appraisal 2013 Data.

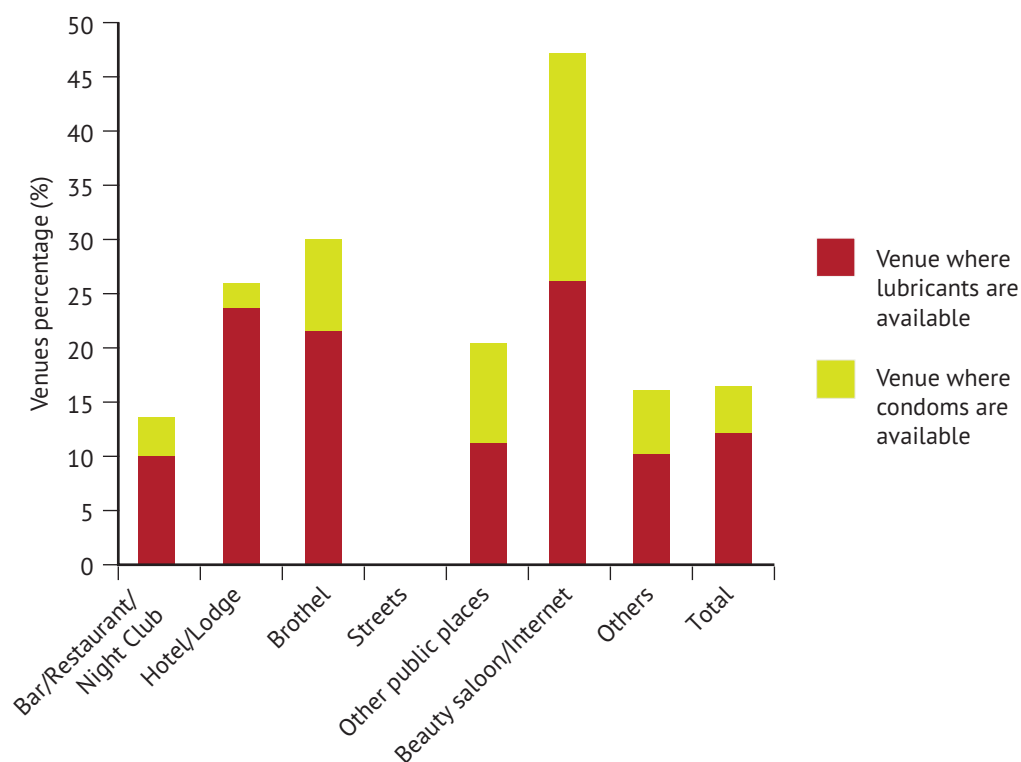
Notes: FSWs = female sex workers.

4.1.5 Condom Availability

Availability of condoms and lubricants at the venues was also assessed (Figure 4.3). Fewer than 25% of venues provided condoms apart from beauty salons and internet café's where this was just above 25%. Lubricants were generally less available across all venues, again apart from beauty salons/internet café where every one in five of such venues had lubricants.

Given the high patronage of the profiled venues in the state, and the high proportion of patrons seeking sex there, renewed efforts to increase the availability of condoms are called for.

Figure 4.3 Percentage of Venues Where Condoms Were Available



Source: Nigeria HIV Epidemic Appraisal 2013 Data.

4.2 Anambra

Anambra State is located in Nigeria's South East geopolitical zone. Its HIV prevalence is estimated to be 8.7% and the fourth highest in the country.

4.2.1 Distribution of Most at Risk Populations (MARPs)

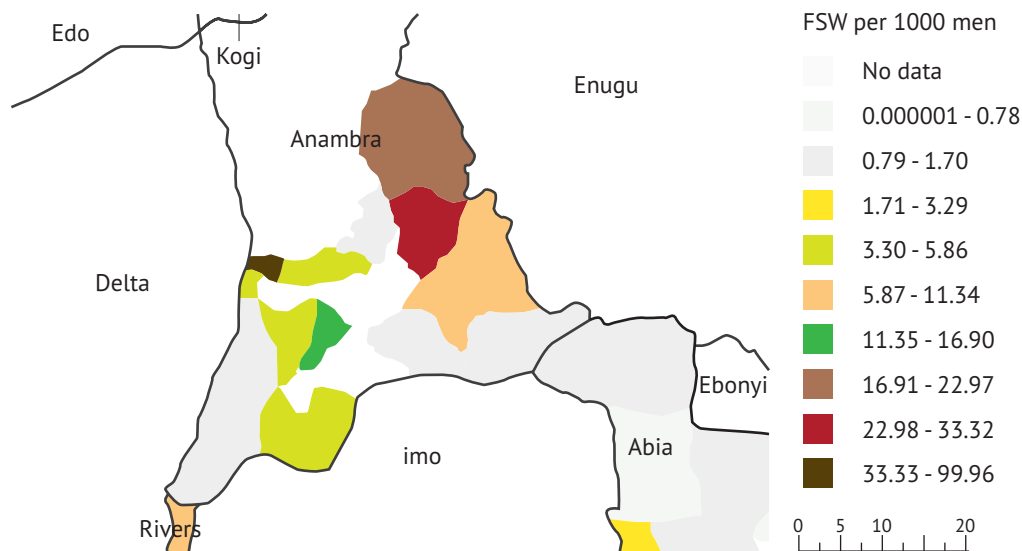
Mapping of MARPs was conducted in 13 local government areas (LGAs) across the state, and included systematic interviews with a total of 1,672 key informants.

4.2.2 Female Sex Workers

A total of 618 active hot spots were mapped where FSWs congregated, with an estimated total of 5,920 FSWs across all sites. The density and size of population varied widely as the map below signifies and is further discussed in 4.3.

4.4 shows the estimated size of the FSW population and FSW population density per 1000 adult men by LGA. Across the State and in the urban areas that were mapped, there were estimated to be approximately 9 FSWs per 1000 adult men. Onitsha North and Awka South had the largest estimated number and the highest density of FSWs, with an estimated 45 and 27 FSWs per 1000 adult men respectively. As the shows Akwa North and Nnewi North also merit targeted interventions having a much higher than average density of FSW.

Figure 4.4 Density of Female Sex Workers (FSWs per 1000 adult men) in Local Government Areas, Anambra State, 2012



Source: Nigeria HIV Epidemic Appraisal 2013 Data.

Notes: FSW = female sex worker.

Table 4.4 Estimated Size of FSW Population by Local Government Area, Anambra State, Nigeria, 2012

Local Government Area	Estimated Number of FSWs	FSWs per 1000 Adult Men
Aguata	97	1
Ekwusigo	183	5
Njikoka	61	2
Ogbaru	95	2
Onitsha South	188	5
Orumba South	117	3
Awka North	587	21
Idemili North	379	4
Ihiala	443	6
Nnewi North	766	20
Orumba North	331	8
Awka South	1269	27
Onitsha North	1404	45
Total	5920	8.7

Source: Nigeria HIV Epidemic Appraisal 2013 Data.

Notes: FSWs = female sex workers.

4.2.3 IDU and MSM

The study identified 50 hot spots for MSM, both sex workers and non sex workers. The majority of the MSM were found in Awka South, Onitsha North and Onitsha South LGAs, while IDUs were mostly found in Onitsha North, Akwa South and Nnewi North LGAs. It is interesting to note the direct correlation between sites for FSW and IDU and the addition of Onitsha South as a location where MSM might be reached.

Table 4.5 Distribution of Injecting Drug Users (IDUs) and High Risk Men Who Have Sex With Men (MSM), by Local Government Area, Anambra State, Nigeria, 2012

Local Government Area	Injecting Drug Users at Mapped Hot Spots	High Risk MSM at Mapped Hot Spots
Aguata	3	21
Awka North	Nil	6
Awka South	72	101
Ihiala	Nil	4
Nnewi North	22	29
Onitsha North	75	50
Onitsha South	Nil	30
Orumba North	Nil	19
Njikoka	2	Nil
Total	173	260

Source: Nigeria HIV Epidemic Appraisal 2013 Data.

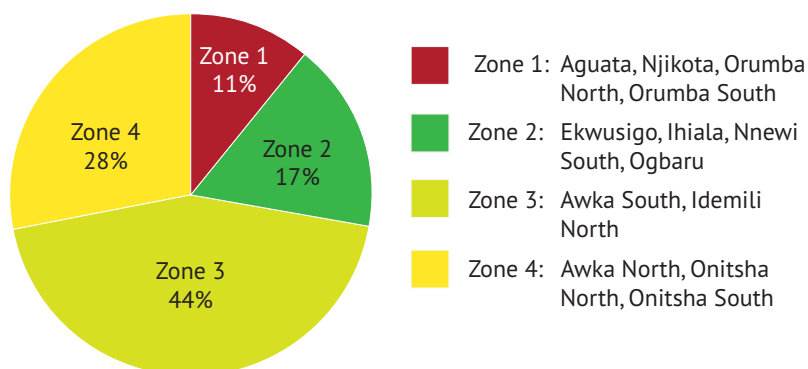
Note: MSM = men who have sex with men.

4.2.4 Profiling Venues for Casual Sexual Networking

Overall, 825 venues were profiled in Anambra as follows, with 57.0% of venues being bars, night clubs and restaurants, and a further 21.8% being hotels and lodges. On average, there were approximately 36 patrons visiting each venue on a typical day, with approximately 17% of these patrons seeking sexual partners at these venues.

72% of patrons seeking casual sexual partners were visiting venues in Zones 3 and 4 (see Figure 4.4), indicating that HIV prevention efforts targeting urban populations should focus on venues in these areas.

Figure 4.5 Distribution of Patrons Visiting Venues Seeking Casual Partners, by Zone, Anambra State, Nigeria, 2012



Source: Nigeria HIV Epidemic Appraisal 2013 Data.

This is further confirmed when type of patron and venue is analysed in each zone (4.6) showing that approximately 47% of patrons were seeking casual sex partners in FSW networking venues in Zones 3 and 4.

Table 4.6 Percentage of Venue Patrons Engaged in Sexual Networks by Geographic Zones, Anambra State, Nigeria, 2012

	Total	Geographic Zone			
		Zone 1	Zone 2	Zone 3	Zone 4
Number of venues	825	123	221	240	241
% male patrons seeking casual partners	54	64	62	45	62
% female patrons seeking casual partners	30	15	23	31	38
% patrons that are FSWs	14	20	15	19	0
% of patrons seeking casual partners at FSW networking venues		8.8	8.6	25.2	21.0

Source: Nigeria HIV Epidemic Appraisal 2013 Data.

Note: FSWs = female sex workers; % = percentage.

4.2.5 Condom Availability

As elsewhere, access to condoms was limited in the bars/restaurants and night clubs which were the most popular sites, with only about 10% of these venues reporting condom availability. Hotels and brothels fared better with over 80% reported availability.

4.2.6 Rural Assessment

Epidemic appraisals were conducted in 80 villages, selected from the four different geographic zones in Anambra. Of the 80 villages assessed, 77.5% reported having people living with HIV. Overall, about 50% of the villages had FSWs resident in the village with each of those villages having an estimated average of 5 FSWs living and working within (see Table 4.7).

Table 4.7 Percentage of Villages by Level of Risk and by Geographic Zones, Anambra State, Nigeria, 2012

	Total	Geographic Zone			
		Zone 1	Zone 2	Zone 3	Zone 4
Number of villages	80	22	18	16	24
% of villages with PLHIV reported within	77.5	72.7	88.9	68.8	79.2
% of villages with any FSWs living in the village	50.0	50.0	44.4	62.5	45.8
Mean number of FSW live and practice sex work in the village	5.43	3.55	8.72	6.69	3.83

Source: Nigeria HIV Epidemic Appraisal 2013 Data.

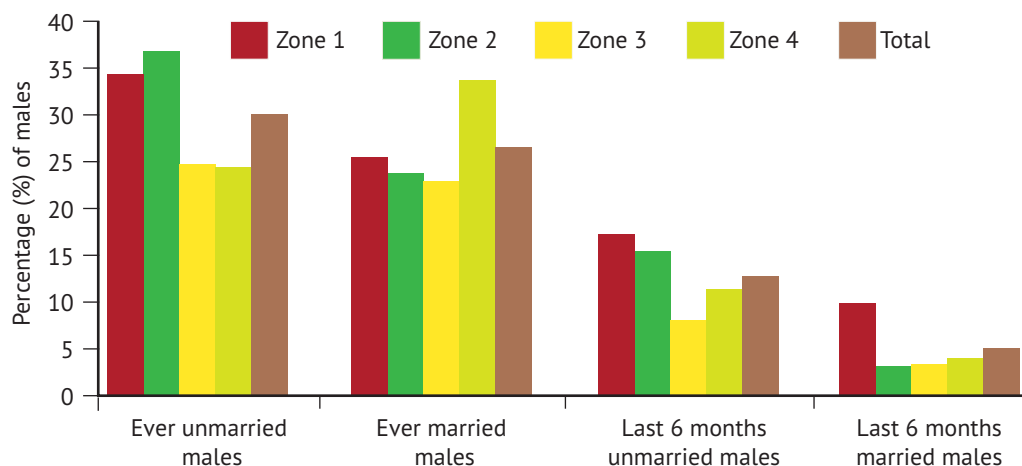
Note: PLHIV = people living with HIV.

4.2.7 Sexual Behaviour in Rural Areas

Polling booth surveys were conducted among a sample of 3,435 men and women (married and unmarried) from the same villages. This revealed high levels of risk among both men and women in all four zones.

Overall, 30% of unmarried men and 26% married men reported that they had ever visited an FSW, with 12% of unmarried men and 4% of married men reported having sex with an FSW in the past six months (Figure 4.6). Although the proportion of men visiting FSWs was high across all zones, it was highest in Zone 1.

Figure 4.6 Percentage of Males Reporting Visiting FSWs by Marital Status, Anambra State Nigeria, 2012

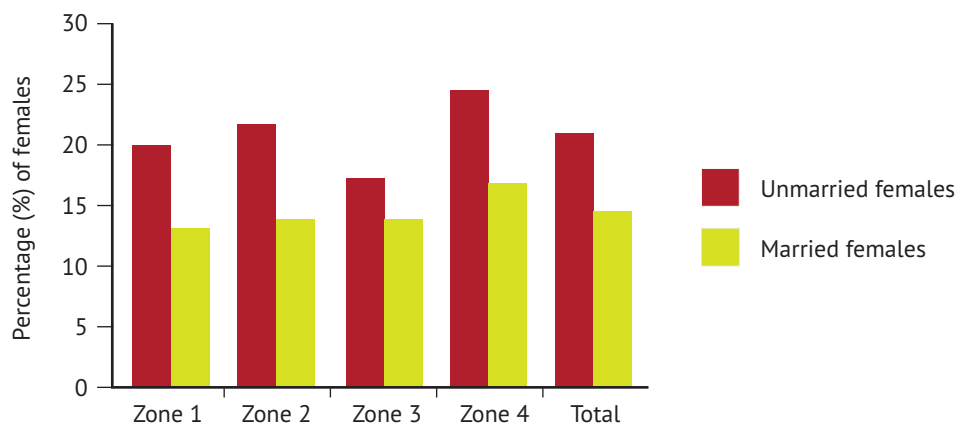


Source: Nigeria HIV Epidemic Appraisal 2013 Data.

Transactional sex was reported by about 20% of unmarried women across all zones, within the last past 6 months (see Figure 4.7) and by 14% of married women. Zone 4 has the highest number of both unmarried and married women reporting transactional sex.

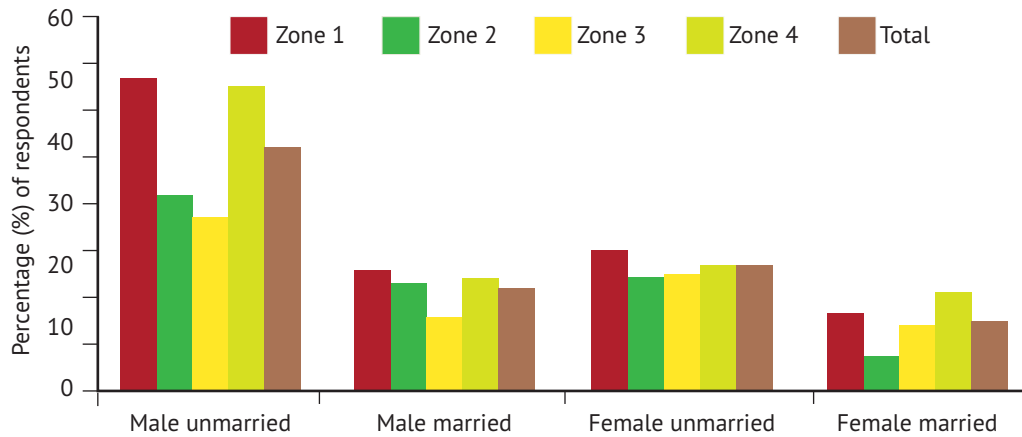
Almost 50% of unmarried men from Zones 1 and 4 reported more than one sexual partner in the past 6 months. For unmarried women the spread was more even across zones peaking at 22% in Zone 1 and about 18% in Zones 2 and 3. About 19% of married men reported more than one partner in 6 months in Zone 1 and about 16% of married women in Zone 4 reported the same. The relatively high proportion of both unmarried men and unmarried women reporting more than one partner suggests a need for focused intensive HIV prevention efforts in rural populations targeted across all zones.

Figure 4.7 Percentage of Female Respondents Who Engaged in Transactional Sex in the Past 6 Months, Marital Status, by Geographic Zones, Anambra, Nigeria, 2012



Source: Nigeria HIV Epidemic Appraisal 2013 Data.

Figure 4.8 Percentage of Respondents Reporting More Than One Sexual Partner in the Past 6 Months, by Sex, Marital Status and Geographic Zones, Anambra State, Nigeria, 2012



Source: Nigeria HIV Epidemic Appraisal 2013 Data.
 Note: Male married = more than one sexual partner other than wife/wives.

4.3 Benue

Benue State is located in Nigeria’s North Central geopolitical zone, with a prevalence of 12.7%. Benue has the highest HIV prevalence in the country.

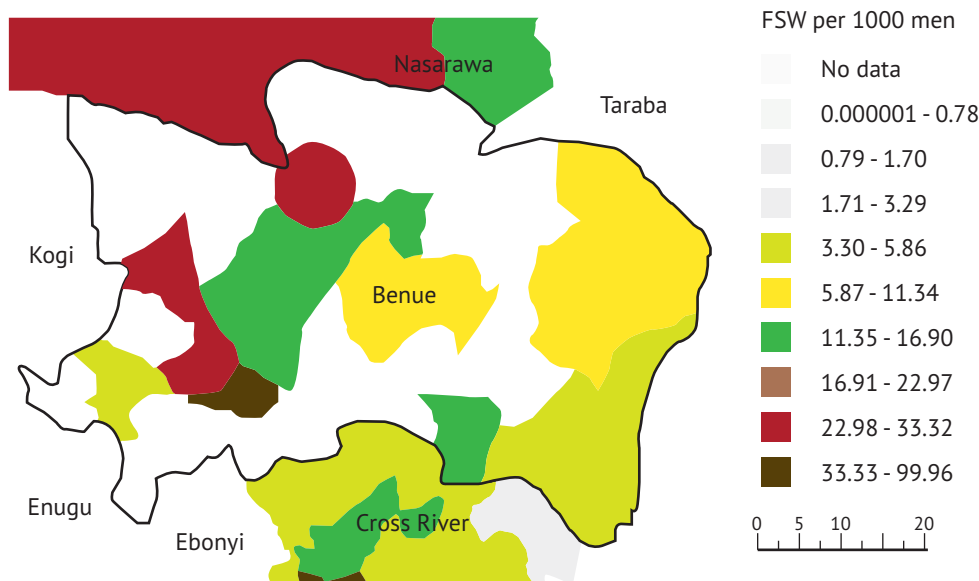
4.3.1 Distribution of Most at Risk Populations (MARPs)

Mapping of MARPs was conducted in 10 local government areas (LGAs) across the state, and included systematic interviews with a total of 1,844 key informants.

4.3.2 Female Sex Workers

A total of 855 hot spots were found where FSWs congregated, with an estimated total of 10,034 FSWs at these hot spots.

Figure 4.9 Density of Female Sex Workers (FSWs Per 1000 Adult Men) in Local Government Areas, Benue State, 2012



Source: Nigeria HIV Epidemic Appraisal 2013 Data.
 Note: FSW = female sex worker.

Table 4.8 describes the variation in Figure 4.9. While there were an estimated 18 FSWs per 1000 adult men across the whole State, Makurdi and Otukpo had the largest estimated number and density of 26 FSWs per 1000 men in each of those LGAs. As the shows, Vandekya, Gboko, Gwer-East, and Ukum also had significantly higher density of FSW population than the national average.

Table 4.8 Estimated Size of FSW Population by Local Government Area, Benue State, Nigeria, 2012

Local Government Area	Estimated Number of FSWs	FSWs per 1000 Adult Men
Kwande	554	9
Okpokwu	430	10
Gboko	1229	14
Gwer-East	873	21
Katsina-Ala	760	13
Takar	376	19
Ukum	895	16
Makurdi	1962	26
Otukpo	1715	26
Vandekya	1240	21
Total	10,034	17.6

Source: Nigeria HIV Epidemic Appraisal 2013 Data.

Note: FSWs = female sex workers.

4.3.3 Injecting Drug Users and High Risk MSM

A total of 32 and 57 spots respectively were identified where IDUs and MSM congregated. As 4.9 shows the majority of MSM could be found in Gboko, Makurdi and Otukpo while IDUs were significantly fewer in number and were found primarily in Markurdi and Gwer-East.

Table 4.9 Distribution of Injecting Drug Users (IDUs) and High Risk Men Who Have Sex With Men (MSM), by Local Government Area, Benue State, Nigeria, 2012

Local Government Area	Injecting Drug Users at Mapped Hot Spots	High Risk MSM at Mapped Hot Spots
Gboko	Nil	255
Gwer-East	38	70
Kwande	5	51
Makurdi	69	228
Okpokwu	Nil	127
Otukpo	12	175
Takar	25	45
Ukum	7	10
Vandekya	24	58
Total	180	1018

Source: Nigeria HIV Epidemic Appraisal 2013 Data.

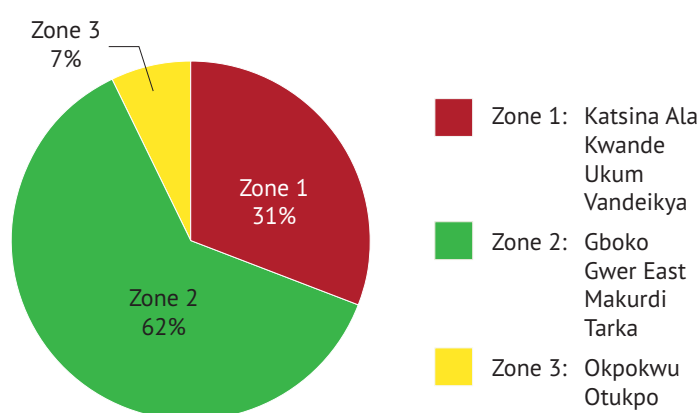
Note: MSM = men who have sex with men.

4.3.4 Profiling Venues for Casual Sexual Networking

Overall, 724 venues were profiled across four geographic zones in Benue, with 59.6% of venues profiled being bars, night clubs and restaurants, and a further 28.5% being hotels and lodges. On average, there were approximately 40 patrons visiting each of the profiled venues on a typical day, with approximately 38% of these patrons seeking sexual partners at these venues.

Geographically, the majority of patrons seeking casual sexual partners were visiting venues in Zones 1 and 2 (see Figure 4.10), indicating that HIV prevention efforts targeting urban populations should focus on venues in these areas.

Figure 4.10 Distribution of Patrons Visiting Venues Seeking Casual Partners, by Zone, Benue State, Nigeria, 2012



Source: Nigeria HIV Epidemic Appraisal 2013 Data.

4.10 shows the majority of patrons seeking sexual partners were men. Of more import is the fact that 41.3% of all patrons seeking casual sex partners were found at FSW networking venues in Zone 1 and Zone 2.

Table 4.10 Percentage of Venue Patrons Engaged in Sexual Networks by Geographic Zones, Benue State, Nigeria, 2012

	Total	Geographic Zone			
		Zone 1	Zone 2	Zone 3	Zone 4
Number of venues	724	261	376	87	0
% male patrons seeking casual partners	40	34	44	43	0
% female patrons seeking casual partners	31	28	35	22	0
% patrons that are FSWs	22	31	16	32	0
% of patrons seeking casual partners at FSW networking venues		19.3	22.0	5.6	0.0

Source: Nigeria HIV Epidemic Appraisal 2013 Data.
Note: % = percentage; FSW/s = female sex worker/s.

4.3.5 Condom Availability

Availability of condoms was low: in hotels and brothels it was recorded to be less than 50% and in bars and night clubs less than 14%.

4.3.6 Rural Assessment

Epidemic appraisals were conducted in 78 villages. Of these, 100% reported having people living with HIV. Overall, about 90% of the villages had FSWs resident in the village with each of those villages having an estimated average of 40 FSWs living and working within (see Table 4.11).

Table 4.11 Percentage of Villages by level of Risk and By Geographic zones, Benue State, Nigeria, 2012

	Total	Geographic Zone			
		Zone 1	Zone 2	Zone 3	Zone 4
Number of villages	78	19	19	17	23
% of villages with PLHIV reported within	100	100	100	100	100
% of villages with any FSWs living in the village	90.0	80.0	85.0	100.0	95.7
Mean number of FSW live and practice sex work in the village	40.45	32.0	44.20	61.53	28.78

Source: Nigeria HIV Epidemic Appraisal 2013 Data.

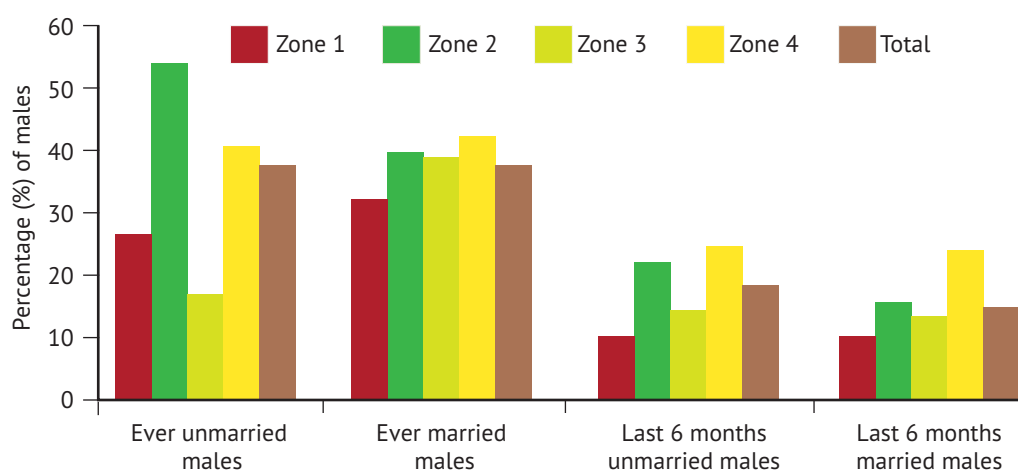
Note: FSW/s - female sex worker/s; % = percentage; PLHIV = people living with HIV.

4.3.7 Sexual Behaviour in Rural Areas

Polling booth surveys were conducted among 3,727 men and women (married and unmarried) from villages across the four geographic zones of Benue. High levels of sexual risk were found among both men and women in all four zones.

Overall, 38% of both unmarried and married men reported that they had ever visited an FSW, with 18% of unmarried men and 8% of married men reported having sex with a sex worker in the past six months (Figure 4.11). Although the proportion of men visiting FSWs was high across all zones, it was highest in Zone 2.

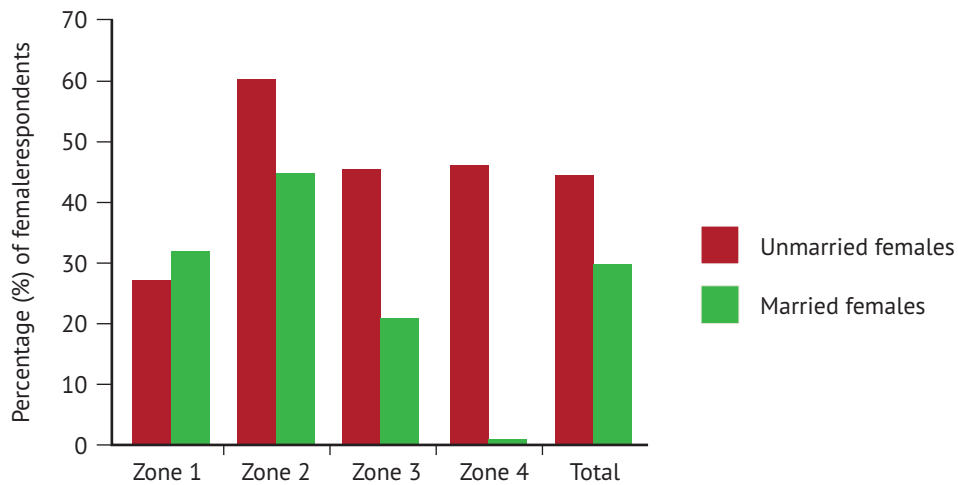
Figure 4.11 Percentage of Males Reporting Visiting FSWs by Marital Status, Benue State, Nigeria, 2012



Source: Nigeria HIV Epidemic Appraisal 2013 Data.

Transactional sex was reported commonly by unmarried women across all zones, with approximately 45% of unmarried women reporting engaging in transactional sex within the past 6 months (see Figure 4.12). Similarly, transactional sex was reported by a high proportion of married women; 30% overall. This was true in all zones except Zone 4.

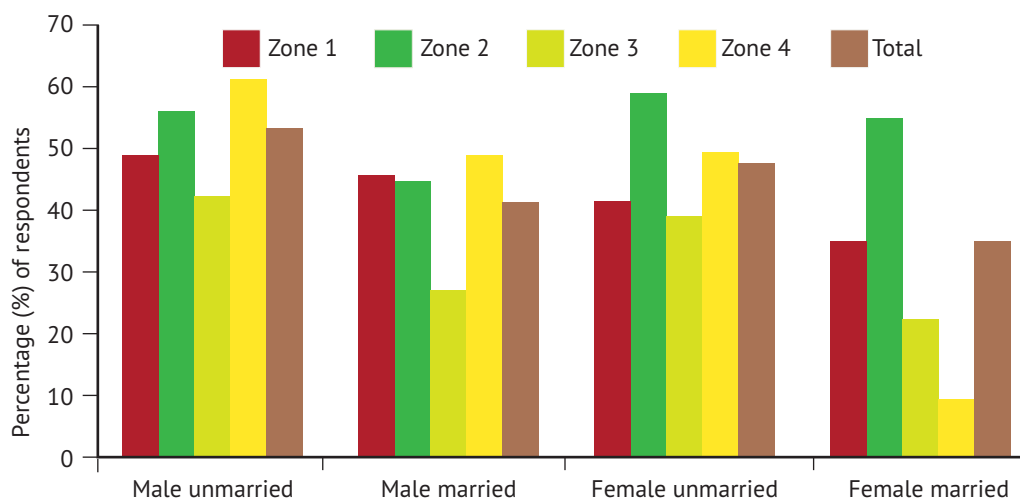
Figure 4.12 Percentage of Female Respondents Who Engaged in Transactional Sex in the Past 6 Months, Marital Status, by Geographic Zones, Benue State, Nigeria, 2012



Source: Nigeria HIV Epidemic Appraisal 2013 Data.

A high proportion of both men and women reported more than one sexual partner in the past 6 months, indicating a high level of risk in the general population of rural areas. This pattern was seen across all zones, with the exception of married women in Zone 3. A higher proportion of men than women reported multiple sexual partners, but the relatively high proportion of both married and unmarried women reporting more than one partner suggests a need for intensive HIV prevention efforts in rural populations in Benue.

Figure 4.13 Percentage of Respondents Reporting More Than 1 Sexual Partner in the Past 6 Months, by Sex, Marital Status and Geographic Zones, Benue State, Nigeria, 2012



Source: Nigeria HIV Epidemic Appraisal 2013 Data.

Note: Male married = more than one sexual partner other than wife/wives.

4.4 Cross River

Cross River State is located in Nigeria's South-South geopolitical zone. Its estimated HIV prevalence rate is 7.1% making it the third highest in the zone and ninth highest in the country.

4.4.1 Distribution of Most at Risk Populations (MARPs)

Mapping of MARPs was conducted in 18 local government areas (LGAs) across the state.

Study sites: Abi, Akamkpa, Akpabuyo, Bakassi, Bekwarra, Biase, Boki, Calabar Municipality, Calabar South, Etung, Ikom, Obanlikwu, Oburra, Obudu, Oduk-pani, Ogola, Yakurr, Yala.

Systematic interviews were conducted with a total of 2,308 key informants.

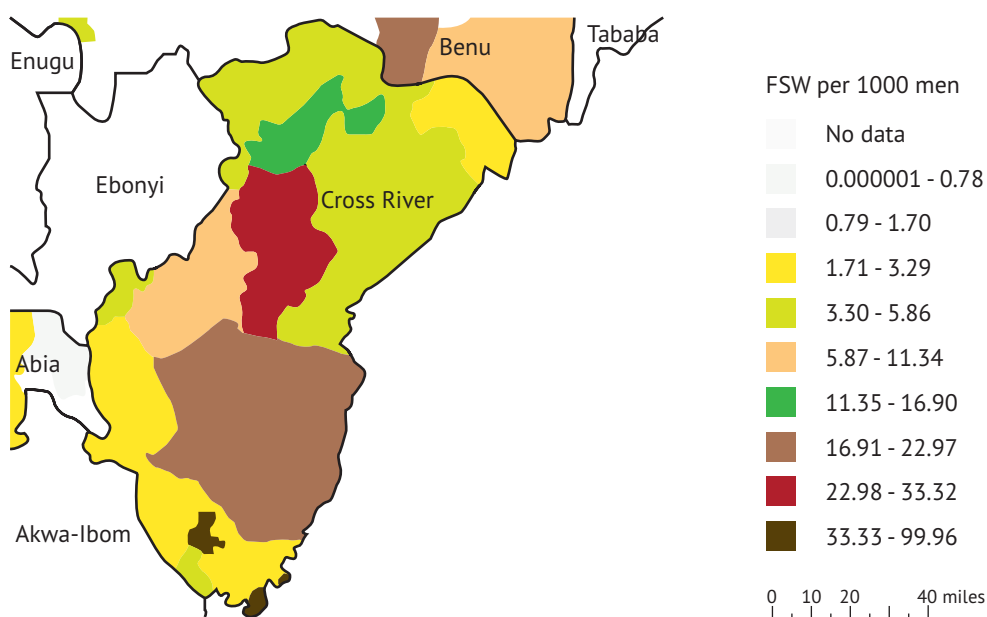
4.4.2 Female Sex Workers

The study identified a total of 692 hot spots where FSWs congregated, with an estimated average total of 9,838 FSWs across all locations. As in other States, the spread of these populations differed according to geographic zone (Figure 4.14).

Calabar Municipality had the largest estimated number of FSWs and the highest density of FSWs, with an estimated 54 FSWs per 1000 adult men representing 4 times as many as the national average. Based on the density data, Bakassi and Ikom are also critical LGAs for focus as they rank second and third in size to Calabar Municipality.

The estimated size and density of the FSW population is given in 4.12. It can be seen that in the urban areas mapped, there were approximately 14 FSWs per 1000 adult men.

Figure 4.14 Density of Female Sex Workers (FSWs per 1000 adult men) in Local Government Areas, Cross River State, 2012.



Source: Nigeria HIV Epidemic Appraisal 2013 Data.

Note: FSW = female sex worker.

Table 4.12 Estimated size of FSW population by Local Government Area, Cross River state, Nigeria, 2012

Local Government Area	Estimated Number of FSWs	FSWs per 1000 Adult Men
Abi	327	9
Akpabuyo	315	5

(continued next page)

Table 4.12 (continued)

Local Government Area	Estimated Number of FSWs	FSWs per 1000 Adult Men
Biase	238	6
Boki	423	9
Obanlikwu	134	5
Obudu	359	9
Odukpani	221	5
Akamkpa	638	17
Bakassi	259	33
Bekwarra	262	10
Calabar South	444	9
Etung	227	11
Obubra	503	12
Yakurr	594	12
Yala	486	9
Calabar Municipality	2472	54
Ikom	1112	27
Ogoja	824	19
Total	9838	13.6

Source: Nigeria HIV Epidemic Appraisal 2013 Data.

Note: FSWs = female sex workers.

4.4.3 IDU and MSM

Mapping of MSM revealed only 15 spots with 12 in Calabar Municipality and 3 in Calabar South (Anantigha). As 4.13 shows, a total of 276 MSM was estimated in the State with 250 in Calabar Municipality.

Far fewer IDU were mapped across 8 hotspots with a total of 54. In this case, the locations where they were found were more widespread than MSM, with 31 in Calabar South and 18 in Akamkpa.

Table 4.13 Distribution of Injecting Drug Users (IDUs) and High Risk Men Who Have Sex With Men (MSM), by Local Government Area, Cross River State, Nigeria, 2012

Local Government Area	Injecting Drug Users at Mapped Hot Spots	High Risk MSM at Mapped Hot Spots
Calabar Municipality	4	250
Calabar South	31	26
Akamkpa	18	Nil
Obudu	1	Nil
Total	54	276

Source: Nigeria HIV Epidemic Appraisal 2013 Data.

Note: MSM = men who have sex with men

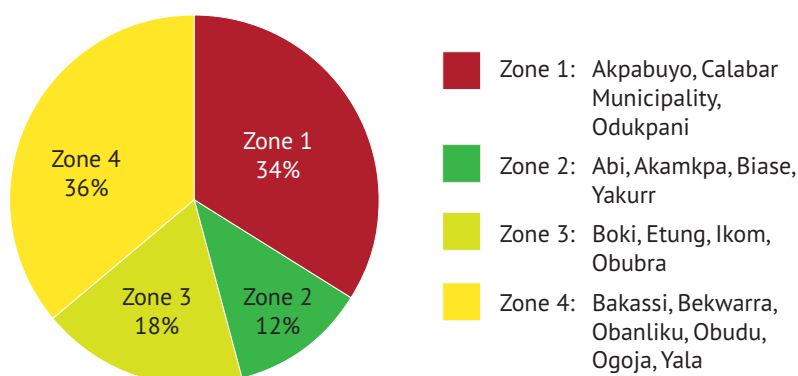
4.4.4 Profiling Venues for Casual Sexual Networking

Overall, 670 venues were profiled across four geographic zones in Cross River State. The majority of venues were bars, night clubs and restaurants (59.3%) and a further 20.0% being hotels and lodges. On average, there were approximately 34 patrons visiting each

of the profiled venues on a typical day, with approximately 35% of these patrons seeking sexual partners at these venues

Geographically, the majority of patrons seeking casual sexual partners were visiting venues in Zones 1 and 4 (see Figure 4.15), indicating that HIV prevention efforts targeting urban populations should focus on venues in these areas.

Figure 4.15 Distribution of Patrons Visiting Venues Seeking Casual Partners, by Zone, Cross River State, Nigeria, 2012



Source: Nigeria HIV Epidemic Appraisal 2013 Data.

4.14 shows the proportion of venue patrons engaged in sexual networks by geographic zones. Zones 1 and 4 represent 70% of all activity across the State. Furthermore, almost 39% of all patrons seeking sexual partners at FSW networking venues were located in Zones 3 and 4.

Table 4.14 Percentage of Venue Patrons Engaged in Sexual Networks by Geographic Zones, Cross River State Nigeria, 2012

	Total	Geographic Zone			
		Zone 1	Zone 2	Zone 3	Zone 4
Number of venues	670	269	88	172	141
% male patrons seeking casual partners	48	36	45	59	55
% female patrons seeking casual partners	25	38	30	6	20
% patrons that are FSWs	24	18	21	35	24
% of patrons seeking casual partners at FSW networking venues		12.3	4.1	14.3	24.4

Source: Nigeria HIV Epidemic Appraisal 2013 Data.

Notes: FSW/s = female sex worker/s; % = percentage.

4.4.5 Condom Availability

Across the venues profiled, condoms were available in 71% of brothels, 52% of hotels and lodges but only 3% of bars which were the most common venue for sexual networking.

4.4.6 Rural Assessment

Epidemic appraisals were conducted in 79 villages of which approximately 88% of respondents reported knowing there were people living with HIV in their village. Overall, about

50% of the villages had FSWs resident in the village with each of those villages having an estimated average of 10 FSWs living and working within (4.15).

Table 4.15 Percentage of Villages by Level of Risk and By Geographic Zones, Cross River, Nigeria, 2012

	Total	Geographic Zone			
		Zone 1	Zone 2	Zone 3	Zone 4
Number of villages	79	21	19	19	20
% of villages with PLHIV reported within	87.3	57.1	100.0	100.0	95.0
% of villages with any FSWs living in the village	50.6	42.9	27.8	75.0	55.0
Mean number of FSW live and practice sex work in the village	10.81	10.0	6.84	18.05	8.20

Source: Nigeria HIV Epidemic Appraisal 2013 Data.

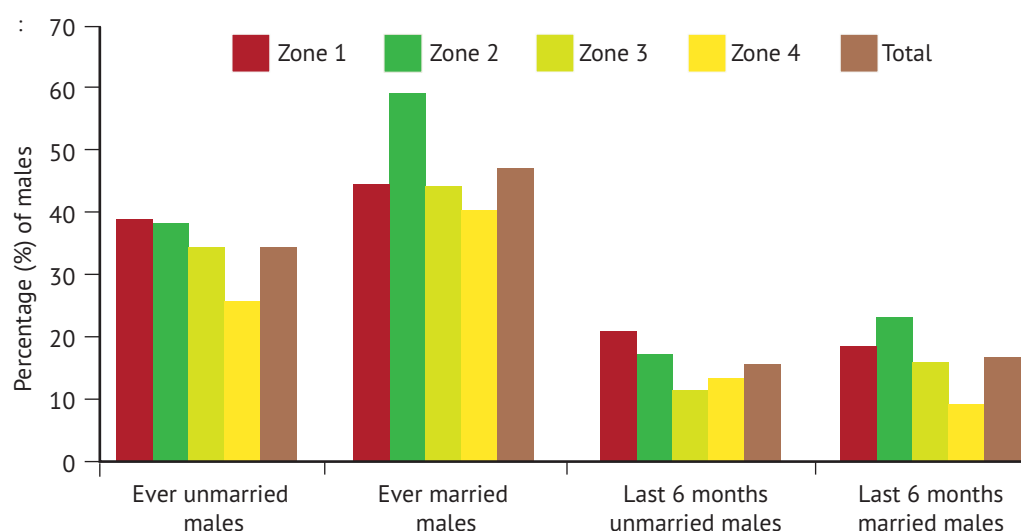
Notes: FSW/s = female sex worker/s; PLHIV = people living with HIV; % = percentage.

4.4.7 Sexual Behaviour in Rural Areas

Polling booth surveys were conducted among a randomly selected sample of 4,718 men and women (married and unmarried) from villages across the four geographic zones of Cross River. High levels of sexual risk were found among both men and women in all four zones.

Overall, 35% of unmarried men and 47% married men reported that they had ever visited an FSW, with 13% of unmarried men and 11% of married men reported having sex with an FSW in the past six months (Figure 4.16). Although the proportion of men visiting FSWs was high across all zones, it was highest in Zone 2.

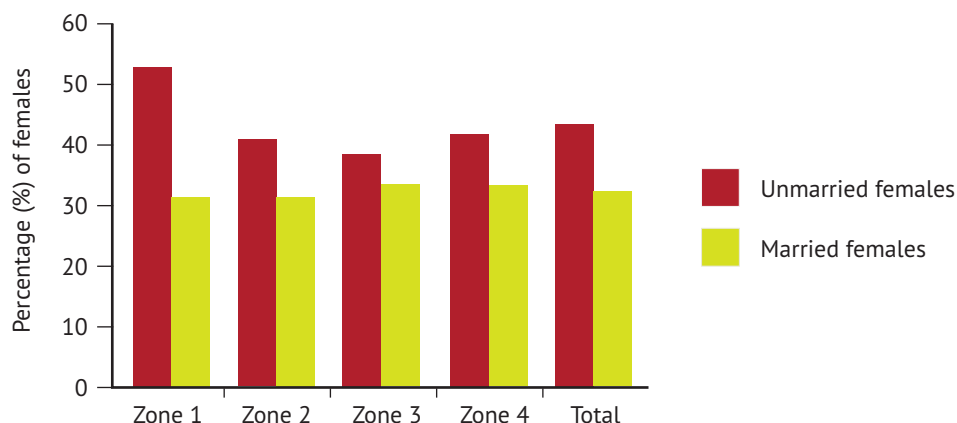
Figure 4.16 Percentage of Males Reporting Visiting FSWs by Marital Status, Cross River, Nigeria, 2012



Source: Nigeria HIV Epidemic Appraisal 2013 Data.

Approximately 43.5% of unmarried women reported engaging in transactional sex within the past 6 months (see Figure 4.17). Similarly, transactional sex was reported by over 30% of married women.

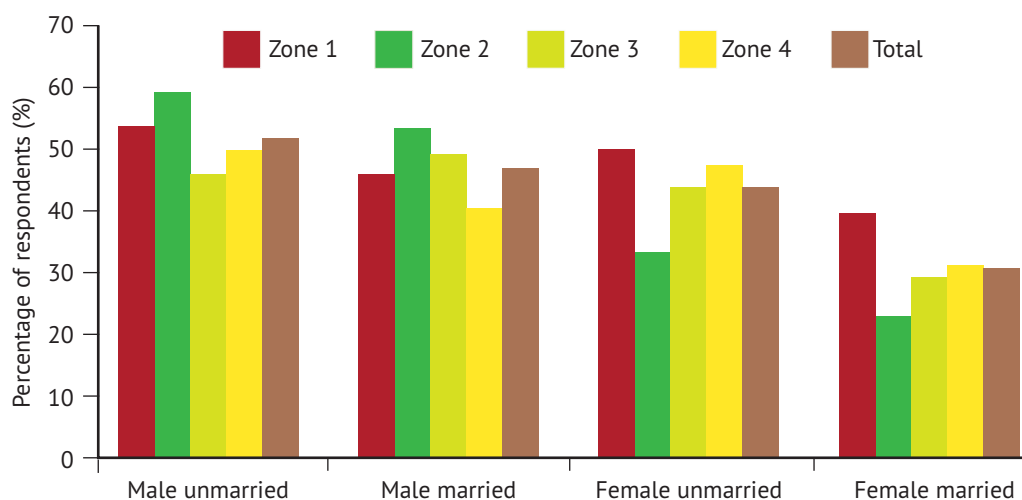
Figure 4.17 Percentage of Female Respondents Who Engaged in Transactional Sex in the Past 6 Months, Marital Status, by Geographic Zones, Cross River State, Nigeria, 2012



Source: Nigeria HIV Epidemic Appraisal 2013 Data.

A high proportion of both men and women reported more than one sexual partner in the past 6 months, indicating a high level of risk in the general population of rural areas. This pattern was seen across all zones. A higher proportion of men than women reported multiple sexual partners, but the relatively high proportion of both married and unmarried women reporting more than one partner suggests a need for intensive HIV prevention efforts in rural populations in Cross River state

Figure 4.18 Percentage of Respondents Reporting More Than 1 Sexual Partner in the Past 6 Months, by Sex, Marital Status and Geographic Zones, Cross River State, Nigeria, 2012



Source: Nigeria HIV Epidemic Appraisal 2013 Data.

Note: Male married = more than one sexual partner other than wife/wives.

4.5 Gombe⁸

Gombe State is located in Nigeria's North East geopolitical zone, with an average general HIV prevalence estimated at 4.2%

⁸ At the time of publication not all data as available for Gombe.

4.5.1 Distribution of Most at Risk Populations (MARPs)

Mapping of MARPs was conducted in 11 local government areas (LGAs) across the state, and included systematic interviews with a total of 1,395 key informants.

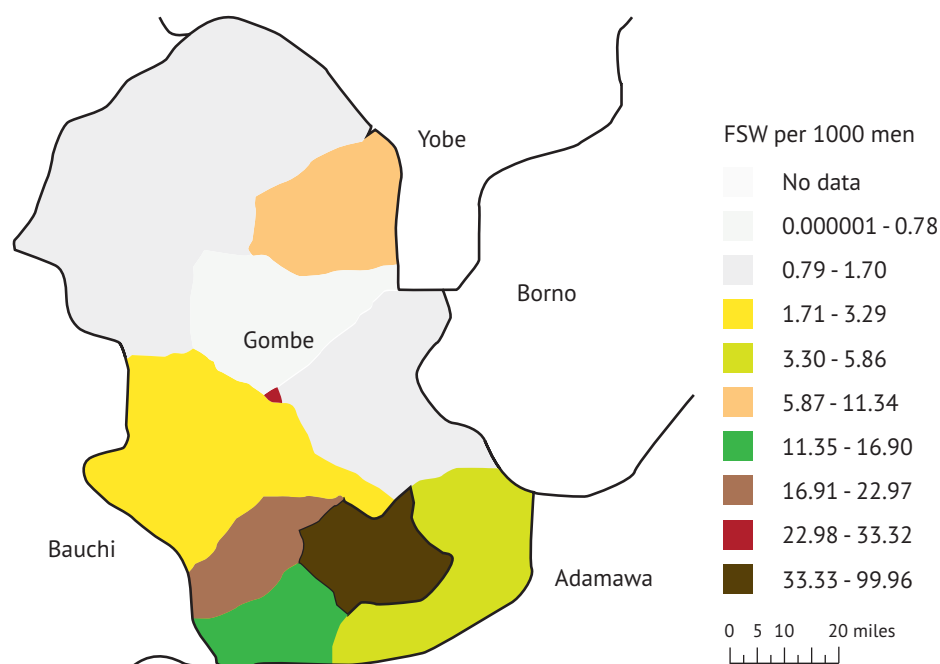
4.5.2 Female Sex Workers

A total of 348 hot spots were identified where FSWs congregated, with an estimated total of 4,151 FSWs at these hot spots. As the Figure 4.19 indicates, the density of these populations are highly localized in Gombe.

The estimated size and density of the FSW by LGA is shown in 4.16. Overall, in the urban areas that were mapped, there were an estimated 7.1 FSWs per 1000 adult men, which is far lower than the national average. However, this varied greatly by location: Gombe had the largest estimated number of FSWs and the highest density of FSWs, with an estimated 24 FSWs per 1000 men, while Dukku, Yafada and Yamaltu-Deba had 1.

It is clear from 4.16 that targeting 4 LGAs (Gombe, Billiri, Kaltungo and Shongom) for prevention programmes which focus on sex work would reach over 50% of the total estimated population in the state.

Figure 4.19 Density of Female Sex Workers (FSWs Per 1000 Adult Men) in Local Government Areas, Gombe State, 2013



Source: Nigeria HIV Epidemic Appraisal 2013 Data.

Note: FSW = female sex worker.

Table 4.16 Estimated Size of FSW Population by Local Government Area, Gombe State, Nigeria, 2013

Local Government Area	Estimated Number of FSWs	FSWs per 1000 Adult Men
Akko	220	3
Balanga	123	2
Billiri	700	14
Dukku	32	1

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4.16 (continued)

Local Government Area	Estimated Number of FSWs	FSWs per 1000 Adult Men
Funakaye	334	6
Gombe	1594	24
Kaltungo	665	17
Kwami	4	0
Nafada	48	1
Shongom	401	11
Yamaltu-Deba	34	1
Total	4151	7.1

Source: Nigeria HIV Epidemic Appraisal 2013 Data.

Notes: FSW/s = female sex worker/s

4.17 shows the estimated number of injecting drug users and high risk MSM who congregate and could be reached by HIV prevention programmes at the mapped hotspots in the different LGAs. While the high risk MSM were found in only 3 LGAs with the majority of them located in Gombe, significantly large populations of IDUs were found across the LGAs, primarily in Akko and Gombe. Gombe had by far the highest proportion of IDU across all States profiled, suggesting intensive efforts are needed to target these populations. Prevention efforts for injecting drug users which focus on Akko and Gombe could reach over 90% of the total estimated population of IDU.

Table 4.17 Distribution of Injecting Drug Users (IDUs) and High Risk Men Who Have Sex With Men (MSM), by Local Government Area, Gombe State, Nigeria 2013

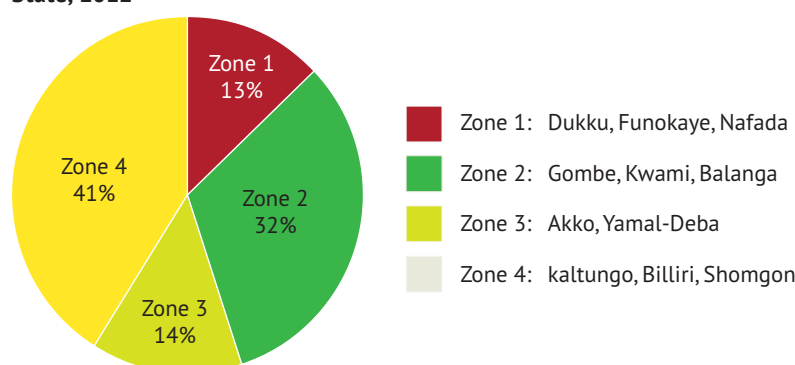
Local Government Area	Estimated number of Injecting Drug Users	Estimated number of High Risk MSM
Akko	1282	130
Balanga	115	Nil
Billiri	363	Nil
Dukku	17	Nil
Funakaye	52	125
Gombe	1177	428
Kaltungo	363	Nil
Kwami	19	Nil
Nafada	81	Nil
Shongom	52	Nil
Yamaltu-Deba	97	Nil
Total	3617	681

Note: MSM = men who have sex with men

4.5.3 Profiling Venues for Casual Sexual Networking

Overall, 1100 venues were profiled across four geographic zones in Gombe, with 21.3% of venues profiled being bars, night clubs and restaurants, and a further 20% being beauty salons and internet cafés. On average, there were approximately 25 patrons visiting each of the profiled venues on a typical day, with approximately 34% of these patrons seeking sexual partners at these venues.

Geographically, the majority of patrons seeking casual sexual partners were visiting venues in Zones 4 and 2 (see Figure 4.20), indicating that HIV prevention efforts targeting urban populations should focus on venues in these areas.

Figure 4.20 Distribution of Patrons Visiting Venues Seeking Casual Partners, by Zone, Gombe State, 2012

Source: Nigeria HIV Epidemic Appraisal 2013 Data.

Approximately half (50.4%) of patrons seeking casual sex partners were found in FSW networking venues in Zone 2 and 4.

Table 4.18 Percentage of Venue Patrons Engaged in Sexual Networks by Geographic Zones, Gombe State, Nigeria, 2013

	Total	Geographic Zone			
		Zone 1	Zone 2	Zone 3	Zone 4
Number of venues	1100	232	346	210	312
% male patrons seeking casual partners	57	61	54	59	58
% female patrons seeking casual partners	14	3	17	8	17
% patrons that are FSWs	29	37	29	33	25
% of patrons seeking casual partners at FSW networking venues		12.3	26.0	12.8	24.4

Source: Nigeria HIV Epidemic Appraisal 2013 Data.

Notes: FSW/s = female sex worker/s; % = percentage.

4.5.4 Rural Assessment

Across the geographic zones, the level of risk in the villages was assessed (4.19). Of the 80 villages selected across the four geographic zones, 95% reported having people infected with HIV. Nearly half of these villages had FSWs resident in the village with each village having an estimated average of 7 FSWs living and working within them. Programmatically, the villages in Zone 2 are very strategic a large majority of the villages reported having people living with HIV. It also has the highest number of villages with FSWs and the highest average number of sex workers per village than other zones.

Table 4.19 Percentage of Villages by Level of Risk and By Geographic Zones, Gombe, Nigeria, 2013

	Total	Geographic Zone			
		Zone 1	Zone 2	Zone 3	Zone 4
Number of villages	80	20	20	20	20
% of villages with PLHIV reported within	95	95	95	90	100
% of villages with any FSWs living in the village	49.4	47.4	65	50	35
Mean number of FSW live and practice sex work in the village	6.83	3.30	7.60	7.65	8.75

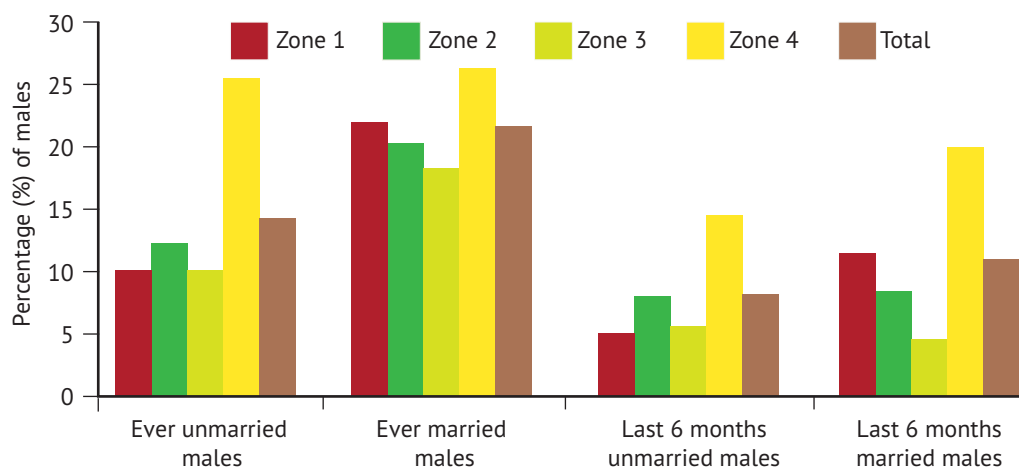
Source: Nigeria HIV Epidemic Appraisal 2013 Data.

Notes: FSW/s = female sex worker/s; % = percentage.

4.5.5 Sexual Behaviour in Rural Areas

Polling booth surveys were conducted among a randomly selected sample of 3,480 men and women (married and unmarried) from villages across the four geographic zones of Gombe.

Figure 4.21 Percentage of males reporting visiting FSWs by Marital Status, Gombe, Nigeria, 2012

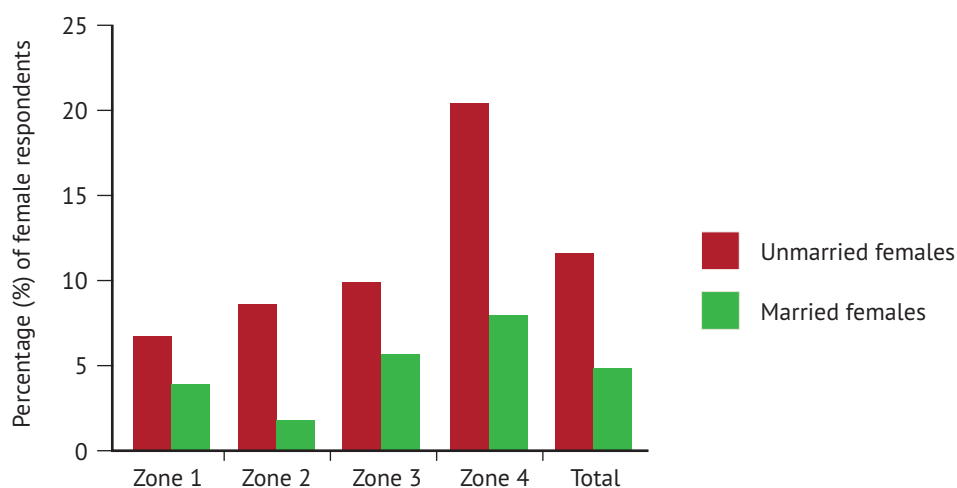


Source: Nigeria HIV Epidemic Appraisal 2013 Data.

Note: % = percentage.

Overall, 14% of unmarried men and 22% of married men reported that they had ever visited an FSW, with 8% of unmarried men and 11% of married men reported having sex with an FSW in the past six months (Figure 4.21). The proportion of men visiting FSWs was highest in Zone 4.

Figure 4.22 Percentage of female respondents who engaged in transactional sex in the past 6 months, marital status, by Geographic Zones, Gombe state, Nigeria, 2012

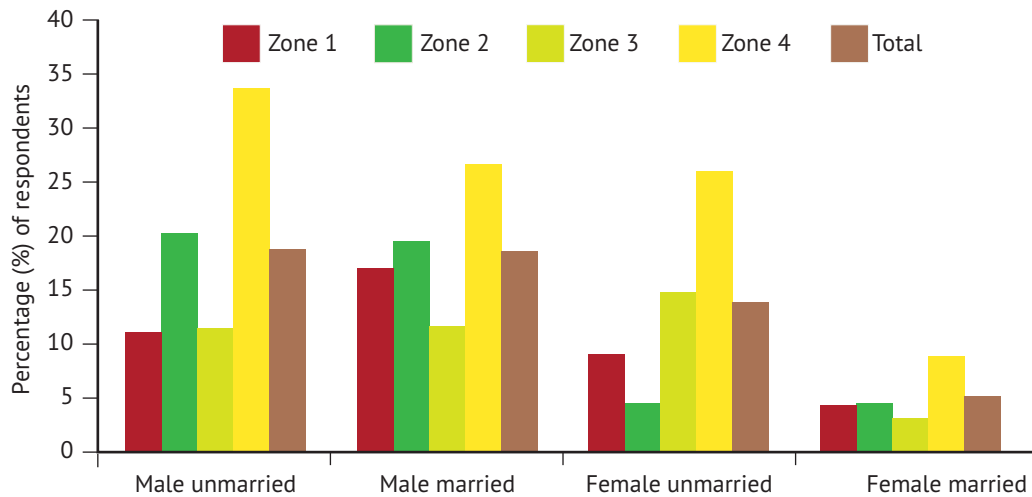


Source: Nigeria HIV Epidemic Appraisal 2013 Data.

Across all the zones, few women reported being involved in transactional sex, with only 12% of unmarried women reporting engaging in transactional sex within the past 6 months (see Figure 4.22). Similarly, transactional sex was reported by a low proportion of married women; 4.7% overall.

The proportion of men and women reporting more than one sexual partner in the past 6 months was not significantly high indicating a relatively low level of risk in the general population of rural areas. This pattern was seen across all zones except in Zone 4, which had a significantly higher proportion of respondents reporting more than one sexual partner in comparison to the other zones. A higher proportion of men than women reported multiple sexual partners.

Figure 4.23 Percentage of respondents reporting more than one sexual partner in the past 6 months, by sex, marital status and Geographic Zones, Gombe state, Nigeria, 2012

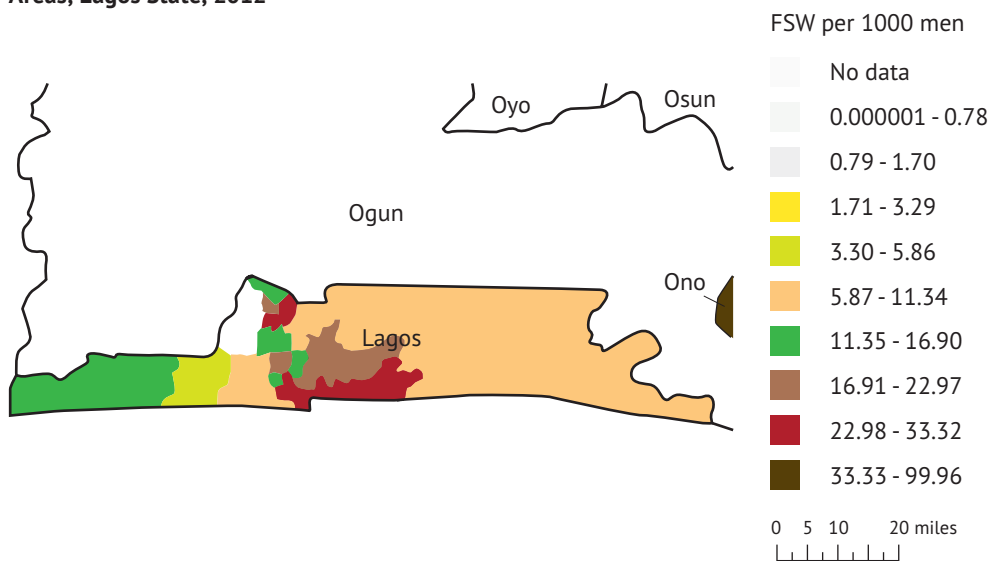


Source: Nigeria HIV Epidemic Appraisal 2013 Data.

4.6 Lagos

Lagos State is located in Nigeria’s South West geopolitical zone, with an HIV prevalence estimated at 5.1%.

Figure 4.24 Density of Female Sex Workers (FSWs Per 1000 Adult Men) in Local Government Areas, Lagos State, 2012



Source: Nigeria HIV Epidemic Appraisal 2013 Data.

Note: FSW = female sex worker.

4.6.1 Distribution of Most at Risk Populations (MARPs)

Mapping of MARPs was conducted in 20 local government areas (LGA) and 37 Local Council Development Areas (LCDAs) across the state, and included interviews with a total of 4,940 key informants.

4.6.2 Female Sex Workers

A total of 4056 hot spots were mapped where FSWs congregated, with an estimated total of 46,691 FSWs at these hot spots. As illustrated in the map in Figure 4.24, the density of FSWs varies substantially geographically within the state and this is described further in 4.20.

4.20 shows the estimated size of the FSW population and FSW population density per 1000 adult men by LGA. Overall, in the areas mapped there were an estimated 20.7 FSWs per 1000 adult men. While Alimosho had the largest estimated number of FSWs, Apapa had the highest density suggesting that more FSW could be reached with prevention programmes per site than elsewhere representing maximum efficiency of approach.

Table 4.20 Estimated Size of FSW Population by Local Government Area, Lagos State, Nigeria, 2012

Local Government Area	Estimated Number of FSWs	FSWs per 1000 Adult Men
Badagry	716	12
Epe	554	12
Ibeju Lekki	493	17
Ikeja	2871	36
Ojo	1434	9
Amuwoodofin	1218	15
Ifako-Ijaiye	2353	22
Ikorodu	1674	13
Kosofe	2273	13
Lagos Mainland	1642	20
Mushin	2940	19
Oshodi-Isolo	3116	20
Shomolu	1706	17
Agege	3835	33
Ajeromi Ifelodun	3333	19
Alimosho	5684	17
Apapa	2694	48
Etiosa	2925	41
Lagos Island	1772	33
Surulere	3457	27
Badagry	716	12
Total	46691	20.5

Source: Nigeria HIV Epidemic Appraisal 2013 Data.

Note: FSWs = female sex workers.

4.6.3 IDU and MSM

4.21 shows the estimated number of injecting drug users and MSM who gather at profiled sites and who could be reached by HIV prevention programmes at these sites. The majority

of MSM were found in Ajeromi, Eti-Osa and Alimosho, while Ikeja, Lagos Island, Agege, Mushin and Alimosho had the highest IDU population estimates.

Table 4.21 Distribution of Injecting Drug Users (IDUs) and High Risk Men Who Have Sex With Men (MSM), by Local Government Area, Lagos, Nigeria 2012

Local Government Area	Estimated Number of Injecting Drug Users	Estimated Number of High Risk MSM
Agege	126	121
Ajeromi Ifelodun	23	575
Alimosho	134	325
Amuwo-Odofin	80	126
Apapa	NIL	81
Badagry	82	NIL
Eti-Osa	41	376
Ifako-Ijaiye	29	56
Ikeja	180	280
Ikorodu	15	54
Kosofe	40	56
Lagos Island	152	243
Lagos Mainland	15	81
Mushin	127	133
Ojo	6	NIL
Oshodi-Isolo	56	136
Shomolu	18	95
Surulere	65	214
Total	1186	2952

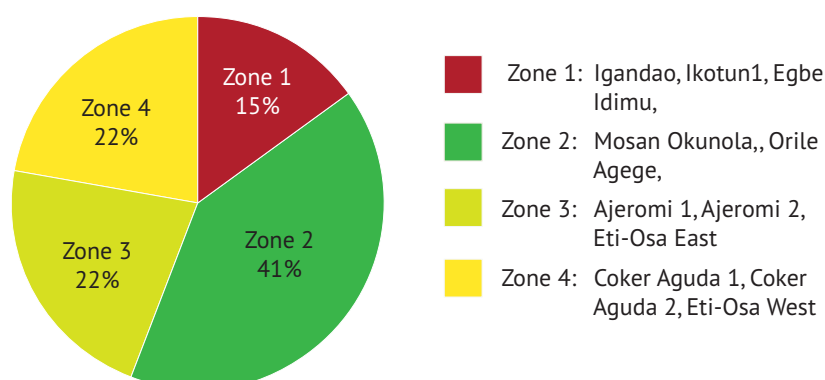
Source: Nigeria HIV Epidemic Appraisal 2013 Data.

Note: MSM = men who have sex with men.

4.6.4 Profiling Venues for Casual Sexual Networking

Overall, 728 venues were profiled across four geographic zones in Lagos, with 48.9% of venues profiled being bars, night clubs and restaurants, and a further 17.1% being hotels and lodges. On average, there were approximately 26 patrons visiting each of the profiled venues on a typical day, with approximately 36% of these patrons seeking sexual partners at these venues.

Figure 4.25 Distribution of Patrons Visiting Venues Seeking Casual Partners, by Zone, Lagos State, 2012



Source: Nigeria HIV Epidemic Appraisal 2013 Data.

Geographically, the majority of patrons seeking casual sexual partners were visiting venues in Zones 2, 3 and 4 (see Figure 4.25), indicating that HIV prevention efforts targeting urban populations should focus on venues in these areas.

4.22 shows the proportion of venue patrons engaged in sexual networks by geographic zones. Overall, the proportion of males seeking casual sex partners was higher than the proportion of females seeking casual sex partners at the venues and one-third of the patrons at the venues were FSWs. Furthermore, nearly half (46.5%) of patrons seeking casual sex partners were found in FSW networking venues in Zone 2 and 3. Therefore, to reach a significant number of the urban population seeking casual sex partners, HIV prevention programmes should focus on FSW networking venues in these zones.

Table 4.22 Percentage of Venue Patrons Engaged in Sexual Networks by Geographic Zones, Lagos State, Nigeria, 2012

	Total	Geographic Zone			
		Zone 1	Zone 2	Zone 3	Zone 4
Number of venues	728	170	266	114	178
% male patrons seeking casual partners	55	58	53	50	60
% female patrons seeking casual partners	13	0	17	19	11
% patrons that are FSWs	31	41	28	28	29
% of patrons seeking casual partners at FSW networking venues		12.5	29.4	17.1	10.7

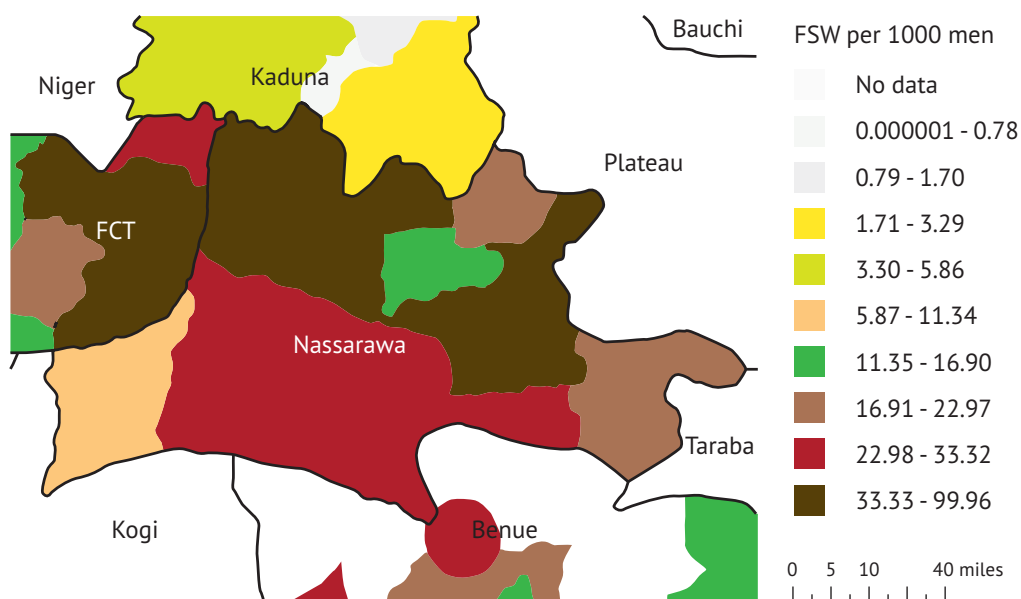
Source: Nigeria HIV Epidemic Appraisal 2013 Data.

Note: FSWs = female sex workers; % = percentage.

4.7 Nassarawa

Nassarawa State is located in Nigeria's North Central geopolitical zone, with an estimated HIV prevalence of 7.5%.

Figure 4.26 Density of Female Sex Workers (FSWs Per 1000 Adult Men) in Local Government Areas, Nassarawa State, 2012



Source: Nigeria HIV Epidemic Appraisal 2013 Data.

Note: FSW = female sex worker

4.7.1 Distribution of Most at Risk Populations (MARPs)

Mapping of MARPs was conducted in 13 local government areas (LGAs) across the state, and included interviews with a total of 2,811 key informants.

4.7.2 Female Sex Workers

A total of 1409 hot spots were mapped, where FSWs congregated. A total of 19,953 FSWs were estimated to frequent these hot spots. As illustrated in the map in Figure 4.26, Nassarawa has a relatively high density of FSWs across the state.

Table 4.23 shows the estimated size of the FSW population and FSW population density per 1000 adult men by LGA. Apart from Toto, all states had more than the national average FSW per 1000 men with an overall total for the state being almost 43 sex workers per 1000 men. While Lafia had the largest estimated number of FSWs, it did not have the highest density of FSWs. Keffi had the second highest number of FSWs and the highest density suggesting that it should be high priority for prevention programmes.

Table 4.23 Estimated Size of FSW Population by Local Government Area, Nassarawa State, Nigeria, 2012

Local Government Area	Estimated Number of FSWs	FSWs per 1000 Adult Men
Awe	517	18
Keana	625	31
Toto	368	12
Akwanga	947	34
Doma	1067	31
Keffi	1882	81
Kokona	1486	55
Lafia	3695	45
Nassarawa	1191	25
Nassarawa Eggon	852	23
Obi	1393	37
Wamba	526	29
Total	19953	42.7

Source: Nigeria HIV Epidemic Appraisal 2013 Data.

Note: FSWs = female sex workers; % = percentage.

4.7.3 IDU and MSM

4.24 shows the distribution of injecting drug users (IDUs) and high-risk men who have sex with men (MSM). These target population were identified in only three LGAs, while the highest population estimates of the IDUs were found in Keffi and Lafia, The majority of the high risk MSM were found in Lafia and Karu. This indicates that Lafia, the state capital, is highly strategic in planning HIV prevention interventions for IDU, high risk MSM and FSW.

Table 4.24 Distribution of Injecting Drug Users (IDUs) and High Risk Men Who Have Sex With Men (MSM), by Local Government Area, Nassarawa, Nigeria 2012

Local Government Area	Estimated Number of Injecting Drug Users	Estimated Number of High Risk MSM
Karu	18	174

(continued next page)

Table 4.24 (continued)

Local Government Area	Estimated Number of Injecting Drug Users	Estimated Number of High Risk MSM
Keffi	280	61
Lafia	117	206
Total	414	441

Source: Nigeria HIV Epidemic Appraisal 2013 Data.

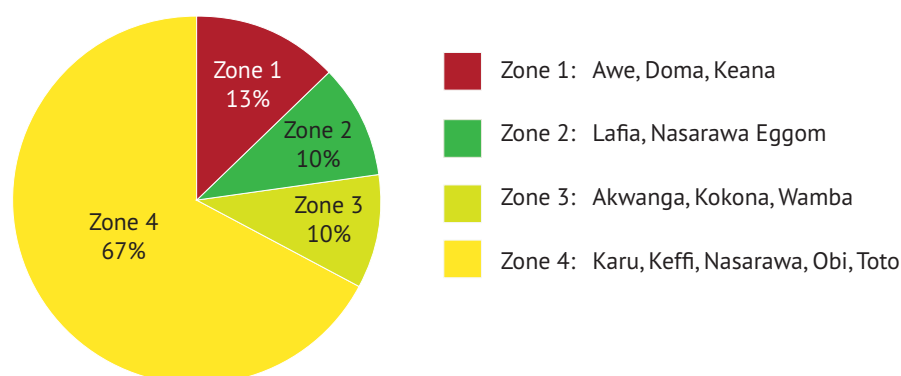
Note: MSM = men who have sex with men.

4.7.4 Profiling Venues for Casual Sexual Networking

Overall, 1,225 venues were profiled across four geographic zones, with 25.3% of venues profiled being public places, and a further 23.8% being hotels and lodges. On average, there were approximately 49 patrons visiting each of the profiled venues on a typical day, with approximately 31% of these patrons seeking sexual partners at these venues.

Geographically, the majority of patrons seeking casual sexual partners were visiting venues in Zone 4 (see Figure 4.27).

Figure 4.27 Distribution of Patrons Visiting Venues Seeking Casual Partners, by Zone, Nassarawa State, 2012



Source: Nigeria HIV Epidemic Appraisal 2013 Data.

Table 4.25 Percentage of Venue Patrons Engaged in Sexual Networks by Geographic Zones, Nassarawa State, Nigeria, 2012

	Total	Geographic Zone			
		Zone 1	Zone 2	Zone 3	Zone 4
Number of venues	1279	17	28	21	34
% male patrons seeking casual partners	43	62	54	35	39
% female patrons seeking casual partners	25	8	7	30	30
% patrons that are FSWs	25	29	38	28	22
% of patrons seeking casual partners at FSW networking venues		11.4	10.5	8.8	45.4

Source: Nigeria HIV Epidemic Appraisal 2013 Data.

Notes: FSWs = female sex workers; % = percentage.

Table 4.25 shows the proportion of venue patrons engaged in sexual networks by geographic zones. As is the case nationally, there were significantly more men seeking sexual partners than women. Of the total number of patrons seeking sexual partners, almost 46% were found at FSW networking venues in Zone 4.

4.7.5 Condom Availability

Availability of condoms was low at the profiled urban venues with only 23% of bars having condoms available.

4.7.6 Rural Assessment

Across the geographic zones, the level of risk in the villages was assessed (4.26). Of the 80 selected villages, about 96% reported having people infected with HIV. Approximately one-quarter of these villages had FSWs resident in the village with each village having an average of 4.5 FSWs. Programmatically, the villages in Zone 1 are very strategic as all the villages reported having people living with HIV. It also has the highest number of villages with FSWs and the highest estimated number of sex workers when compared with other zones.

Table 4.26 Percentage of Villages by Level of Risk and By Geographic Zones, Nassarawa, Nigeria, 2012

	Total	Geographic Zone			
		Zone 1	Zone 2	Zone 3	Zone 4
Number of villages	80	20	20	20	20
% of villages with PLHIV reported within	96.3	100	95.0	100	90
% of villages with any FSWs living in the village	26.0	50.0	26.3	20.0	10.0
Mean number of FSW live and practice sex work in the village	4.5	8.75	3.50	2.55	3.25

Source: Nigeria HIV Epidemic Appraisal 2013 Data.

Notes: FSW/s = female sex worker/s; PLHIV = people living with HIV; % = percentage.

4.7.7 Sexual Behaviour in Rural Areas

Polling booth surveys were conducted among a randomly selected sample of 3,053 men and women (married and unmarried) from villages across the four geographic zones of Nassarawa.

Figure 4.28 Percentage of Males Reporting Visiting FSWs by Marital Status, by Geographic Zone, Nassarawa State, Nigeria, 2012



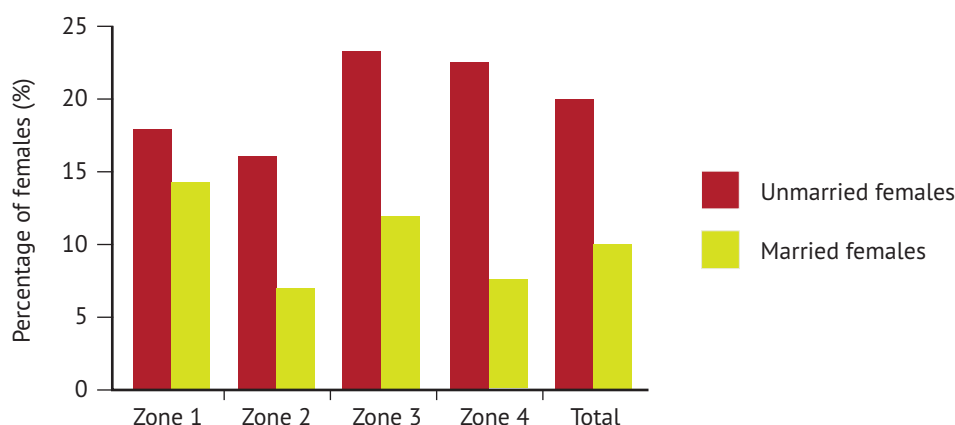
Source: Nigeria HIV Epidemic Appraisal 2013 Data.

Overall, 24% of married men and 17% of unmarried men reported that they had ever visited an FSW, with 11% of unmarried men and 8.7% of married men reporting having sex

with an FSW in the past six months (Figure 4.28). Although the proportion of men visiting FSWs was high across all zones, it was highest in Zone 2.

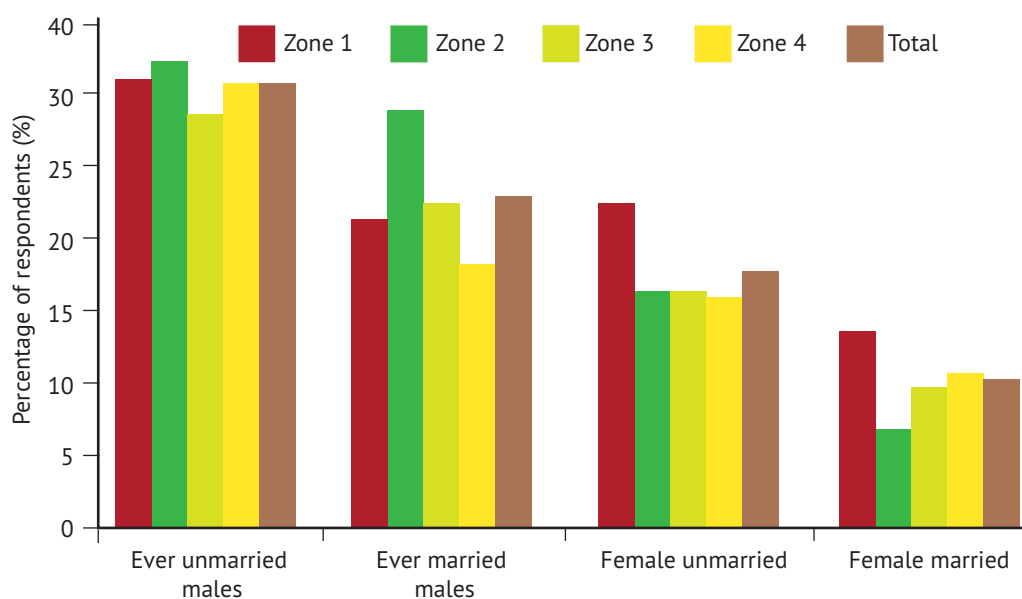
Transactional sex was also the subject of enquiry. Figure 4.29 illustrates that while transactional sex was commonly reported by unmarried women across all zones, with approximately 20% of unmarried women reporting engaging in transactional sex within the past 6 months (see Figure 4.29) it was significantly lower for married women at around 10% overall. Zone 3 and 4 represent nearly one-quarter of all unmarried females in the state who reported involvement in transactional sex within the past 6 months.

Figure 4.29 Percentage of Female Respondents Who Engaged in Transactional Sex in the Past 6 Months, Marital Status, by Geographic Zones, Nassarawa State, Nigeria, 2012



Source: Nigeria HIV Epidemic Appraisal 2013 Data.

Figure 4.30 Percentage of Respondents Reporting More Than 1 Sexual Partner in the Past 6 Months, by Sex, Marital Status and Geographic Zones, Nassarawa State, Nigeria, 2012



Source: Nigeria HIV Epidemic Appraisal 2013 Data.

Note: Male married = more than one sexual partner other than wife/wives

Figure 4.30 shows the proportion of respondents reporting more than one sexual partner in the past 6 months. Generally, a far higher proportion of males than females reported having multiple sexual partners. Across all the zones, Zone 1 had the highest proportion of all respondents reporting multiple sexual partners.

4.7.8 Condom Use

The rural assessment revealed interesting variations across zones in terms of condom use: while in Zone 2 90% of unmarried men used condoms with their last encounter with an FSW, this dropped to 45% in Zone 1. It will be necessary to ascertain if this relates to attitude or availability. Rates of condom use between men were extremely low in Zone 4 at 23.1% suggesting intensified prevention programmes are required.

Table 4.27 Percentage of Unmarried Male Use Condom Use At Last Sex With Different Sexual Partners by Geographic Zones, Nassarawa, Nigeria, 2012

Condom Use in different Relationship	Zone 1	Zone 2	Zone 3	Zone 4	Total
% use condom at last sex with a woman other than sex worker	40.2	58.3	36.8	45.9	45.5
% use condom at last sex with FSW	45.5	75.0	90.0	57.9	67.7
% Use condom at last anal sex with a man	36.4	50.0	75.0	23.1	42.5

Source: Nigeria HIV Epidemic Appraisal 2013 Data.

Note: FSW = female sex worker; % = percentage.

4.8 Ondo

Ondo State is located in Nigeria's South West geopolitical zone, with an estimated total HIV prevalence of 2.3%.

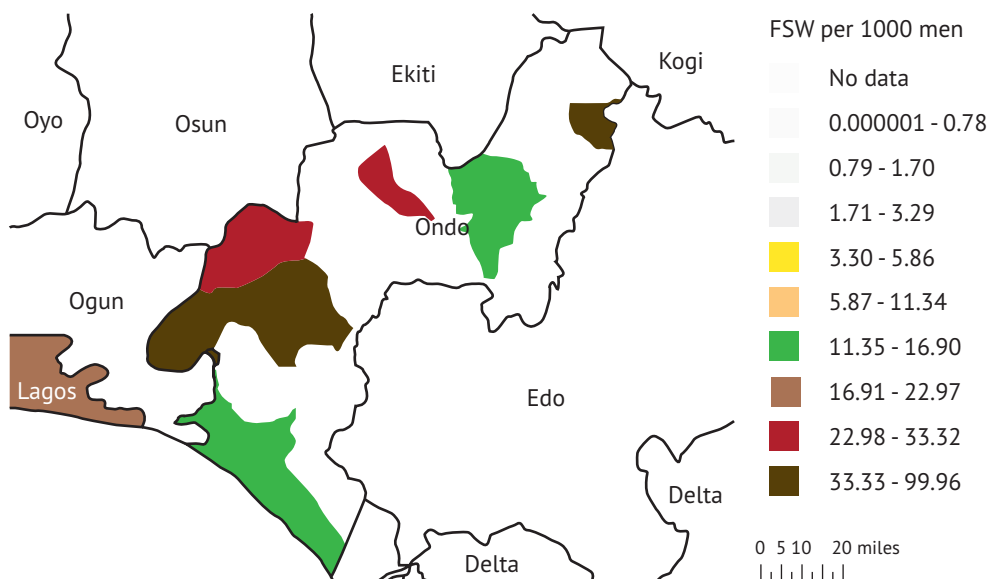
4.8.1 Distribution of Most at Risk Populations (MARPs)

Mapping of MARPs was conducted in 6 local government areas (LGAs) across the state, and included systematic interviews with a total of 1,501 key informants.

4.8.2 Female Sex Workers

A total of 1,187 hot spots were mapped where FSWs gathered, with an estimated total of 9,677 FSWs at these sites. The density of FSW per 1000 men is shown in Figure 4.31.

Figure 4.31 Density of Female Sex Workers (FSWs Per 1000 Adult Men) in Local Government Areas, Ondo State, 2012



Source: Nigeria HIV Epidemic Appraisal 2013 Data.

Note: FSWs = female sex workers.

As the map above shows, presence of FSW is concentrated in particular areas. 4.28 describes this further. Akure-South has the largest estimated number of FSWs, and while its density was not as high as Odigbo it is still considerable at 30. Of all LGAs mapped, and based on this information, it is clear that Ilaje would not be an immediate priority

Table 4.28 Estimated Size of FSW Population by Local Government Area, Ondo State, Nigeria, 2012

Local Government Area	Estimated Number of FSWs	FSWs per 1000 Adult Men
Akoko South-East	730	35
Akure-South	2687	30
Ilaje	860	12
Odigbo	2328	40
Ondo-West	2006	28
Owo	1066	19
Total	9677	26.2

Source: Nigeria HIV Epidemic Appraisal 2013 Data.

Note: FSWs = female sex workers.

4.8.3 IDU and MSM

4.29 shows the distribution of injecting drug users (IDUs) and high-risk men who have sex with men (MSM). A majority of the high risk MSM were found in Akure South, Odigbo and Ondo West LGAs but no IDUs were identified in any of the other LGAs, suggesting that harm reduction programmes are unnecessary in Ondo at present.

Table 4.29 Distribution of Injecting Drug Users (IDUs) and High Risk Men Who Have Sex With Men (MSM), by Local Government Area, Ondo State, Nigeria 2012

Local Government Area	Estimated Number of Injecting Drug Users	Estimated Number of High Risk MSM
Akoko North East	Nil	6
Akure South	Nil	25
Odigbo	Nil	26
Ondo West	Nil	31
Owo	Nil	16
Total	Nil	102

Source: Nigeria HIV Epidemic Appraisal 2013 Data.

Note: MSM = men who have sex with men.

4.8.4 Profiling Venues for Casual Sexual Networking

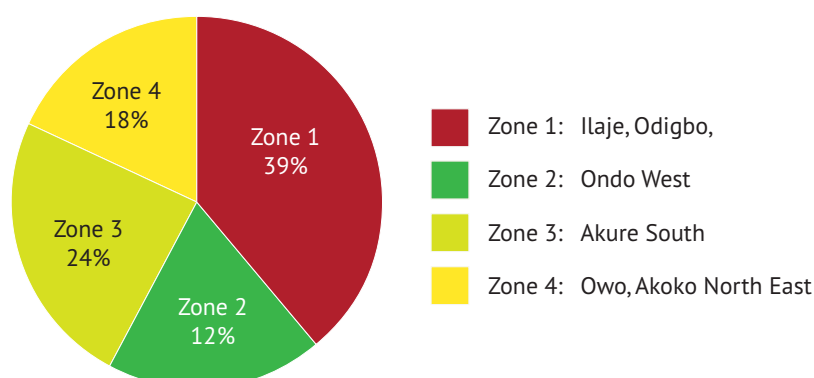
Overall, 626 venues were profiled across four geographic zones, with 55.3% of venues profiled being bars, restaurants and nightclubs and a further 17.9% being hotels and lodges. On average, there were approximately 45 patrons visiting each of the profiled venues on a typical day, with approximately 18% of these patrons seeking sexual partners at these venues.

Condom availability was also investigated across venues and found to be in a total of 20.5% sites. Given that the most frequented type of venue in Ondo as bars/restaurants,

their low reported availability of condoms at 11% is a concern. It is interesting to note that 64% of hotels lodges did have condoms available although they were less common as sites of sexual networking than bars.

Geographically, the majority of patrons seeking casual sexual partners were visiting venues in Zone 1 and 3 (see Figure 4.32), indicating that HIV prevention efforts targeting urban populations should focus on venues in these areas

Figure 4.32 Distribution of Patrons Visiting Venues Seeking Casual Partners, by Zone, Ondo State, 2012



Source: Nigeria HIV Epidemic Appraisal 2013 Data.

4.30 shows the proportion of venue patrons engaged in sexual networks by geographic zones. Approximately one-third of the patrons at the venues were FSWs. Furthermore, 57% of patrons seeking casual sex partners were found at FSW networking venues in Zone 1, 3 and 4 so that these venues and zones should be the focus of primary prevention programmes

Table 4.30 Percentage of Venue Patrons Engaged in Sexual Networks by Geographic Zones, Ondo State, Nigeria, 2012

	Total	Geographic Zone			
		Zone 1	Zone 2	Zone 3	Zone 4
Number of venues	626	188	109	204	125
% male patrons seeking casual partners	57	57	58	57	57
% female patrons seeking casual partners	12	13	20	8	11
% patrons that are FSWs	31	31	21	35	33
% of patrons seeking casual partners at FSW networking venues		32.6	10.5	19.4	15.8

Source: Nigeria HIV Epidemic Appraisal 2013 Data.
Note: FSW/s = female sex worker/s; % = percentage.

4.8.5 Rural Assessment

Across the geographic zones, the level of risk in the villages was assessed (4.31). Of the 80 selected villages, only 35% reported having people infected with HIV. About one-third of these villages had FSWs resident in the village with each village having an average of 5 FSWs. Zone 1 reported the highest number of villages with FSWs and the highest estimated number of sex workers than other zones.

Table 4.31 Percentage of Villages by Level of Risk and By Geographic Zones, Ondo, Nigeria, 2012

	Total	Geographic Zone			
		Zone 1	Zone 2	Zone 3	Zone 4
Number of villages	80	19	20	20	21
% of villages with PHLIV reported within	35.0	31.6	20.0	50.0	38.1
% of villages with any FSWs living in the village	35.4	55.6	10.0	40.0	38.1
Mean number of FSW live and practice sex work in the village	5.8	10.7	0.7	6.0	6.0

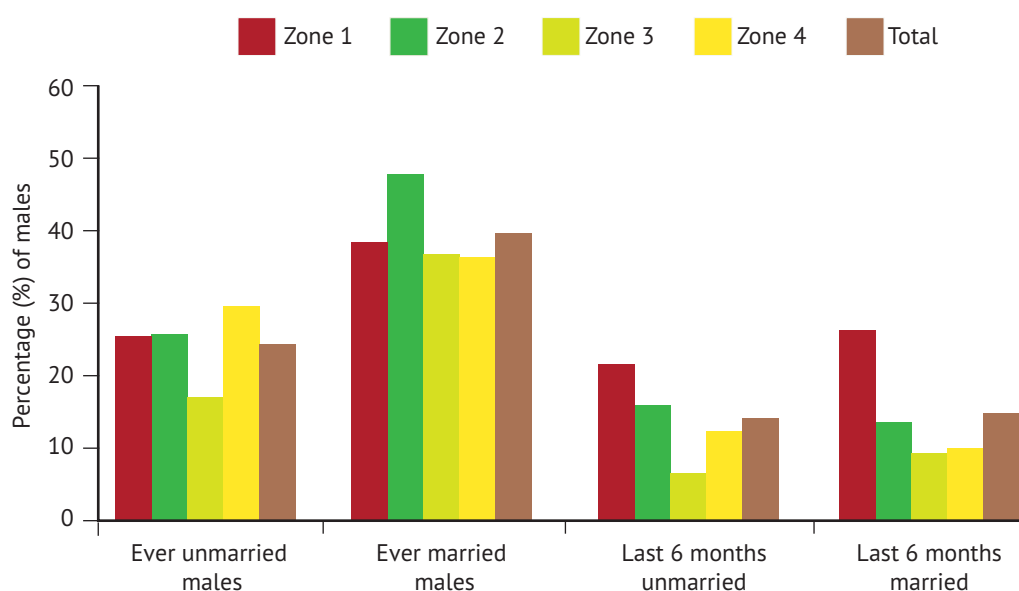
Source: Nigeria HIV Epidemic Appraisal 2013 Data.

Note: FSW/s = female sex worker/s; % = percentage.

4.8.6 Sexual Behaviour in Rural Areas

Polling booth surveys were conducted among a randomly selected sample of 2,864 men and women (married and unmarried) from villages across the four geographic zones of Ondo. High levels of sexual risk were found among both men and women in all four zones.

Overall, 39% of married men and 26% of unmarried men reported that they had ever visited an FSW, with 22% of unmarried men and 26% of married men reporting having sex with an FSW in the past six months (Figure 4.33). The proportion of married men reported to have ever visited a FSW was particularly high in Zone 2.

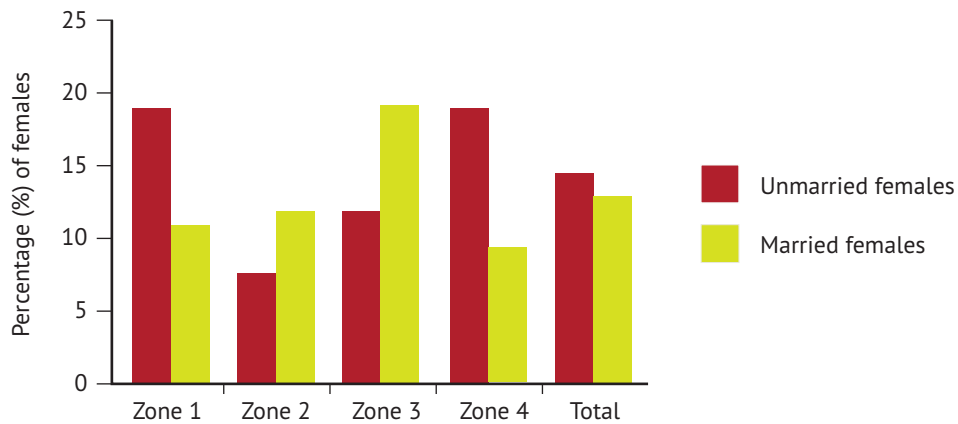
Figure 4.33 Percentage of Males Reporting Visiting FSWs by Marital Status, by Geographic Zone, Ondo State, Nigeria, 2012

Source: Nigeria HIV Epidemic Appraisal 2013 Data.

Questions were also asked about transactional sex among women. Figure 4.34 shows the proportion of female respondents who engaged in transactional sex in the past 6 months.

Across the zones, the proportion of unmarried females who engaged in transactional sex was slightly higher (14%) than married females (12%). This was true in all zones except Zone 2 and 3.

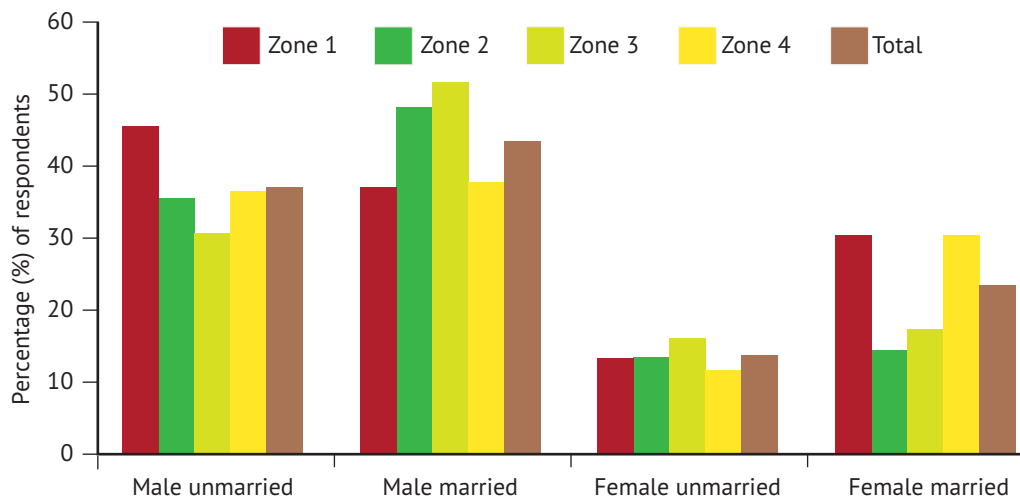
Figure 4.34 Percentage of Female Respondents Who Engaged in Transactional Sex in the Past 6 Months, Marital Status, by Geographic Zones, Ondo, Nigeria, 2012



Source: Nigeria HIV Epidemic Appraisal 2013 Data.

Figure 4.35 shows the proportion of respondents reporting multiple sexual partners in the past 6 months. Generally, a higher proportion of males reported having multiple sexual partners than females with the highest proportion of respondents reporting multiple sexual partners being married males, followed by unmarried males, married females then unmarried females. Cumulatively, Zone 1 had the highest number of respondents reporting multiple sexual partners across all the zones and demographic groups.

Figure 4.35 Percentage of Respondents Reporting More Than 1 Sexual Partner in the Past 6 Months, by Sex, Marital Status and Geographic Zones, Ondo, Nigeria, 2012



Source: Nigeria HIV Epidemic Appraisal 2013 Data.

Note: Male married = more than one sexual partner other than wife/wives

4.8.7 Condom Use

Table 4.32 Percentage of Unmarried Male Use Condom Use At Last Sex With Different Sexual Partners by Geographic Zones, Ondo, Nigeria, 2012

Condom Use in Different Relationship	Zone 1	Zone 2	Zone 3	Zone 4	Total
% use condom at last sex with a woman other than sex worker	57.0	48.9	31.4	63.4	52.0
% use condom at last sex with FSW	73.3	73.3	83.3	60.6	69.0
% use condom at last anal sex with a man	33.3	0.0	0.0	25.0	7.4

Source: Nigeria HIV Epidemic Appraisal 2013 Data.

Notes: FSW = female sex worker; % = percentage.

Chapter 5

Summary and Use of The Epidemic Appraisal Data

5.1 Implications For Programming: Linking Results With Programme Design and Delivery

Epidemic appraisals were conducted in eight states across Nigeria to obtain information about most at risk populations (sex workers, high risk men who have sex with men, and injecting drug users); urban venues where people go to meet new sexual partners; and sexual behaviours among people living in rural areas. This information provides valuable insights into what is driving HIV transmission in urban and rural areas, and helps guide programmes planners to develop HIV prevention strategies accordingly. In addition, the geographic specificity of the findings are important for providing programmes planners with the necessary information to set geographic priorities for focusing their HIV prevention response, and establishing plans for scaling up programmes.

The Epidemic Appraisals link directly to the design framework that has been developed by SACAs for scaling up HIV prevention programmes, in that they focus on the same three populations:

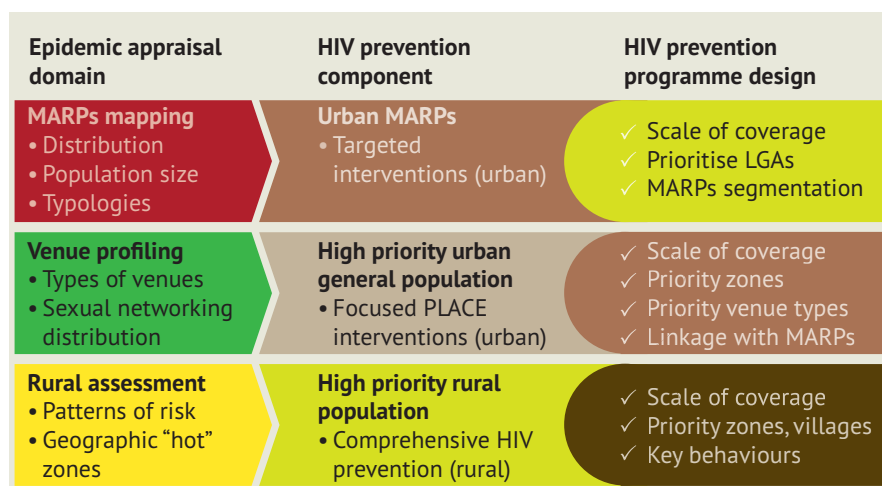
1. **Urban MARPs**—This component entails scaling up targeted interventions for MARPs (particularly FSWs) in key urban areas.
2. **High Priority Urban General Population**—To address the HIV prevention needs of those in the “general population”, the approach is to focus on high priority segments, which entails focusing on those that are actively seeking engaging in sexual partnerships with multiple partners, and/or seeking new sexual partners frequently.
3. **High Priority Rural Populations**—This component focuses on directly a comprehensive set of HIV prevention services to priority areas and populations in rural areas (i.e., small towns and villages), with a focus on those areas and groups wherein the highest levels of sexual risk behaviour are found.

The epidemic appraisals follow this framework and provide intelligence on each population through mapping of MARPs, profiling of urban venues, and assessing levels of risk at rural levels as summarised below.

- **MARPs mapping** generates local information about the size, distribution and typology of MARPs, which can support the design of the urban MARPs programmes planning by determining the scale of effort which is required to reach coverage and from this to establish realistic target indicators. It also provides guidance on which geographic areas should be prioritised, and information on the type of venue to be targeted for greatest reach.
- **Venue profiling** provides information about the number and types of venues used most by members of the local population for meeting new sexual partners thereby providing information about where to focus interventions. It also provides information about the types of sexual networking that happens, and the extent to which networking occurs at different types of venues. Findings from this component can guide prevention programmes and attendant budgets since different venues require different approaches and these may have different cost benefit implications. For example, where a large proportion of MARP are ‘home based’ such as MSM, carefully designed peer engagement and outreach programmes are likely to be needed. Likewise, where high levels of sexual networking occur in bars and hotels, a high proportion of those at risk might be reached by programmes which involve regular site visits, organised around busiest times and which ensure a reliable supply of condoms is available. Finally, venue profiling has shown that there may be synergies between interventions particularly where networking of sex workers and patrons seeking casual sex overlap.
- **Rural assessments** provide information about the general HIV burden in rural areas in different regions of the state, along with information about the presence of high risk networks (e.g., FSWs). In addition, important information is collected about patterns of high risk sexual behaviour, indicating both the need for programmes designed to change behaviours, and which behavioural patterns to focus on.

5.1 summarises the very practical benefits of epidemic appraisals and how their results can be applied to prevention programming.

Figure 5.1 Framework for Translating Epidemic Appraisal Results Into HIV Prevention Programmes Design



Source: Nigeria HIV Epidemic Appraisal 2013 Data.

5.2 Key Findings and Implications

Several key findings emerge from these appraisals that are important for guiding the HIV prevention response. These are summarised below, with programmes implications at the National and State levels.

5.2.1 Urban Marps

Female Sex Workers

The mapping results clearly show that there are large populations of FSWs, distributed widely across the eight states. Overall, more than 125,000 FSWs were mapped at more than 11,500 “hot spots”. Not surprisingly, the highest number of FSWs were in Lagos and FCT (Abuja), but each state had a large enough number to justify ensuring that targeted interventions for FSWs are a key strategic priority for the national HIV prevention response.

Furthermore, a high proportion of the FSWs are not based in brothels. This is an important finding, since a large proportion of previous HIV prevention programmes in Nigeria have focused on brothel-based FSWs. This appraisal indicates that focusing solely on brothel-based FSWs will yield coverage of only 16% of all urban FSWs across these eight states. Therefore, a strategy needs to be established to expand programmes to other types of FSWs, particularly those working in bars and nightclubs (28% of FSWs) and hotels and lodges (32% of FSWs).

At the state level, the mapping found large differences in the size and density of FSW populations between the LGAs. Therefore, the strategy for scaling up FSW interventions should focus first on those LGAs with both the highest population and density of FSWs to achieve the greatest impact on the epidemic.

IDU and High Risk MSM

Despite the difficulty inherent in mapping these highly stigmatized populations, the appraisal indicated the scope for intensifying interventions for both IDU and high risk MSM populations. At the hot spots mapped there were almost 6,000 IDUs, with the large majority found in Gombe state. The large number of IDUs per spot (12.5), indicates that these locations might also be areas where drug users gather to share injecting equipment, which in turn would facilitate rapid HIV transmission.

The results from these appraisals suggest that effective interventions for IDUs are necessary, with a particular emphasis on scaling up in Gombe state.

Although not meant to be a comprehensive enumeration of MSM, the appraisal provided important information about where high risk MSM gather and meet new sexual partners. Overall, almost 500 such hot spots were mapped, with an estimated 7,613 MSM visiting these spots on a daily basis, including male sex workers. These results provide an impetus for developing targeted interventions at key sites where MSM congregate. This would provide an entry point into a population which is difficult to reach, which could then catalyse interventions for wider MSM networks.

Urban MARPs—Key Programme Implications

- FSWs are of highest priority
- Scale up interventions for non-brothel-based FSWs
- States should focus on key LGAs with high concentrations of FSWs
- Emphasise interventions for IDU in Gombe
- Reach MSM at key hot spot venues

5.2.2 High Priority Urban General Population

The venue profiling of urban venues where people congregate found that a high proportion of certain types of venues were places where both men and women frequent to meet new sexual partners. Overall, 56% of the venues profiled were places where such sexual networking occurred. This proportion varied by state, indicating that a strategy focusing on key venues for HIV prevention efforts would be more successful in reaching higher risk individuals and groups in some states than others. For example, 73% of the venues in Cross River were found to be “high risk”, that is they facilitated finding new sexual partners, whereas 50% of the venues profiled in Gombe were “high risk”.

Sexual networking was more common at some types of venues than others. Not surprisingly, bars and night clubs were commonly associated with sexual networking, indicating that these sorts of venues should be prioritised. However, this pattern was not consistent across states or indeed, within states. The local level information emerging from the appraisals provides a very practical foundation for state level planning and can inform different states as to which type of venue sees most sexual networking and when.

A key finding was that many of the venues where members of the general population met new casual sexual partners also have FSWs and their clients visiting there. This overlapping between the casual and sex work networks is likely to facilitate the expansion of the HIV epidemic by intermixing of the sexual networks. Therefore, venues where such overlapping exists should receive the highest priority for interventions.

At the state level, it was found that certain geographic zones contained a high proportion of the “high risk” venues. Therefore, when implementing interventions, efficiencies could be gained by focusing on these zones where there is a higher concentration of the high risk venues.

Overall, only 18% of the high risk venues had condoms available on site. This was somewhat higher (32%), but still much too low at venues frequented by FSWs. Only 15% of venues facilitating casual sex networking had condoms on site. This finding shows that there is a substantial opportunity to greatly improve condom programming, both in terms of distribution and promotion of condoms at high risk venues.

Urban Venue Profiling—Key Programme Implications

- Venues provide an efficient target for focused HIV prevention programmes
- Bars, nightclubs and hotels and lodges are the most important venues to target
- Priority should be given to the venues which facilitate both casual and sex work networking
- Efficiency and impact can be maximised by focusing on local geographic zones with a high density of venues that facilitate sexual networking
- High priority should be given to enhanced condom programming targeting high risk venues

5.3 Rural Assessment

The appraisal findings from the rural assessments found substantial heterogeneity in patterns of HIV risk in rural areas. Not surprisingly, states with higher HIV prevalence such as Benue and Nassarawa had a much higher HIV burden in the villages than those with lower HIV prevalence such as Ondo. For example, 100% of the villages assessed in Benue had reports of PLHIV within, whereas 35% of villages in Ondo reported having any PLHIV.

A relatively high proportion of villages were found to have FSWs living and working within. This varied substantially across the states, with 40% of Benue villages having FSWs within, compared 23% in Nassarawa. This finding indicates that any HIV prevention programmes in the rural areas of these states should incorporate a strategy for reaching FSWs. This is of particular importance in Benue, where FSWs are widely distributed in rural areas, with relatively large numbers of FSWs overall.

The polling booth surveys (PBS) in rural populations found much higher levels of sexual risk behaviour than has been found in previous behavioural surveys. This is probably due to the fact that the surveys were anonymous and as such reduced the likelihood of social desirability biases which have been found elsewhere.

Overall, a high proportion of both married and unmarried men reported that they visited FSWs, which is consistent with the finding of the widespread presence of FSWs in the villages. This pattern varied somewhat between states, with the highest proportion of men reporting that they visit FSWs being in Benue, Cross River and Nassarawa. This finding reinforces the importance of incorporating interventions for FSWs and their clients in key rural areas.

Sexual behaviour patterns varied substantially between states, but overall a high proportion of both men and women reported having multiple sexual partners within the past 6 months. This was true for both married and unmarried men and women. Transactional sex was also reported commonly. Consistent with the epidemic patterns, Benue showed the highest levels of high risk sexual behaviour with 35% of married women and almost 50% of unmarried women reporting more than one sex partner in the past six months. Reported condom use tended to be low among both men and women; less than 50% in the last encounter with a casual sexual partner overall. These findings highlight the importance for developing effective interventions to reach key rural areas and for expanding access to condoms. This will be particularly important in states such as Benue and Cross River, where the prevalence is high and sexual risk behaviours are widespread.

Rural Assessments—Key Programme Implications

- HIV burden is high in rural areas, and requires a strategic response
- FSWs are widespread in rural areas, so HIV prevention programmes should include a strategy for rural FSWs
- HIV prevention programmes for the general population in villages is required, particularly in Benue and Cross River
- Programmes should focus on both reducing the number of partners and increasing condom use

Chapter 6

Conclusion

These appraisals have confirmed what is already known about the mixed nature of the HIV epidemic in Nigeria but have gone further to reveal important local variations and trends. This is critical intelligence for effective planning. The results will enable both an accurate focus on key populations as well as the establishment of realistic targets for coverage at national and state level. In the current climate of shrinking resources for HIV and AIDS, tighter focus and an emphasis on results is paramount. Drawing on what is already known about effective interventions, programmes can now be planned and tailored to meet the needs of different populations and so to reduce new infections.

The utility of these local epidemic appraisals for programming is already being realized. While the National HIV prevention plan provides the guiding framework for action, implementation takes place at state level and below. As the Global AIDS Response Progress Report (2012) states 'mapping a local epidemic requires a local response'. To this end, the findings presented from this study are already enabling states to specify the target population which needs to be reached, where it can be reached and with what package of intervention activities.

Furthermore, the estimates generated allow for realistic coverage targets to be set at a macro level, for example a 60% coverage rate of estimated number of FSWs and at a micro level 80% of sex workers in a given location to be reached with a whole or partial range of proven effective interventions. The generation of these evidence based targets in turn facilitates more effective results based approaches which maximise resources and efficiency.

There are several ways in which the specific information emerging from the local epidemic appraisals are being used by the SACAs to efficiently scale up their prevention programs. The urban mapping of MARPs has enabled them to identify and describe locations where sex work is conducted at high densities, or 'hot spots' thus ensuring optimal distribution and reach of HIV prevention services at these sites. It has also enabled them to employ a more strategic and systemic approach in prioritizing locations for FSW interventions. By assessing the distribution of FSW populations SACAs have prioritised Local Government Areas (LGAs), and this has been central to the development of the implementation roll out plan for the targeted FSW prevention programmes within the states. It ensures that locations where sex work may be a significant driver of the HIV epidemic in terms of the large

FSW population or FSW density per thousand men are sufficiently saturated with interventions before other areas. Furthermore, in most of these states where majority of the HIV prevention response is provided by external donors, the information has strengthened NACA and the SACAs in their coordination of implementation roll out among the multiple donor agencies implementing HIV prevention programmes for FSWs. This improved coordination effort has markedly reduced duplication of efforts among partners implementing programmes in the field.

Knowledge about the typologies and operational dynamics of female sex work within their states is also enabling the SACAs to determine which strategy to employ in designing targeted FSW programmes that are applicable to their own local context. States such as Nassarawa and Cross River, where a significant proportion of sex workers operate from street/public places emphasize peer outreach and provision of appropriate clinical services while states where most sex workers solicit at hotels/lodges and bars/night clubs (e.g., Lagos, Ondo, Benue) use alternate strategies such as engaging pimps, hotel staff and bar/night club staff to facilitate outreach and services. The SACAs are also using the population estimates provided by the urban mapping of MARPs to estimate the resources required to provide the necessary services to a high proportion of FSWs in a catchment area, and allocate resources to implementing organizations accordingly. Furthermore, the mapping data has been instrumental in the design of the proposed impact evaluation that will evaluate the impact of Nigeria's targeted HIV prevention program on averting new HIV infections among FSWs, their clients and communities. The mapping data served as the sampling frame for the random allocation of the units of intervention.

NACA and the SACAs are also using the urban venue profiling data to plan their HIV prevention interventions for the general population in urban areas. By understanding the types of venues where men and women who are seeking sexual partners can be found, SACAs are developing specific plans for targeting these types of "hot spots" where they can efficiently reach a significant proportion of the high risk segments of the general population. Of note, the venue profiling has shown that in some states (especially FCT and Lagos), a high proportion of the assessed venues facilitate both FSW and casual sexual networking, so interventions can be targeted to these locations with overlapping sexual networks. In contrast, in other states such as Benue with more generalized epidemics, there is a wider range of venues where men and women seek new sexual partners, and these more often do not have sex workers present, necessitating a more broad-based targeting to reach high risk networks within the general population.

The rural assessment component of the epidemic appraisals has also yielded valuable information for programming. The rapid village profiling has shown that sex work is not confined to urban areas and that programs for FSWs need to be incorporated into rural HIV prevention programs. This is particularly true in some states such as Benue, where a very high proportion of villages were found to have clusters of FSWs working within. The rural assessments also provided important information about the sexual behaviour patterns among those living in villages and small towns in the different states. Of note, the "polling booth surveys", which reduce levels of social desirability bias, found much higher levels of sexual risk than has been reported from previous behavioural surveys in Nigeria. This is congruent with the persistently high HIV prevalence levels in many of the states, particularly considering the high levels of male circumcision in Nigeria. Key sexual behaviours that will need to be addressed by HIV prevention programs in rural areas include; substan-

tial proportions of men (married and unmarried) visiting FSWs, high proportions of both men and women reporting multiple sex partners in the past six months, and very high levels of transactional sex reported by women in a few states. It is noted that the highest levels of sexual risk behaviour were found in Benue and Cross River, which are states that have persistently had among the most severe HIV epidemics in Nigeria. The results of the rural appraisals will now be used to design HIV interventions, both in terms of regional focus and intervention strategies.

In summary, the results of the epidemic appraisals have provided NACA and the SACAs with new and timely information which can be used to design and focus HIV prevention programmes. They also provide an important basis for future monitoring and evaluation efforts to provide ongoing guidance to prevention strategies.

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Annex 1

Mapping MARPs Format

Mapping MARPs In Nigeria 2012 Level 1 Form

Form No.: Date:

State: LGA: Town/Village: Zone Number:

FW1 Name: FW1 Unique I.D.: FW2 Name: FW2 Unique I.D.:

Field Supervisor Name: Unique I.D.:

S.N	Spot Name	Spot Address	Type of MARP	Type of spot	Type of operation	Number of MARPs	
						Min	Max
1.			FSW				
			MSM				
			IDU				
2.			FSW				
			MSM				
			IDU				
3.			FSW				
			MSM				
			IDU				
4.			FSW				
			MSM				
			IDU				
5.			FSW				
			MSM				
			IDU				
6.			FSW				
			MSM				
			IDU				
7.			FSW				
			MSM				
			IDU				

KI Name and Contact Information (Optional):

 Sex: Male Female Education Level:

Profession:

 Type of KI:

Type of spot: 1-Brothel; 2-Street/public places; 3-Home-based; 4-Bar/night club/casino based; 5-Hotel/lodge; 6-Massage parlour; 7-Hostel/campus based; 8-Trailer (truck) stops; 9-Escort(call girls/mobile); 10-Others (Specify):

Time of Operation: A-Morning; B-Afternoon; C-Evening; D-Night; E-Whole Day/24 Hours

Education Level: 1-Primary; 2-Secondary/vocational; 3-Tertiary; 4-None

Type of KI: 1-MARP; 2-Taxi /Okada driver; 3-Keke napep operator; 4-Local food vendors; 5-Pimp/brothel owner/chair ladies; 6-Watchmen/security staff; 7-H Name/hotel/lodge workers; 8-Bar workers/owners/patrons; 9-Porters at higher institutions/ hostels; 10-Burukuntus joints; 11-Petty shop owners; 12-Drug peddlers/pushers; 13-Networks of MARPs; 14-NGO staff; 15-Service providers; 16-Government/law enforcement officials; 17-Pharmacist; 18-Street families; 19-Bouncers; 20-Construction workers/labourers; 21-Charge sellers; 22-Musicians; 23-Others (Specify):

**Code List
Level 1 Format**

Description	Code List	
Type of spot	1 Brothel 2 Street/public places 3 Home-based 4 Bar/night club/casino based 5 Hotel/lodge	6 Massage parlour 7 Hostel/campus based 8 Trailer (truck) stops 9 Escort (call girls/mobile) 10 Others (Specify)
Time of operation	A Morning B Afternoon C Evening	D Night E Whole Day/24 Hours
Type of KI	1 MARP 2 Taxi/Okada driver 3 Keke napep operator 4 Local food vendors 5 Pimp/brothel owner/chair ladies 6 Watchman/security staff 7 Hotel/lodge workers 8 Bar workers/owners/patrons 9 Porters at higher institutions/ hostels 10 Burukuntus joints 11 Petty shop owners 12 Drug peddlers/pushers	13 Networks of MARPs 14 NGO staff 15 Service providers 16 Government/law enforcement officials 17 Pharmacist 18 Street families 19 Bouncers 20 Construction workers/labourers 21 Charge sellers 22 Musicians 23 Others (Specify)

Mapping MARPs In Nigeria 2012 Level 2 Form—FSW

State: LGA: Town/Village: Zone: <input type="text"/> <input type="text"/> Zone: <input type="text"/> <input type="text"/> Spot Name: <input type="text"/> <input type="text"/> Type of Spot* <input type="text"/> <input type="text"/>	Date: <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> FW 1 Name: FW 1 I.D.: <input type="text"/> <input type="text"/> FW 2 Name: FW 2 I.D.: <input type="text"/> <input type="text"/> FS Name: FS Unique I.D.: <input type="text"/> <input type="text"/> Spot Active: Yes <input type="checkbox"/> No <input type="checkbox"/>
----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Spot Name Duplicated: Yes: <input type="checkbox"/> No: <input type="checkbox"/> Spot Duplicate Code: <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	Spot Validation Result Validated by interviewing primary KI 1 Validated by interviewing secondary KI 2 Validated through L1 3
----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------------------

Type of spot: 1-Brothel; 2-Street/public places; 3-Home-based; 4-Bar/night club/casino based; 5-Hotel/lodge; 6-Massage parlour; 7-Hostel/campus based; 8-Trailer (truck) stops; 9-Escort (call girls/mobile); 10-Others

S.N.	Spot Profile	
1.	Code the venue with the response which best describes it.	Brothel 1 Street 2 Home-based 3 Bar/night club/casino based 4 Hotel/lodge 5 Massage parlour 6 Hostel/campus based 7 Trailer (truck) stops 8 Escort (call girls/mobile) 9 Others (specify) 10
2.	Which day/s of the week is the total number of FSWs visiting this spot more than usual (peak day)? <i>Circle as applicable</i>	Monday A Tuesday B Wednesday C Thursday D Friday E Saturday F Sunday G
3.	What time of the day do more FSWs visit this venue (peak time)?	Morning (before 12 noon) A Afternoon (12 pm – 5 pm) B Evening (5 pm – 9 pm) C Night (9 pm – late night) D
4.	On a usual day, how many FSWs work/visit here (min–max)	Min <input type="text"/> <input type="text"/> <input type="text"/> Max <input type="text"/> <input type="text"/> <input type="text"/>
5.	On a peak day, how many FSWs work/visit here (min–max)	Min <input type="text"/> <input type="text"/> <input type="text"/> Max <input type="text"/> <input type="text"/> <input type="text"/>
6.	Do FSWs solicit clients at this spot?	Yes <input type="checkbox"/> No <input type="checkbox"/>
7.	Does sex take place at this venue?	Yes <input type="checkbox"/> No <input type="checkbox"/>
8.	Do you know any other place like this, where sex workers solicit clients?	

S.N.	Spot Name	Estimates (Min)	Estimates (Max)	Do you solicit clients in this spot?			
A.				Yes		No	
B.				Yes		No	
C.				Yes		No	
D.				Yes		No	

Mapping MARPs In Nigeria 2012 Level 2 Form—MSM/MSW

State:..... LGA:..... Town/Village: Zone: <input type="text"/> <input type="text"/> Zone: <input type="text"/> <input type="text"/> Spot Name:..... <input type="text"/> <input type="text"/> Type of Spot* <input type="text"/> <input type="text"/>	Date: <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> FW 1 Name: FW 1 I.D.: <input type="text"/> <input type="text"/> FW 2 Name: FW 2 I.D.: <input type="text"/> <input type="text"/> FS Name: FS Unique I.D.: <input type="text"/> <input type="text"/> Spot Active: Yes <input type="checkbox"/> No <input type="checkbox"/>
Spot Name Duplicated: Yes: <input type="checkbox"/> No: <input type="checkbox"/> Spot Duplicate Code: <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	Spot Validation Result Validated by interviewing primary KI 1 Validated by interviewing secondary KI 2 Validated through L1 3

Type of spot: 1-Brothel; 2-Street/public places; 3-Home-based; 4-Bar/night club/casino based; 5-Hotel/lodge; 6-Massage parlour; 7-Hostel/campus based; 8-Trailer (truck) stops; 9-Escort (call girls/mobile); 10-Others

S.N.	Spot Profile	Response
1.	Code the venue with the response which best describes it.	Brothel 1 Street 2 Home-based 3 Bar/night club/casino based 4 Hotel/lodge 5 Massage parlour 6 Hostel/campus based 7 Trailer (truck) stops 8 Escort (call girls/mobile) 9 Others (specify) 10
2.	Which day/s of the week is the total number of MSMs/MSWs visiting this spot more than usual (Peak day)? <i>Circle as applicable</i>	Monday A Tuesday B Wednesday C Thursday D Friday E Saturday F Sunday G
3.	What time of the day do more MSMs/MSWs visit this venue (peak time)?	Morning (before 12 noon) A Afternoon (12 pm – 5 pm) B Evening (5 pm – 9 pm) C Night (9 pm – late night) D
4.	On peak day/s, how many MSWs work/visit this spot?	Min <input type="text"/> <input type="text"/> <input type="text"/> Max <input type="text"/> <input type="text"/> <input type="text"/>
5.	On peak day/s, how many MSMs other than MSWs visit this spot	Min <input type="text"/> <input type="text"/> <input type="text"/> Max <input type="text"/> <input type="text"/> <input type="text"/>
6.	On usual day/s, how many MSWs work/visit this spot?	Min <input type="text"/> <input type="text"/> <input type="text"/> Max <input type="text"/> <input type="text"/> <input type="text"/>
7.	Do MSMs/MSWs look for male partner/clients at this spot?	Yes <input type="checkbox"/> No <input type="checkbox"/>
8.	Does sex take place at this spot?	Yes <input type="checkbox"/> No <input type="checkbox"/>
9.	Do you know any other place like this, where MSMs/MSWs seek male partner clients?	

S.N.	Spot Name	Estimates (Min)	Estimates (Max)	Do you seek male partner/clients in this spot?		
A.				Yes	No	
B.				Yes	No	
C.				Yes	No	
D.				Yes	No	

Mapping MARPs In Nigeria 2012 Level 2 Form—IDU

State:..... LGA:..... Town/Village: Zone: <input type="text"/> <input type="text"/> Zone: <input type="text"/> <input type="text"/> Spot Name:..... <input type="text"/> <input type="text"/> Type of Spot* <input type="text"/> <input type="text"/>	Date: <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> FW 1 Name: FW 1 I.D.: <input type="text"/> <input type="text"/> FW 2 Name: FW 2 I.D.: <input type="text"/> <input type="text"/> FS Name: FS Unique I.D.: <input type="text"/> <input type="text"/> Spot Active: Yes <input type="checkbox"/> No <input type="checkbox"/>
Spot Name Duplicated: Yes: <input type="checkbox"/> No: <input type="checkbox"/> Spot Duplicate Code: <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>	Spot Validation Result Validated by interviewing primary KI 1 Validated by interviewing secondary KI 2 Validated through L1 3

Type of spot: 1-Brothel; 2-Street/public places; 3-Home-based; 4-Bar/night club/casino based; 5-Hotel/lodge; 6-Massage parlour; 7-Hostel/campus based; 8-Trailer (truck) stops; 9-Escort (call girls/mobile); 10-Others

S.N.	Spot Profile	Response				
1.	Code the venue with the response which best describes it.	Brothel 1 Street 2 Home-based 3 Bar/night club/casino based 4 Hotel/lodge 5 Massage parlour 6 Hostel/campus based 7 Trailer (truck) stops 8 Escort (call girls/mobile) 9 Others (specify) 10				
2.	Which day/s of the week is the total number of IDUs visiting this spot more than usual (Peak day)? <i>Circle as applicable</i>	Monday A Tuesday B Wednesday C Thursday D Friday E Saturday F Sunday G				
3.	What time of the day do more IDUs visit this venue (peak time)?	Morning (before 12 noon) A Afternoon (12 pm – 5 pm) B Evening (5 pm – 9 pm) C Night (9 pm – late night) D				
4.	On peak day/s, how many IDUs visit this spot?	Min <input type="text"/> <input type="text"/> <input type="text"/> Max <input type="text"/> <input type="text"/> <input type="text"/>				
5.	On the peak days, how many IDUs share injection needles?	Min <input type="text"/> <input type="text"/> <input type="text"/> Max <input type="text"/> <input type="text"/> <input type="text"/>				
6.	On usual day/s, how many IDUs work/visit this spot?	Min <input type="text"/> <input type="text"/> <input type="text"/> Max <input type="text"/> <input type="text"/> <input type="text"/>				
7.	Do you know any other place like this, where MSMs/MSWs seek male partner clients?					
S.N.	Spot Name	Estimates (Min)	Estimates (Max)	Do you inject drugs in this spot?		
A.				Yes	No	
B.				Yes	No	
C.				Yes	No	
D.				Yes	No	

Venue Profiling In Nigeria 2012 Venue Listing Form

Date:

State: LGA: Town/Village: Zone Number:

FW1 Name: FW1 Unique I.D.: FW2 Name: FW2 Unique I.D.:

Field Supervisor Name: Unique I.D.:

S.N	Name of the venue	Venue Address
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		
16.		
17.		
18.		
19.		
20.		
21.		
22.		

Note: Use one format for listing venues within a defined zone. If more than 1 sub-zone selected for venue

Annex 2

Venue Listing Format

Venue Profiling In Nigeria 2012 Venue Listing Form

Date:

State: LGA: Town/Village: Zone Number:

FW1 Name: FW1 Unique I.D.: FW2 Name: FW2 Unique I.D.:

Field Supervisor Name: Unique I.D.:

S.N	Name of the venue	Venue Address
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		
15.		
16.		
17.		
18.		
19.		
20.		
21.		
22.		

Note: Use one format for listing venues within a defined zone. If more than 1 sub-zone selected for venue profiling, list the venues in the same format. Add additional sheet, if required

Annex 3

Venue Profile Format

Venue Profile

State: LGA: Town: Zone Number:
 Name of Venue and SL No: Interviewer Name and Code:
 Venue Address:

No.	Information	Respondent 1	Respondent 2	Respondent 3
1.	Date (DD/MM/YY)	<input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/>
2.	Type of respondent	Venue Manager 1 Venue Worker 2 Venue Patron 3 Other 4 (Specify)	Venue Manager 1 Venue Worker 2 Venue Patron 3 Other 4 (Specify)	Venue Manager 1 Venue Worker 2 Venue Patron 3 Other 4 (Specify)
3.	Sex of respondent	Male 1 Female 2	Male 1 Female 2	Male 1 Female 2
4.	Type of venue (circle applicable)	Bars A Night Clubs B Hotel C Lodge D Commercial Parks E Campus F Under Bridge/Open Space G Cinema H Shopping Malls I Mechanic Villages J Beauty Saloons K Internet Café L Point And Kill/Fish Joint M Brothel N Street O Others (Specify) X	Bars A Night Clubs B Hotel C Lodge D Commercial Parks E Campus F Under Bridge/Open Space G Cinema H Shopping Malls I Mechanic Villages J Beauty Saloons K Internet Café L Point And Kill/Fish Joint M Brothel N Street O Others (Specify) X	Bars A Night Clubs B Hotel C Lodge D Commercial Parks E Campus F Under Bridge/Open Space G Cinema H Shopping Malls I Mechanic Villages J Beauty Saloons K Internet Café L Point And Kill/Fish Joint M Brothel N Street O Others (Specify) X

(continued next page)

Venue Profile (continued)

No.	Information	Respondent 1	Respondent 2	Respondent 3																																				
5.	Days of operation (circle applicable)	Monday A Tuesday B Wednesday C Thursday D Friday E Saturday F Sunday G	Monday A Tuesday B Wednesday C Thursday D Friday E Saturday F Sunday G	Monday A Tuesday B Wednesday C Thursday D Friday E Saturday F Sunday G																																				
6.	Time of operation (circle applicable)	Morning A Afternoon B Evening C Night D	Morning A Afternoon B Evening C Night D	Morning A Afternoon B Evening C Night D																																				
7.	Peak time of operation (circle applicable)	Morning A Afternoon B Evening C Night D	Morning A Afternoon B Evening C Night D	Morning A Afternoon B Evening C Night D																																				
8.	Peak day/s of operation (circle applicable)	Monday A Tuesday B Wednesday C Thursday D Friday E Saturday F Sunday G	Monday A Tuesday B Wednesday C Thursday D Friday E Saturday F Sunday G	Monday A Tuesday B Wednesday C Thursday D Friday E Saturday F Sunday G																																				
9.	Approximately how many people come here on a usual day?	<table border="1" style="width: 100%; text-align: center;"> <tr> <td style="width: 25%;"></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> </tr> <tr> <td>Men</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Women</td> <td></td> <td></td> <td></td> </tr> </table>					Men				Women				<table border="1" style="width: 100%; text-align: center;"> <tr> <td style="width: 25%;"></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> </tr> <tr> <td>Men</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Women</td> <td></td> <td></td> <td></td> </tr> </table>					Men				Women				<table border="1" style="width: 100%; text-align: center;"> <tr> <td style="width: 25%;"></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> <td style="width: 25%;"></td> </tr> <tr> <td>Men</td> <td></td> <td></td> <td></td> </tr> <tr> <td>Women</td> <td></td> <td></td> <td></td> </tr> </table>					Men				Women			
Men																																								
Women																																								
Men																																								
Women																																								
Men																																								
Women																																								
10.	From which places do people usually come here on a normal day?	Around This Area A Other Parts Of This Town B Other Parts Of This State C Other States C Outside Country D	Around This Area A Other Parts Of This Town B Other Parts Of This State C Other States C Outside Country D	Around This Area A Other Parts Of This Town B Other Parts Of This State C Other States C Outside Country D																																				

(continued next page)

Venue Profile (continued)

No.	Information	Respondent 1	Respondent 2	Respondent 3
11.	Approximately how many people come here on a peak day?	Men..... Women..... Yes.....1 }14 No.....2 } Dk.....8 }	Men..... Women..... Yes.....1 }14 No.....2 } Dk.....8 }	Men..... Women..... Yes.....1 }14 No.....2 } Dk.....8 }
12.	Do men come here to meet new female sexual partners?	Yes.....1 }14 No.....2 } Dk.....8 }	Yes.....1 }14 No.....2 } Dk.....8 }	Yes.....1 }14 No.....2 } Dk.....8 }
13.	Approximately how many men who come here pick up new female sexual partners?
14.	Do women come here to meet new male sexual partners?	Yes.....1 }16 No.....2 } Dk.....8 }	Yes.....1 }16 No.....2 } Dk.....8 }	Yes.....1 }16 No.....2 } Dk.....8 }
15.	Approximately how many women come here to meet new male sexual partners?
16.	Do female sex workers meet clients here?	Yes.....1 }21 No.....2 } Dk.....8 }	Yes.....1 }21 No.....2 } Dk.....8 }	Yes.....1 }21 No.....2 } Dk.....8 }
17.	Approximately, how many female sex workers usually come here, on a usual day, to meet clients?
18.	Approximately how many FSWs come here on a peak day?
19.	Do men come here to meet new male sexual partners?	Yes.....1 }21 No.....2 } Dk.....8 }	Yes.....1 }21 No.....2 } Dk.....8 }	Yes.....1 }21 No.....2 } Dk.....8 }

(continued next page)

Venue Profile (continued)

No.	Information	Respondent 1	Respondent 2	Respondent 3
20.	Approximately how many men come here to meet male sexual partners, on a peak day?	<input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/> <input type="text"/>
21.	Are condoms available at this venue?	Yes.....1 No.....2 Dk.....8	Yes.....1 No.....2 Dk.....8	Yes.....1 No.....2 Dk.....8
22.	Are lubricants available at this venue?	Yes.....1 No.....2 Dk.....8	Yes.....1 No.....2 Dk.....8	Yes.....1 No.....2 Dk.....8
23.	Do you know any other places in this area where men and women seek new sexual partners? IF YES: What type of place is that? (Circle applicable)	Bars.....A Night Clubs.....B Hotel.....C Lodge.....D Commercial Parks.....E Campus.....F Under Bridge/Open Space.....G Cinema.....H Shopping Malls.....I Mechanic Villages.....J Beauty Saloons.....K Internet Café.....L Point And Kil/Fish Joint.....M Brothel.....N Street.....O Others (Specify).....X	Bars.....A Night Clubs.....B Hotel.....C Lodge.....D Commercial Parks.....E Campus.....F Under Bridge/Open Space.....G Cinema.....H Shopping Malls.....I Mechanic Villages.....J Beauty Saloons.....K Internet Café.....L Point And Kil/Fish Joint.....M Brothel.....N Street.....O Others (Specify).....X	Bars.....A Night Clubs.....B Hotel.....C Lodge.....D Commercial Parks.....E Campus.....F Under Bridge/Open Space.....G Cinema.....H Shopping Malls.....I Mechanic Villages.....J Beauty Saloons.....K Internet Café.....L Point And Kil/Fish Joint.....M Brothel.....N Street.....O Others (Specify).....X
24.	Can you please tell me your age?	<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>	<input type="text"/> <input type="text"/>
Thank the respondents				

Annex 4

Rural Appraisal: Village Profile

Rapid Assessment Of HIV Risk In Rural Areas Of Nigeria, 2012

Village Profile–Key Informant Interview

State:..... LGA:..... Date (DD/MM/YYYY):
 Geographic Zone:..... Village:.....

Item#	Item Description	Consolidation
1.	What is the total population of this village?	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
2.	Is this a specific community based settlement?	Yes.....1 No.....0
3.	If yes, describe the community based settlement?	Size <input type="text"/> <input type="text"/> <input type="text"/>
4.	Approximate distance to the nearest town? (in km)	Kms <input type="text"/> <input type="text"/> <input type="text"/>
5.	Does this village has road connectivity to the nearest town/ urban settlement	Yes.....1 No.....0
6.	Does this village have a weekly market?	Yes.....1 No.....0
7.	Are there any big events in the village, which attract a large number of people from other places? If no skip to 9	Yes.....1 No.....0
8.	How many such events occur in a year?	<input type="text"/> <input type="text"/>
9.	Are there any major factories/construction sites within or close to the village?	Yes.....1 No.....0
10.	About how many persons from this village go out to work? 1. <1 weeks 2. >1 weeks to <6 months 3. >6 months	1. <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> 2. <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> 3. <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
11.	About how many persons come to this village for work? 1. <1 weeks 2. >1 weeks to <6 months 3. >6 months	1. <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> 2. <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> 3. <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
12.	Is there any season during which large number of families migrates to other places?	Yes.....1 No.....0
13.	About how many families migrated from this village in such seasons in last one year?	<input type="text"/> <input type="text"/> <input type="text"/>
14.	Are there HIV infected people in this village? If yes, would you say they are few, some or many?	None.....0 Few.....1 Some.....2 Many.....3
15.	Are there HIV/TB related deaths in this village in the past 2 years? If yes, would you say they are few, some or many?	None.....0 Few.....1 Some.....2 Many.....3
16.	Are there any female sex workers (FSWs) living in this village? If 'No' Skip To Item 21	Yes.....1 No.....0
17.a	How many female sex workers live and do sex work in this village?	<input type="text"/> <input type="text"/> <input type="text"/>
17.b	How many female sex workers live in this village and do sex work outside this village?	<input type="text"/> <input type="text"/> <input type="text"/>
17.	Number of female sex workers living in this village? (Sum of 17a and 17b)	<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>
18.	How many of female sex workers from outside this village do sex work in this village?	<input type="text"/> <input type="text"/> <input type="text"/>

(continued next page)

Village Profile—Key Informant Interview *(continued)*

19.	How many female sex workers from this village, live and practice sex work outside this village?	<input type="text"/> <input type="text"/> <input type="text"/>
20.	For the sex workers practice sex work in this village, from where do most of the clients come? Within the village..... 1 From nearby villages/towns..... 2 From other villages/towns 3 Can't determine 4	<input type="checkbox"/>
21.	Total number of Key Informants interviewed (including the FSWs, if any)	<input type="text"/> <input type="text"/>
22.	Number of FSWs interviewed	<input type="text"/> <input type="text"/>
23.	Names of Assessment Team Members	1. _____ 2. _____
24.	Verified by (supervisor's name and signature):.....	<input type="text"/> <input type="text"/>

Annex 5

Household listing for Polling Booth Survey

Household Listing Form for Pooling Booth Survey, Nigeria, 2012

State: [][] [][] [][] [][] [][] [][]

Zone: [][] [][] [][] [][] [][] [][]

Male Female LGA Name: [][][][][][] Date (DD/MM/YYYY): [][][][][][][][][][][][][]
 Village Name: [][][][][][][][][][][][][][][][] PBS Group No.: [][][][][][][][][][][][][][]
 Moderator Name: [][][][][][][][][][][][][][][][] Assistant Name: [][][][][][][][][][][][][][][][]

HH#	# available in the HH	Name of household head	Individual Sr. No.:	Name of individual	Age	Marital Status	Eligible (Y/N)	Consent for PBS (Y/N)	Address/location
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)

Marital Status: M: Married; UM: Unmarried, O: Others
PBS Group: 1. Married females age 15 – 29; 2. Married females age 30 – 49; 3. Married males age 15 – 29; 4. Married males age 30 – 49; 5. Unmarried females age 15 – 24; 6. Unmarried males age 15 – 24; 7. Unmarried females age 25 – 34; 8. Unmarried males age 25 – 34

Note: Please add additional sheets as many required

Annex 6

Polling Booth Survey

Unmarried Males					
Question	Green	Red	White	No Answers	Total
1. Have you ever heard of HIV/AIDS?					
2. Do you believe that having multiple sexual partners increase the chances of HIV?					
3. Do unmarried males in this village have sexual intercourse with a woman who is not a sex worker?					
4. Do unmarried males in this village have sex with more than one such woman?					
5. Do unmarried males in this village have sexual intercourse with female sex workers (FSWs)?					
6. Do unmarried males in this village have sex with more than one FSW?					
7. Have you ever had sexual intercourse with a woman who is not a sex worker?					
8. Have you had sex with a woman who is not a sex worker in the last one month?					
9. Have you had sex with more than one woman who is not a sex worker in the last 6 months?					
10. Was a condom used at last sex with such women?					
11. Have you had sex with a woman who is not a sex worker in exchange for gifts in the last 6 months?					
12. Have you had unpaid sex with a woman, who is not sex worker, and resides in this village in the last 6 months?					
13. Have you had unpaid sex with a woman who is not a sex worker and resides outside the village in the last 6 months?					
14. Have you ever had sex with FSW?					
15. Have you had sex with a FSW in the last one month?					
16. Have you had sex with more than one FSW in the last 6 months?					
17. The last time you had sex with a FSW, was a condom used?					
18. Have you had sex with a FSW who resides in this village in the last 6 months?					
19. Have you had sex with a FSW who resides in other places in the last 6 months?					
20. Have you ever had anal sex with a man?					
21. Have you had anal sex with a man in the last one month?					
22. Have you had anal sex with different men in the last 6 months?					

(continued next page)

Unmarried Males Polling Booth Survey (*continued*)

Question	Green	Red	White	No Answers	Total
23. The last time you had anal sex with a man, was a condom used?					
24. Have you had anal sex with a man who resides in this village in the last 6 months?					
25. Have you had anal sex with a man who resides in other places in the last 6 months?					
26. Have you ever had anal sex with a woman?					

Unmarried Females

Question	Green	Red	White	No Answers	Total
1. Have you ever heard of HIV/AIDS?					
2. Do you believe that having multiple sexual partners increase the chances of HIV?					
3. Do unmarried females in this village have sexual intercourse with men?					
4. Do unmarried females in this village have sex with more than one man?					
5. Have you ever had sexual intercourse with a man?					
6. Have you had sex with a man in the last one month?					
7. Have you had sex with more than one man in the last 6 months?					
8. Was a condom used at last sex with a man?					
9. Have you had sex with a man in exchange for gifts in the last 6 months					
10. Have you had sex with a man in exchange for money in the last 6 months					
11. Have you had sex with a man who resides in this village in the last 6 months?					
12. Have you had sex with a man who resides in other places in the last 6 months?					
13. Have you ever had anal sex?					
14. Have you had anal sex with a man in the last one month?					
15. Have you had anal sex with different men in the last 6 months?					
16. The last time you had anal sex with a man, was a condom used?					
17. Have you had anal sex with a man who resides in this village in the last 6 months?					
18. Have you had anal sex with a man who resides in other place in the last 6 months?					
19. Have you ever been forced to have sex?					
20. Have you been forced to have sex in the last 6 months?					

Married Males					
Question	Green	Red	White	No Answers	Total
1. Have you ever heard of HIV/AIDS?					
2. Do you believe that having multiple sexual partners increase the chances of HIV					
3. Do married males in this village have sexual intercourse with a woman who is not a sex worker?					
4. Do married males in this village have sexual intercourse with more than one such woman?					
5. Do married males in this village have sex with female sex workers (FSWs)?					
6. Do married males in this village have sex with more than one FSW?					
7. Did you ever have sex with a woman before marriage?					
8. After your marriage, have you ever had sexual intercourse with a woman other than your wife/wives?					
9. Have you had sex with more than one woman other than your wife/wives in the last 6 months?					
10. Have you had sex with women other than your wife/wives in the last 1 month?					
11. Was a condom used at last sex outside marriage?					
12. Have you had sex with a woman in exchange for gifts in the last 6 months					
13. Have you had unpaid sex with a woman other than your wife/wives who resides in this village in the last 6 months?					
14. Have you had unpaid sex with a woman other than your wife/wives who resides in other places in the last 6 months?					
15. Have you ever had sex with a FSW?					
16. Have you had sex with a FSW in the last one month?					
17. Have you had sex with more than one FSW in the last 6 months?					
18. The last time you had sex with a FSW, was a condom used?					
19. Have you had sex with FSW who resides in this village in the last 6 months?					
20. Have you had sex with FSW resides in other places in last 6 months?					
21. Have you ever had anal sex with a man?					
22. Have you had anal sex with a man in the last one month?					
23. Have you had anal sex with more than one man in the last 6 months?					
24. The last time you had anal sex with a man, was a condom used?					
25. Have you had anal sex with a man who resides in this village in the last 6 months?					
26. Have you had anal sex with a man who resides in other place in the last 6 months?					
27. Have you ever had anal sex with a woman?					

Married Females					
Question	Green	Red	White	No Answers	Total
1. Have you ever heard of HIV/AIDS?					
2. Do you believe that having multiple sexual partners increase the chances of HIV?					
3. Do married women in this village have sexual intercourse with a man other than their husband?					
4. Do married women in this village have sexual intercourse with more than one man other than their husband?					
5. Do married women in this village engage in sexual relationship before marriage?					
6. Did you ever have sexual intercourse with a man before marriage?					
7. After your marriage, did you ever have sexual intercourse with a man other than your husband?					
8. Have you had sex with a man other than your husband in the last 1 month?					
9. Have you had sex with more than one man other than your husband in last 6 months?					
10. Was a condom used at last sex outside marriage?					
11. Have you had sex with a man in exchange for gifts in the last 6 months?					
12. Have you had unpaid sex with another man who resides in this village in the last 6 months?					
13. Have you had unpaid sex with other man who resides in other places in the last 6 months?					
14. Have you ever had anal sex?					
15. Have you had anal sex with a man in last one month?					
16. Have you had anal sex with more than one man in the last 6 months?					
17. The last time you had anal sex with a man, was a condom used?					
18. Have you had anal sex with a man who resides in this village in the last 6 months?					
19. Have you had anal sex with a man who resides in other place in the last 6 months?					
20. Does your husband visits sex worker?					
21. Have you ever been physically forced to have sex (including your husband)?					
22. Have you ever been physically forced to have sex in the last 6 months?					

