Ebonyi State University
Abakaliki, Nigeria

African Population and
Health Research Center

Quality of Post-Abortion Care in Nigeria

November 2020

Ebonyi State University
Abakaliki, Nigeria

African Population and
Health Research Center

Quality of Post-Abortion Care in Nigeria

November 2020

Contents

List of tables

List of figures

List of acronyms

APHRC	African Population and Health Research Center
CHEW	Community Health Extension Workers
EBSU	Ebonyi State University
ERPC	Evacuation of retained products of conception
FCT	Federal Capital Territory
IEC	Information Education Communication
IUD	Intra-uterine Device
LARC	Long-Acting Reversible Contraceptive
MA	Medical Abortion
MBBS	Bachelor of Medicine, Bachelor of Surgery
MUE	Medical Uterine Evacuation
MVA	Manual Vacuum Aspiration
NGN	Nigerian Naira
NGO	Non-Governmental Organization
NHREC	National Health Research Ethics Committee of Nigeria
PAC	Post-Abortion Care
SRH	Sexual and Reproductive Health
VCAT	Values Clarification and Attitude Transformation

Acknowledgments

This report is drawn from a multi-country research project generously supported by the William and Flora Hewlett Foundation (Grant #2017-6344 and #2019-9486). The project team is grateful to the Vice-Chancellor of Ebonyi State University (EBSU) Abakaliki, his Excellency Prof Chigozie Ogbu (OON), for his support and encouragement. We also thank the Bursar, Dr. Leonard C. Uguru and the project desk officer, Mrs. Uche Nweke, for all their hard work.

The team appreciates all the policy makers, researchers, and other stakeholders in the Federal Ministry of Health, the state Ministries of health in Anambra, Bauchi, Cross River, Edo, Kogi and Kano states as well as the Federal Capital Territory (FCT). Our gratitude also goes to the various participating organizations and institutions for supporting the study implementation.

We are also grateful to Dr. Catherine Kyobutungi, Executive Director of APHRC, Dr. Caroline Kabiru, Head of the Population Dynamics Sexual and Reproductive Health and Rights (PDRH) unit, as well as Ivy Nandongwa, Michelle Mbuthia, Stella Chege, Phyllis Mungai and Denis Mwirigi at APHRC for their great support to the project.

We want to thank the research assistants for their engagement and dedication to delivering quality data. Finally, we are grateful to the study participants, including the patients, healthcare providers and policy makers who agreed to share their experiences and views on Post-Abortion Care (PAC) in Nigeria.

Study team

Ebonyi State University	APHRC
Nkechi Emma-Echiegu	Ramatou Ouedraogo
Joseph Eton	Kenneth Juma
Frank Chibuzo	Sherine Athero
Ogbonnaya Eze	Silvia Njoki
Chidubem Oraelosi	Martin Bangha

Report Citation

Ebonyi State University and African Population and Health Research Center. (2020) *Quality of post-abortion care in Nigeria.* APHRC: Nairobi

Ebonyi State University
Abakaliki, Nigeria

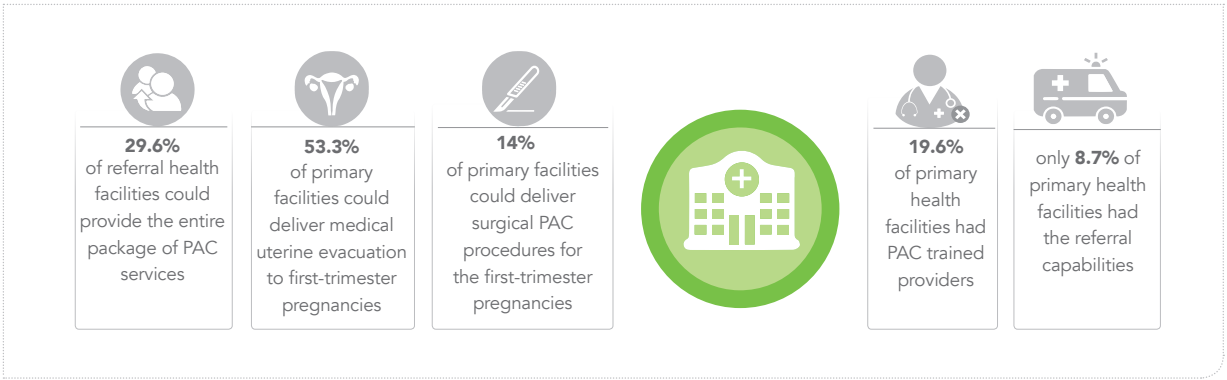
African Population and Health Research Center
Transforming lives in Africa through research.

Executive summary

Women in Nigeria face a high rate of unwanted pregnancies, with more than half of these resulting in induced abortions, which are often unsafe. About 40% of women who resort to abortion experience complications that are serious enough to warrant medical treatment and hospital admission. Often there is limited evidence on the preparedness of public health facilities to provide post-abortion care (PAC) services as well as on patients' experiences while seeking PAC services.

A cross-sectional survey was conducted in 227 public health facilities across seven states in Nigeria using health facility assessment questionnaires to assess the preparedness of facilities to provide basic and comprehensive PAC services. In addition, a total of 1,247 exit interviews with PAC patients were conducted to document their experiences on the quality of PAC services. Using semi-structured interview guides, an additional one hundred and thirty-seven in-depth interviews (IDI) with PAC service providers, women treated for post abortion complications and policy makers were conducted to explore their views, experiences and perceptions on the quality of PAC services provided at public health facilities.

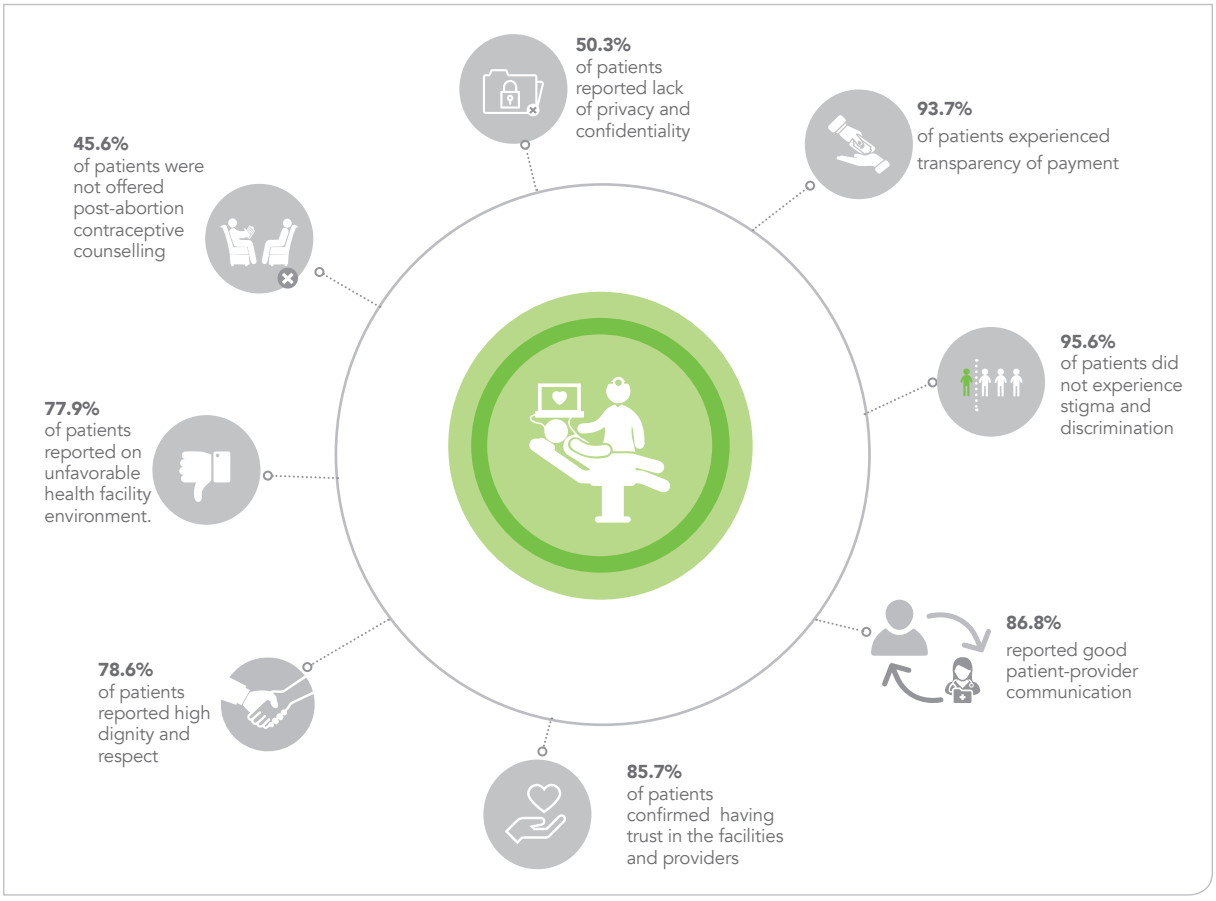
The study findings revealed low levels of capacity among primary and referral level facilities to provide quality PAC services. Only 7.6% of the primary and 29.6% of referral-level facilities had the capacity to deliver a full package of basic and comprehensive PAC services respectively. At least half (53.3%) of the primary-level facilities could provide medical PAC (uterine evacuation) to first trimester pregnancies whereas only 14% of these facilities could offer surgical PAC procedures for first trimester pregnancies. This low capacity of primary-level facilities was mainly linked to the low number of PAC trained providers (only 19.6%), and lack of PAC equipment and supplies. Consequently, a large proportion of these facilities had to refer patients to higher level facilities even though majority of them had inadequate referral capabilities since barely 8.7% had fueled ambulances/vehicles. Moreover, not many secondary-level facilities had medical and/ or surgical PAC capabilities. For instance, only 66.1% and 51.6% of the secondary-level facilities could provide medical and surgical PAC procedures respectively to second trimester pregnancies.



In spite of the relatively low PAC capacities across facilities, patients' reported experiences reflected a general satisfaction. Most respondents (78.6%) indicated that they were treated with dignity and respect. Majority of them (85.7%) expressed trust in the kind treatment received from providers; experienced (95.6%) no form of stigma and discrimination; and reported (86.8%) effective communication with providers. Further, 93.7% and 83.9% of the respondents experienced high levels of transparency and autonomy respectively. However, a considerable proportion of PAC patients (50.3%) reportedly experienced lack of privacy and confidentiality during treatment. A greater proportion of patients (63.3%) at the tertiary facilities reported that their privacy was compromised. The ratings for health facility environment were equally poor. Only 22.1% of the PAC patients found the health facility environment favorable for care.

Crowded and unhygienic health facility environments, lack of clean running water and frequent power outages contributed to unconducive treatment areas. In addition, close to half of the respondents (45.6%) did not receive post-abortion contraceptive counselling.

The limited capacity of primary-level facilities to deliver basic PAC services has immense influence on the quality of care to PAC patients. The lack of privacy and confidentiality for most of patients and the poor health facility environment negatively influenced the patient's experiences during PAC care. Moreover, policy regulations governing service provision including task shifting, coupled with the cultural and moral contexts of abortion in Nigeria influenced provider attitudes towards PAC service provision and affected the overall delivery of quality PAC services. This indicates the need for strengthening public health capacity to provide basic and comprehensive PAC services, including staffing and training, as well as provision of supplies and equipment.



Background

In Nigeria, abortion is legally restricted and only permitted to save a woman's life. Many women in need of abortion services resort to unsafe methods and procedures to terminate their pregnancies. For instance, in 2012, Nigeria recorded an estimated 1.25 million induced abortions with an abortion rate of 33 abortions per 1,000 women. This abortion figure had doubled from an estimated 610,000 induced abortions in 1996 [1]. Unsafe abortions are a major contributor to Nigeria's relatively high levels of maternal death, ill health and disability. Slightly more than 10% of women die from unsafe abortion complications including excessive bleeding, systemic infections, ruptured uterus and organ failure. From the 2012 study, about 285,000 women experienced complications serious enough to require treatment but could not receive the medical care they needed. Yet, access to quality care for abortion-related complications is acknowledged for preventing deaths and severe morbidity of women [2,3].

Post-abortion care (PAC) is a package of interventions designed to address the challenge of maternal mortality and morbidity arising from abortion complications. It aims to facilitate treatment of complications, psychological counseling and provision of contraceptive services, and other sexual and reproductive health (SRH) services. Comprehensive PAC is considered central to eliminating preventable mortality and other adverse health, economic and social consequences associated with unsafe abortion in settings with restrictive abortion laws.

Even so, evidence suggests limited access to quality PAC services for a majority of women in Nigeria owing mostly to health system weaknesses, lack of training and inadequate PAC equipment and supplies [4]. Stakeholders have long urged for expansion of PAC services with a focus on providing modern and less invasive methods of PAC, such as manual vacuum aspiration (MVA) and misoprostol, along with training of health personnel to provide prompt care for women suffering from complications of unsafe procedures. In addition, there have been calls to improve the capacity of primary level and mid-level health facilities to enable them to provide most emergency PAC treatments for the majority of women requiring these services [5].

This study report provides robust and comparative evidence on the quality of post-abortion care in Nigeria drawing on two of the three components for assessing healthcare quality described by Donabedian [6], namely: (i) structure (facility infrastructure, management and staffing); (ii) process (patient experience); (iii) outcomes (patient satisfaction, return visits and health outcomes). We examined the preparedness of public health facilities to deliver basic and comprehensive PAC services in Nigeria using key signal function indicators for health service delivery including staffing and staff training, supplies and equipment, as well as reproductive health services. We additionally gathered data on patients' experiences through interviews with PAC patients and healthcare providers in selected health facilities, as well as policy makers in Nigeria. Findings from this study will equip stakeholders with critical information to advance the provision of quality post-abortion care by addressing the health system weaknesses and gaps that impede provision of PAC services in Nigeria.

Methods

Study design and population

We conducted a cross-sectional mixed methods study involving health facility assessments and patient-exit surveys. Data were collected across a representative sample of primary, secondary and tertiary public health facilities in Nigeria between November 2018 and November 2019. We also conducted qualitative interviews with purposively selected PAC patients, healthcare providers and policy makers.

Sampling and recruitment

The sampling of facilities was stratified by the different administrative units (states), as well as by facility levels. A master list of all public health facilities in Nigeria was obtained from the Federal Ministry of Health for each state as at July 2018. Sampling was conducted in two stages. The first stage involved a random sample of six states drawn from the list of all 36 states in Nigeria, excluding the Federal Capital Territory (FCT), which is the Capital State. Other states such as Benue, Borno, Plateau, Adamawa, Yobe, and Taraba were excluded due to heightened insecurity as at the time of sampling. The six randomly selected states consisted of Anambra, Bauchi, Cross River, Edo, Kano and Kogi. FCT was purposely added to the final selected list to account for its strategic role in the provision of public health services and to provide a benchmark for comparing quality of PAC services in other randomly sampled states.

The second stage involved sampling of public health facilities drawn from the total number of functional public health facilities capable of providing normal delivery services in the selected seven states. According to a recent study that reported on the quality of PAC in Nigeria, the lowest measure for quality of care (16%) was on contraceptive counseling and provision of information on how to avoid contraceptive method failure, in order to produce stable facility and patient-level estimates, with a 95% confidence level, and the margin of error at 5%. With a proportion of p=0.16, confidence width (Δ) is given by:

$$\Delta = Z\sqrt{(p\ (1-p)/n)}$$

Assuming a confidence interval of 95%, and z=1.96, the above proportion gave a sample size of; n=(1.96/0.05)^2 0.16(1-0.16)=206.5 ≈207. After accounting for a response rate of 93% (which was based on an abortion incidence survey in Kenya in 2012) [8], the sample size was determined as 227 health facilities. All primary, secondary and tertiary level facilities that could conduct deliveries and offer PAC services were included in the state sample size. Psychiatric hospitals, rehabilitation facilities, and other facilities that offer specialized care as well as military and prison hospitals that do not offer services to the general public were excluded from the sample.

In addition, for the client survey, evidence shows that 11% of women were treated for post-abortion complications in Nigeria (PMA 2020 Nigeria). The current study therefore drew a sample of PAC patients from the above facilities, large enough to generate stable estimates of 11% of PAC cases, with 95% confidence and an error margin of 5%. In line with this, a sample of 1,141 (163 (stratum sample) multiplied by 7 (states) was obtained from all the eligible facilities.

For the qualitative component, we conducted 61 in-depth interviews (IDI) with purposely selected PAC patients and 55 providers (e.g. nurse-midwives, medical doctors, obstetricians and gynecologists). We also interviewed 21 policy makers to determine national-level efforts to improve PAC services.

Data collection tools

The study used structured questionnaires for the health facility assessments (PAC signal function) and the patient exit interviews. The signal function survey tool was drawn from Healy and colleagues model [9], which was updated to the Nigerian context with sections covering facility type, staff availability and training, facility operations, equipment and commodities for reproductive health services among others. The patient exit tool was adopted from the frameworks developed to advance person-centered care for reproductive health equity by Sudhinaraset and colleagues[10]. Both tools were programmed in Survey CTO and data collected using tablets.

Qualitative interviews were conducted using a semi-structured interview guides focusing on patients and providers' experiences in seeking and providing PAC services, as well as policy makers' perspectives on quality PAC. Competent and well experienced healthcare providers and research assistants were thoroughly selected and trained to participate in data collection for the health facility assessment and the patient-exit interviews in the sampled facilities.

Data collection process

Health facilities survey (PAC signal function)

This component involved a health facility assessment survey of PAC signal function indicators within the sampled facilities. Trained healthcare providers led the process of data collection by visiting eligible health facilities and administering the PAC signal function questionnaire. Within larger health facilities such as referral hospitals, heads of the obstetrics and gynecology departments or any key obstetrician-gynecologist working in the facility served as the respondents. In lower-level facilities, a nurse, midwife or any healthcare provider in a position to provide information on abortion care offered in that facility was interviewed. The data collection combined both interviews with relevant staff in the selected facilities and real-time observations to confirm availability/functionality of identified PAC equipment.

Patient exit survey

To capture patients' experiences at the point of care, research assistants conducted interviews with all PAC patients treated for abortion-related complications in the selected health facilities. Prior to discharge, PAC healthcare providers introduced the patients to the research assistants stationed at the facilities and only those who consented to participate were interviewed. Data collection first took place within facilities over a period of 30 consecutive days. Due to a low sample coverage attributable to low PAC caseloads and challenges in collaboration with providers, supplemental data collection was conducted over 30 additional days until the desired sample size was achieved. Women were interviewed on their reproductive history, nature of post-abortion care received and perceived quality (including dignity and respect, privacy and confidentiality, and stigma and discrimination).

Qualitative survey

Qualitative interviews were conducted with purposively selected PAC patients, healthcare providers and policy makers. In total, 61 IDIs were conducted with PAC patients across selected states and facility levels. Patients were purposively selected based on characteristics such as marital status, age, level of education, their occupation and location of residence (Table 1). Interviews were conducted in English, Pidgin English, Hausa, and Igbo languages based on the respondent's preference. The interviews aimed to explore the patient's care seeking pathways as well as their experiences and perceptions of PAC services received.

Table 1: PAC patients' socio-demographic characteristics (Qualitative survey)

Characteristics		Frequency: N=61
Age of respondent (years)	14-19	5
	20-29	27
	>30	29
Area of residence	Rural	8
	Urban	53
Employment status	Employed	42
	Unemployed	19
Marital status	Married/cohabiting	49
	Separated/divorced/widowed	2
	Single	10

IDIs with 55 PAC service providers were conducted across the states. Healthcare providers who were interviewed included medical doctors, Community Health Extension Workers (CHEW), nurses and midwives, obstetricians and gynecologists (Table 2). The interviews aimed at exploring healthcare providers' perceptions on PAC services and the quality of care.

Table 2: Health workers' socio-demographic characteristics (Qualitative survey)

Characteristics		Frequency: N=55
Setting	Rural	20
	Urban	35
Cadres	CHEWs	4
	Medical Doctor	28
	Nurse/Midwife	23
Facility level	Primary facilities	8
	Secondary facilities	26
	Tertiary facilities	21

We further interviewed 21 national and state level policy makers who were mainly working within the sexual and reproductive health space and who could speak to the current and planned PAC policies in Nigeria. These included three permanent secretaries from the Federal Ministry of Health, 11 senior officials from the health ministries of various states, and seven country and program managers from international NGOs. Interviews focused on a variety of themes including their notions on PAC guidelines, PAC funding, international PAC guidelines, and their perceptions on quality of PAC in Nigeria, with specific attention to capacity of providers, and PAC equipment and supplies.

The in-depth interviews were supplemented with observations of PAC service provision in the targeted health facilities. These observations took place in waiting rooms, and during the patient's admission process, where the field workers recorded details of interactions between PAC patients and healthcare providers, as well as the facility environment.

Data management and analysis

The data was analyzed using Stata Version 15. Exploratory analysis was done to summarize response rates of PAC patients and health facilities by facility levels and states. The classification of facilities capable of

delivering basic and comprehensive PAC was performed based on key indicators summarized in Table 3. In addition, we summarized proportions of patients who reported various domains of post-abortion quality of care through the lens of patient-provider interactions, facility environment, and post-abortion counselling. Analysis involved scoring individual responses to each question under each domain as either negative (0) or positive (1), followed by summation of scores to generate overall proportions of individuals providing either positive or negative responses.

Table 3: Capacity to provide both basic and comprehensive PAC services

Expected functions for all facilities	
Remove retained products of conception*	
Administer parenteral antibiotics*	
Administer parenteral uterotonics*	
Administer intravenous fluids†	
Provide at least one modern, short-acting family planning method at time of survey†	
Capacity to provide basic PAC **Functions expected of primary facilities**	**Capacity to provide comprehensive PAC** **Functions expected of referral facilities**
Has vehicle with fuel to transport patients needing referral† Has staff capable of undertaking normal deliveries on duty or who are on call for 24 hours per day, 7 days per week	Administer a blood transfusion* Undertake major abdominal surgery (proxied by provision of caesarean section) * Provided at least one long-acting, reversible family planning method† or permanent method at time of survey Has staff capable of doing caesarean sections on duty or who are on call 24 hours per day, 7 days per week‡

*Assessed on the basis of facility reporting if they had ever provided the service
†Assessed on the basis of the availability and validity or functionality of a given item (drug or equipment) at the time of survey
‡We assumed that staff who were capable of doing caesarean sections were also capable of doing normal deliveries, and therefore did not include this factor in comprehensive capability

Qualitative interviews were transcribed and translated into English (where necessary). Researchers then developed a code-book from the interview guides and also by reviewing a few interviews. The code-book was applied to code a set of transcripts to ensure accuracy and capture missing codes. The comprehensive code-book was then applied to all the transcripts using Dedoose and analyzed through the thematic framework approach. Key emerging themes were identified and discussed with a focus on providers' perceptions of their capacity, and that of health facilities to provide PAC services, including reasons for not providing PAC, their interactions with PAC patients and their coping strategies. We equally focused on patients' experiences seeking PAC including decision-making processes, access to services, and perceptions of the quality of care received.

Ethical considerations

The study protocol was reviewed and approved by the National Health Research Ethics Committee of Nigeria (NHREC) (protocol ID: NHREC/01/012007-20/08/2018). The study also obtained authorization letters from the respective state health ministries. Individual written, informed consents were obtained from each participant prior to inclusion in the study. For adolescents below 18 years, we did not seek parental consent as they were qualified as emancipated minors. Interviews were conducted in private locations, convenient for the respondents. Anonymity, confidentiality and privacy of respondents was guaranteed by the exclusion of all unique identifiers of the patients and limiting the data access to the research team.

Findings

Preparedness of public health facilities to deliver PAC

Distribution of health facilities and response rate

All 227 sampled facilities in all the seven states in Nigeria responded to the PAC service assessment (Table 4). Overall, more than half of the total facilities were secondary level (54.6%), while primary healthcare facilities comprised 40.5% of the total.

Table 4: Distribution of health facilities in the survey

States	Primary	Secondary	Tertiary	Total N (%)
Anambra	10	10	2	22
Bauchi	10	18	3	31
Cross River	11	18	1	30
Edo	11	16	1	28
FCT	8	5	2	15
Kano	12	15	1	28
Kogi	30	42	1	73
Total n (%)	92 (40.5)	124 (54.6)	11 (4.9)	227 (100)

Staffing in health facilities and operating hours

In general, more than half (59.0%) of all the facilities had midwives as the key staff present every day for 24 hours. Only one in four (27.2%) primary facilities had midwives, compared to 79.8% of secondary and 90.9% of tertiary facilities. Obstetricians and gynecologists were present in all tertiary facilities, while only one in five (21.8%) secondary facilities had at least one obstetrician/gynecologist every day. More than half of the primary facilities (54.4%) had Community Health Extension Workers (CHEW) present over 24 hours, compared to secondary (30.7%) and tertiary (18.2%) facilities (Table 5).

Table 5: Availability and distribution of medical staff by facility level and cadre

	Present daily, n (%)			
Facility levels	**#OB/GYN**	**Doctors (MBBS)**	**Midwives**	**CHEWs**
Primary (N=92)	5 (5.4)	7 (7.6)	25 (27.2)	50 (54.4)
Secondary (N=124)	27 (21.8)	79 (63.7)	99 (79.8)	38 (30.7)
Tertiary (N=11)	11 (100)	11 (100)	10 (90.9)	2 (18.2)
Total (N=227)	43 (18.9)	97 (42.7)	134 (59.0)	90 (39.7)

Present for 24/7, as at the time of study; #OB/GYN: obstetrician/gynecologists

The deployment of staff and facility operation times have also been elaborated in the qualitative interviews. Most primary health facilities were managed by CHEWs which has implications on the quality of care provided given their limited training. The CHEWs usually refer patients in need of advanced medical care to the medical officers (MBBSs), who are mainly stationed at the headquarters or referral-level facilities 24

hours daily, or those on rotation at the lower-level facilities or who are on call when a case presents. This was explained by one participant in Anambra:

> *…you can come to primary healthcare and find two CHEWs and they may be the only staff there, they are the ones heading most of these facilities. Definitely, you don't have doctors at all heading PHCs, the best you can do is that they can have a doctor at the local government headquarters and once in a while he [doctor] will just visit. That is why I said that staffing in both quality and quantity is a big issue and is a big issue in this state* (Senior MOH official, Anambra)

Although participants reported they "don't have specific officers that are designated for PAC because of the paucity of manpower.", findings show that doctors appear to be the main staff who offer PAC services with support from nurses/midwives and CHEWs. As highlighted in the quote below, doctors first examine the patients, perform the uterine evacuation using MVA or Medical Abortion (MA) and then handover the patients to nurses for monitoring:

> *It is [a] doctors' procedure [PAC]. Once the woman is here, we will call the doctor on call to come and examine the woman, (...), then after that we can go on with the MVA. After the MVA, it is now the responsibility of the nurse to take care of the woman, clean up the woman, monitor her for one hour at the first stage labor room* (Nurse, Tertiary facility, Anambra)

This situation, according to some participants, can delay access to care and derail efforts towards task shifting and realization of its benefits. There are reported instances where nurses and CHEWs had to wait for the doctor's instructions before they could administer any treatment, even when they had the necessary skills. This situation is aggravated by the limited number of trained providers as well as the working in shifts. Additionally, most doctors perform numerous other roles that may keep them busy or absent when a PAC patient needs attention.

> *We sweep, we take care of women in labor, we are in-charge of immunization services, we see to any campaign that is going on, we will start maternal and child health week, we take care of patients, render family planning services, conduct delivery, give health talk. We do everything* (Nurse, primary facility, Anambra)

When considering operating hours and days, we found that majority of facilities (83.3%) are open 7 days a week for 24 hours. All tertiary facilities were open throughout, while 88.7% of secondary and 73.9% of primary-level facilities were open all the time. The remaining secondary level facilities were either open at least 5 days every week for less than 24 hours and most of these were cottage hospitals or clinics, or facilities within special settings. Also noteworthy is the finding that only half of the health facilities (54.6%) could provide contraceptives 24 hours daily. Tertiary facilities accounted for the lowest (36.6%) number of facilities that could offer contraceptives under similar conditions, in comparison to secondary (53.2%) and primary (58.7%) facilities (Table 6).

Table 6: Operating hours for general services and contraceptive services

Facility level	Primary N=92 (%)	Secondary N=124 (%)	Tertiary N=11 (%)	Total N=227 (%)
Operational days and time				
7 days & 24 hours	68 (73.9)	110 (88.7)	11 (100)	189 (83.3)
5 days & less 24 hours	12 (13.0)	5 (4.0)	0	17 (7.5)
Others	12 (13.0)	9 (7.3)	0	21 (9.3)
Days and time when contraceptive services are provided				
7 days & 24 hours	54 (58.7)	66 (53.2)	4 (36.4)	124 (54.6)
5 days & less 24 hours	11 (12.0)	15 (12.1)	3 (27.3)	29 (12.8)
Others	27 (29.4)	43 (34.7)	4 (36.4)	74 (32.6)

Staff training on comprehensive PAC

In general, one in three facilities (34.8%) had staff trained on comprehensive PAC services. Across facility levels, primary facilities had the lowest proportion of trained providers on PAC (19.6%) followed by secondary (42.7%) and tertiary facilities (72.7%). Majority of trained providers within facilities were nurses/midwives (31.3%), compared to doctors and CHEWs (15.0% and 3.5% respectively) (Table 7). Non-governmental organizations (NGOs) provided support in training healthcare providers on PAC with 22.5% of facilities reporting NGOs trained their staff. Majority of NGO-trained staff were in secondary and tertiary-level facilities.

Table 7: Proportion of health facilities with staff trained for PAC

Construct	Primary N=92 (%)	Secondary N=124 (%)	Tertiary N=11 (%)	Total N=227 (%)
Facility with staff trained on comprehensive PAC	18 (19.6)	53 (42.7)	8 (72.7)	79 (34.8)
Doctors (MBBS) and Clinical Officers	5 (5.4)	23 (18.6)	6 (54.6)	34 (15.0)
Nurses and midwives	16 (17.4)	48 (38.7)	7 (63.6)	71 (31.3)
CHEWs	6 (6.5)	2 (1.6)	0 (0)	8 (3.5)
Facilities with staff trained on comprehensive PAC by NGOs	13 (14.1)	34 (27.4)	40 (36.4)	51 (22.5)

Across the states, most health facilities in FCT (87%) and Kano (75%) had staff trained on PAC, while the remaining states had less than half of their healthcare providers trained, with the lowest proportion (9%) reported in Anambra state (Figure 1).

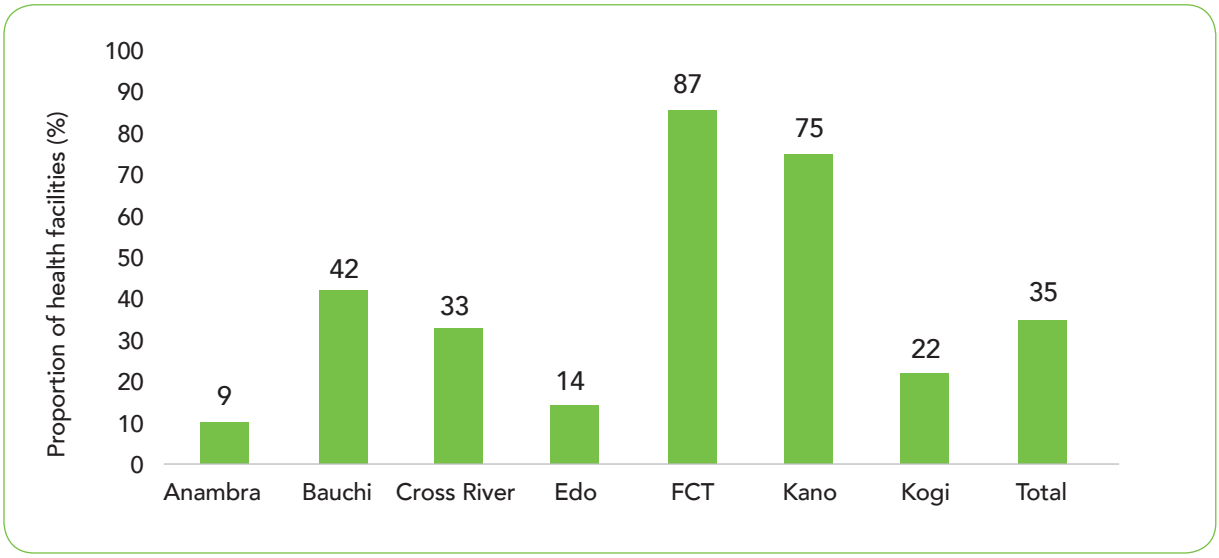


Figure 1: Health facilities with staff trained on PAC by state

Availability of PAC equipment and supplies

Regarding essential PAC supplies and equipment, about half of all facilities had specific suction tubes (50.2%), a vacuum aspirator kit (47.1%), or a manual vacuum aspiration pack on hand (49.8%) within the PAC treatment room. Primary level facilities had the least equipped PAC rooms with only 20.7% having suction tubes, 12.0% with a vacuum aspirator kit or syringes and 18.5% with MVA pack. Overall,

slightly more than half of the health facilities had a functional operating theatre or MVA room (50.7%) with 71% of secondary facilities reporting having functional theatres or MVA rooms. More than half of the facilities (62.6 %) had a backup generator in case of power blackouts, with a greater proportion of secondary (79.8%) and tertiary (81.8%) facilities having backup generators. Only 15.4% of the facilities had a functional landline or mobile phone for calls in case of emergency (Table 8).

Table 8: Equipment and supplies for PAC in facilities (reported available)

Hospital equipment (N=227)	Primary N=92 n (%)	Secondary N=124 n (%)	Tertiary N=11 n (%)	Total N=227 n (%)
Instruments, equipment, and supplies needed for PAC				
Needles and syringes	81 (88.0)	116 (93.6)	9 (81.8)	206 (90.8)
Disposable latex gloves (surgical)	73 (79.4)	115 (92.7)	9 (81.8)	197 (86.8)
Hand-washing soap/liquid soap	74 (80.4)	109 (87.9)	9 (81.8)	192 (84.6)
Manual vacuum aspiration pack	17 (18.5)	87 (70.2)	9 (81.8)	113 (49.8)
Vaginal speculums (Sims, Cusco, Auvard, Graves)	29 (31.5)	106 (85.5)	9 (81.8)	144 (63.4)
Examination light/ Light source (flashlight acceptable)	46 (50.0)	99 (79.8)	9 (81.8)	154 (67.8)
Sponge (ring) forceps	27 (29.4)	99 (79.8)	8 (72.7)	134 (59.0)
Vorsellum/Tenaculum	12 (13.0)	84 (67.7)	7 (63.6)	103 (45.4)
The health facility or the treatment room should have the following furniture and equipment				
Examination/Procedure bed	66 (71.7)	111 (89.5)	9 (81.8)	186 (81.9)
Private room for examining /counselling women and performing reproductive health procedures	75 (81.52)	116 (93.6)	8 (72.7)	199 (87.7)
Clean water source	59 (64.1)	100 (80.7)	8 (72.7)	167 (73.6)
Electric autoclave/non-electric autoclave/Electric dry heat sterilizer **	29 (31.5)	100 (80.7)	9 (81.8)	138 (60.8)
Functional landline/Mobile phone supported by the facility	8 (8.7)	25 (20.7)	2 (18.2)	35 (15.4)
Electricity (e.g. electricity grid, generator, solar, or other)	46 (50.0)	100 (80.7)	9 (81.8)	155 (68.3)
Backup generator (in case of power outage)	34 (37.0)	99 (79.8)	9 (81.8)	142 (62.6)
Functional toilet (latrine) on premises	56 (60.9)	113 (91.1)	9 (81.8)	178 (78.4)
Stethoscope	84 (91.3)	118 (95.2)	9 (81.8)	211 (93.0)
Blood pressure machines (Digital or manual sphygmomanometer)	82 (89.13)	118 (95.2)	9 (81.8)	209 (92.1)
IV fluid giving set (adult)	75 (81.5)	116 (93.6)	9 (81.8)	200 (88.1)
Ambu (ventilatory) bag	33 (35.9)	99 (79.8)	8 (72.7)	140 (61.7)
Suction catheter, 10, 12 Ch	19 (20.7)	86 (69.4)	9 (81.8)	114 (50.2)
Suction aspirator operated by foot or electronically	11 (12.0)	83 (67.0)	9 (81.8)	103 (45.4)
Vacuum aspirator kit/syringes	11 (12.0)	87 (70.2)	9 (81.8)	107 (47.1)
Functional operating theatre/MVA room	18 (19.6)	88 (71.0)	9 (81.8)	115 (50.7)

Most health facilities had all the essential medicines and commodities to manage post-abortion complications. A great proportion of the health facilities had antibiotics (88.1%), uterotonics (81.1%), anticonvulsants (73.1%) and anesthetics (70.9%) available. However, a significant proportion of tertiary-level facilities (27.3%) did not have antibiotics. Moreover about half (48.9%) and 22.8% of the primary level facilities lacked anesthetics and uterotonics respectively (Table 9).

Table 9: Facilities with essential medicines and commodities for PAC

Medicines and commodities available	Primary N=92 (%)	Secondary N=124 (%)	Tertiary N=11 (%)	Total N=227 (%)
Drugs				
Antibiotics	80 (87.0)	112 (90.3)	8 (72.7)	200 (88.1)
Uterotonics*	71 (77.2)	102 (82.3)	11 (100)	184 (81.1)
Anticonvulsants**	57 (62.0)	100 (80.7)	9 (81.8)	166 (73.1)
Antiretrovirals	30 (33.0)	80 (64.5)	9 (81.8)	199 (52.4)
Anesthetics***	47 (51.1)	103 (83.1)	11 (100)	161 (70.9)
Non-pharmaceuticals				
IV fluids****	57 (62.0)	102 (82.3)	10 (90.9)	169(74.5)
Colloids/Plasma expanders	50 (54.4)	94 (75.8)	10 (90.9)	154 (67.8)

*Mifepristone & misoprostol combination, Misoprostol alone, other abortifacient, injectable uterotonic,
**Magnesium sulphate injection, other anticonvulsants
***Halothane, Ketamine, Lignocaine/Lidocaine 2% or 1%
****Dextrose 5%, 10%, 50%, Dextran 70%, Glucose Infusion 5%

About one in every four facilities (22.9%) had received medical equipment and supplies such as MVA kits, family planning products and abortifacient drugs donated by NGOs to support the provision of PAC services. Tertiary facilities were the main beneficiaries with more than half (54.6%) of them receiving relevant equipment from the NGOs. (Table 10)

Table 10: PAC supplies donated by NGOs

Construct	Primary N=92 (%)	Secondary N=124 (%)	Tertiary N=11 (%)	Total N=227 (%)
Facilities receiving equipment/ commodities from NGOs	16(17.4)	30(24.2)	6(54.6)	52(22.9)
Manual Vacuum Aspiration Kit	2(2.2)	14(11.3)	4(36.4)	20(8.8)
Delivery set & beds	1(1.1)	1(0.8)	0	2(0.9)
Family planning supplies#	4(4.4)	7(5.7)	1(9.1)	12(5.3)
Abortifacient	6(6.5)	4(3.2)	1(9.1)	11(4.9)
Other##	14(15.2)	13(10.5)	3(27.3)	30(13.2)
Facilities with staff trained on comprehensive PAC by NGO's	13(14.1)	34(27.4)	4(36.4)	51(22.5)

#IUCD, Implanon, Emergency contraceptive pills ##Examination lamps, dopplers autoclave, speculum, forceps, drugs, cytotec

Evacuation of retained products of conception (ERPC) by facility levels

Overall, a greater proportion of all the health facilities (70.9%) could provide medical PAC for first trimester pregnancies, while slightly more than half (54.6%) were capable of delivering the same for pregnancies above 12 weeks. The lowest capacity was recorded in primary facilities with 53.3% and 33.7% capable of offering medical PAC for first and second trimester pregnancies respectively. As for surgical PAC procedures (i.e., MVA), only 42.3% and 33.5% of all facilities could perform this procedure for first and second trimester pregnancies respectively. Slightly more than half of the secondary facilities could perform these procedures with 66.1% for medical and 51.6% for surgical PAC, in pregnancies above 12 weeks (Figure 2).

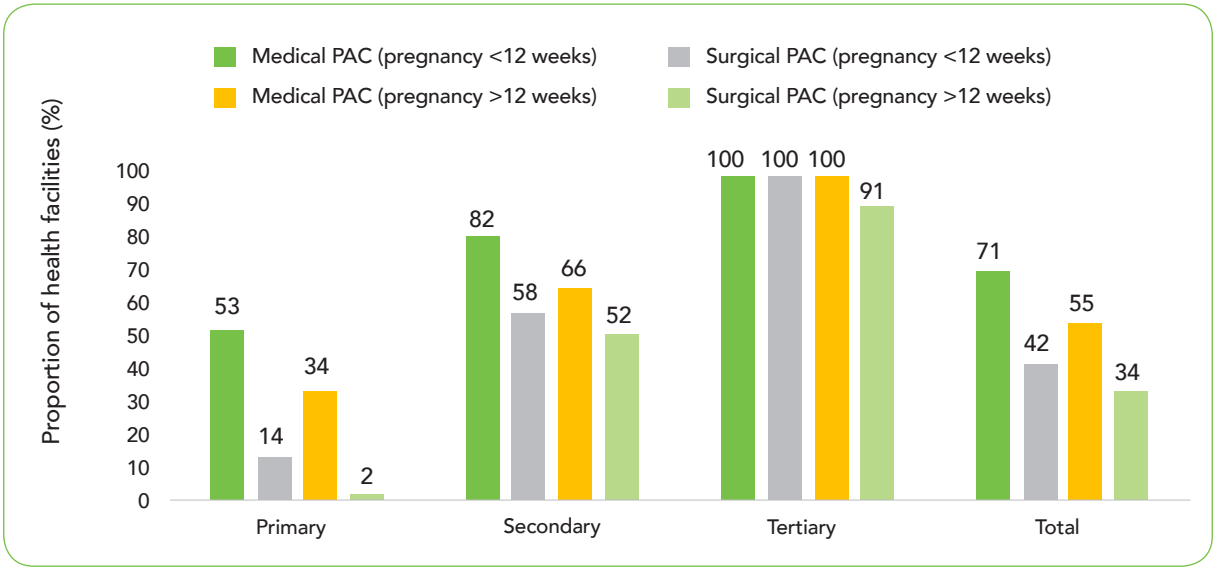


Figure 2: **Proportion of facilities providing surgical and medical PAC for 1st and 2nd trimester pregnancies**

Qualitative findings also illustrated gaps in the providers' training, as most providers had not received training on comprehensive PAC. Rather, a vast majority had only been sensitized on a few components including value clarification, family planning and sexually transmitted infections, while some were learning from experienced colleagues, as explained by one provider in FCT.

> *The training per se, for a while now we have not had official training and it will be nice to have it, most of the training is when a younger staff (member) works with the experienced ones, there she learns but you know if you are talking about the training for PAC we have not done any training on that* (Nurse, tertiary facility, FCT)

This level of training according to providers is not sufficient to offer quality PAC services. Some providers explained that they still manage to offer "skeletal" PAC services to patients with "non-complicated" cases mainly drawing from their pre-service training, or skills gained while working with higher level and trained staff. Instead, other providers reported that they prefer to refer patients to trained colleagues or referral-level facilities due to the unpredictability surrounding abortion complications.

> *The doctor is not always around, when such cases come, we just refer because I have not been trained. We are three here and none of us was trained. We refer because it is a critical situation. Sometimes the woman can bleed, so I don't want to start something I can't finish* (Nurse, secondary facility, Edo)

Participants from facilities with trained staff raised concerns regarding the regularity of training. A participant from one of the teaching hospitals in Anambra complained about them being left out of refresher training sessions. Yet they constantly need to update their skills to handle the difficult cases that are normally referred to them on the assumption that they possess the necessary capabilities.

Regarding PAC equipment and commodities, most primary facilities reported lack of sufficient (and functional) equipment to offer PAC services. Indeed, participants, including some from referral-level facilities, commented on the absence of MVA kits or the sorry state of those available. This situation was blamed on lack of supplies or delays in restocking. Moreover, participants from referral level facilities underscored the limited number of MVA kits, which sometimes led to delays in service delivery in situations where several PAC patients required attention at the same time.

> *Until recently we …like over a month ago the old packs, they were (spoilt), apparatus was spoilt so we just recently acquired new ones* (Medical Officer, primary facility, Kogi, Nigeria)

You understand, these are the poverty, you understand, and then inadequate MVA kits equipment. We have them but not adequate as compared to population (Nurse, tertiary facility, Bauchi)

Even though the training of providers and supply of equipment is the responsibility of the government, policy makers and service providers suggested that the NGOs are main players in delivery of PAC training and the equipment in public health facilities. According to participants, NGOs support public health facilities due to inadequacy of the government resources. Policy makers explained that government funds were mainly used for salaries with very little left to support other programs, hence majority rely on donor funding (including NGOs) to supplement their resources. This is narrated by a policy maker from Anambra:

Well, like we all know, most states in the federation have funding constraints and therefore, donor funding is quite significant especially in terms of specific programs. Government funds are mainly for salary payment, construction of buildings and infrastructure and maybe equipping them, but in terms of programs running, you find out that the donors play a kind of leading roles in these programs. You know in programming, you have to do trainings, most of the training we do are done by donor agencies (Senior MOH Official, Anambra)

Availability of contraceptive services after PAC

About 77.5% (176 in total) of all the health facilities were capable of providing contraceptives after PAC. All primary level facilities among these 176 health facilities could provide at least one short acting contraceptive method, while a significant proportion of them (67.2%) were capable of providing at least one Long-acting reversible contraceptive (LARC) method. As for the secondary and tertiary facilities among the 176 health facilities, nearly all could provide short and Long-acting contraceptives following PAC. Regarding permanent methods, only 43.6% of secondary facilities could offer it, while tertiary facilities had a greater capacity (90.9 %) (Figure 3).

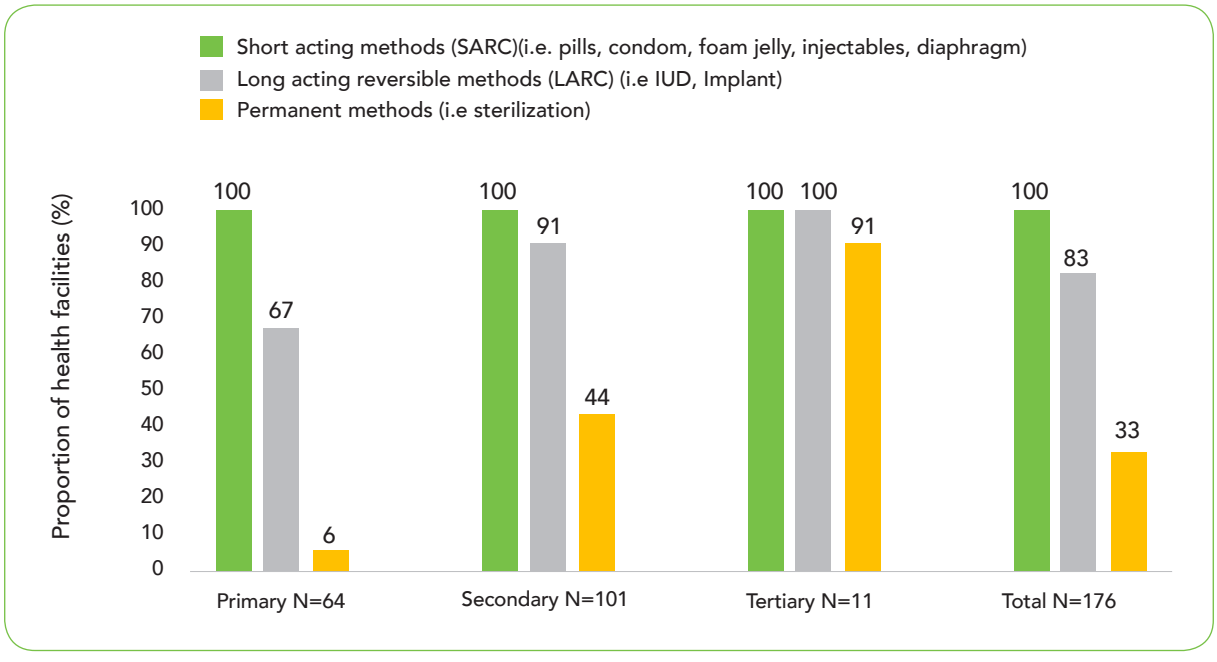


Figure 3: Contraceptives available after PAC

Healthcare providers described the range of PAC counselling services they offer, which included educating PAC clients on sex, sexually transmitted infections, family planning methods, providing them with the contraceptive options and letting patients make an informed choice. In addition, providers also explained that they often provide emotional and psychological counselling to support women who experience

trauma following a pregnancy loss. All PAC patients were generally required to undergo the counselling procedure, which was largely conducted by nurses within the family planning unit in the case of larger health facilities (such as secondary and tertiary level facilities) whereas in smaller primary facilities, this was done within the same location as the other PAC services.

Interviews with healthcare providers highlighted the critical role played by availing family planning counselling to PAC patients. As explained by one of the providers, when PAC patients are properly counseled and take up contraceptives, this may potentially provide some reprieve to the women who need time before conceiving again, and also prevent further unintended pregnancies and unsafe abortions:

> *Before the patient leaves hospital, she must be adequately counseled on how to prevent it [abortion] from re-occurring. We educate them on various family planning methods, give the sex education and allow them to choose which family planning method they want to adopt in a particular situation* (Clinician, primary health facility, Cross River)

However, providers reported some instances where PAC patients exit the health facilities without receiving post-abortion counselling, reflecting a significant missed opportunity to address their emotional, psychological and reproductive health needs including the need for contraceptives. Such cases occurred when the nurse-in-charge of counselling was off-duty, or if the facility was experiencing stock-outs, in which case one health provider reported that they *"still counsel them on that [family planning] and direct them to the nearest place to access the services".* Further, some patients who do not express any preference for a contraceptive at discharge are allowed to come back later (at times with their partners) to get the service. In a few cases, some healthcare providers reported not giving post-abortion counselling to adolescents and unmarried women not because of hospital policies, but rather *"based on your [their] own judgment", and in that case they would "use the parents as contraceptives"* as illustrated below:

> *We tell the parents to watch out now. In fact I remember one that I told please marry her, marry her out even if it is now and watch over her just see, anytime she's going out, match her with one of her brothers to go and call her, umm....., We use their parents as contraceptive [Laughter]* (Senior obstetrician & gynecologist, tertiary facility, Bauchi)

Overall capability to provide post-abortion care

Capacity to provide basic PAC among primary level facilities

Primary level facilities had very limited capacity to provide all the essential elements of PAC, which include: treatment of complications, family planning counselling and contraceptive services, availability of vehicle with fuel to transport patients needing referral, and staff capable of conducting deliveries. Just 7.6% of facilities were capable of delivering the whole package of basic PAC service indicators, with the most facilities found in FCT (25%), Kano (16.7%) and Bauchi (10%). Surprisingly, none of the primary facilities in Anambra and Cross River could deliver any service for all basic PAC indicators (Figure 4).

Excluding availability of staff capable of conducting deliveries did not have any influence on facility capabilities to provide basic PAC as only 7.6% of the primary level facilities were capable of delivering the whole package of basic PAC services. When using a less restrictive approach (exclusion of staff availability, referral capacity and availability of short-acting family planning methods), only 9.3% of facilities could deliver all the other basic PAC services. In general, there was no change in basic PAC capacities across the states except in Kogi (moved from 3.3% to 6.7%).

Not considering the availability of a vehicle with fuel for referrals created the greatest change in basic PAC capacities, with one in five (20.6%) facilities now capable of delivering all basic PAC service indicators. Under such criteria, FCT had the greatest capabilities 62.5%, followed by Anambra, which moved from 0% to 50%. Nonetheless, Cross River remained with no facility capable of delivering basic PAC (Figure 4).

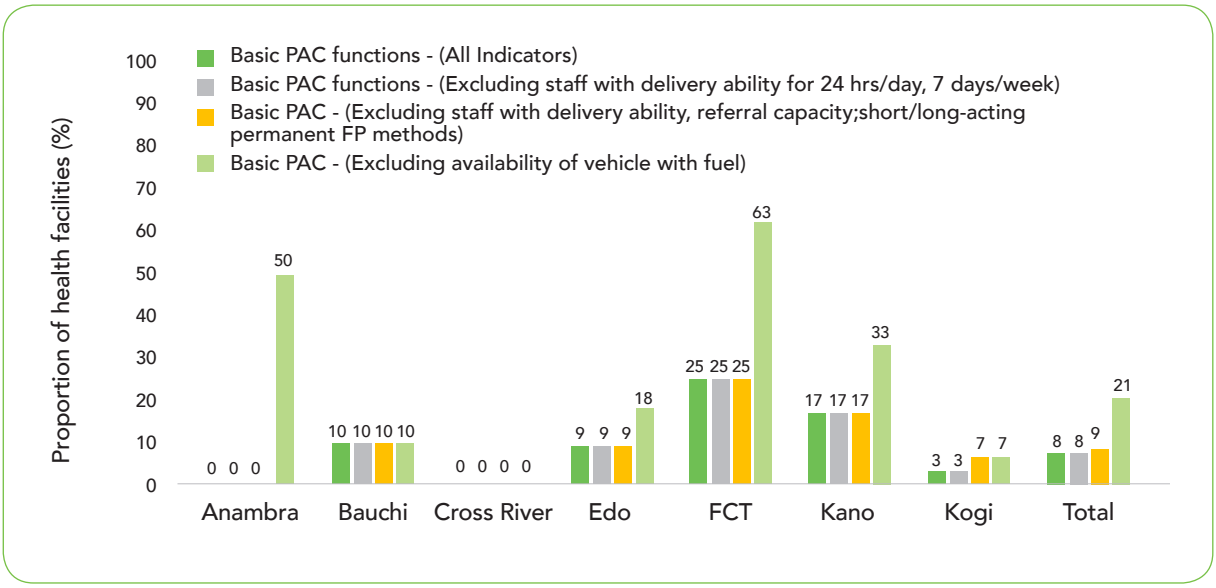


Figure 4: **Proportion of primary level facilities with capacity for basic PAC provision**

Availability of specific PAC services

Among the primary level facilities, over 83.7% were able to remove retained products of conception. Majority of the facilities (88%) could administer parenteral antibiotics, parenteral uterotonics (83.7%) and intravenous fluids (91.3%). About 70% of the facilities provided at least one modern, short-acting contraceptive method. Notably just 26.1% of the facilities had staff who could undertake deliveries. Critically only 8.7% had means of providing transport for referral patients. Nonetheless, it is evident that this did not have an influence on the provision of the other services mentioned above (Figure 5).

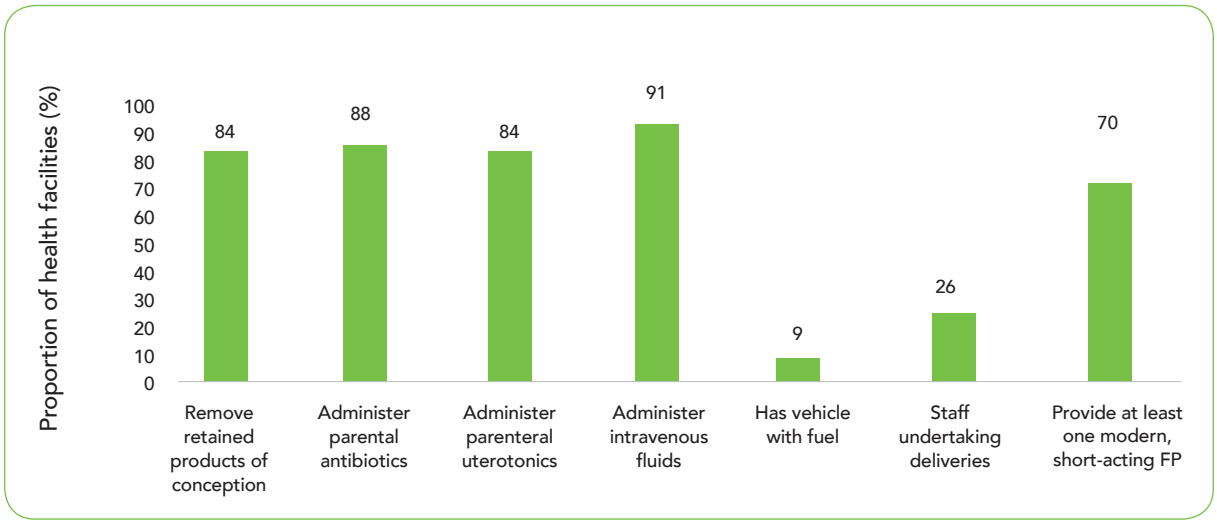


Figure 5: **Proportion of primary level facilities with specific PAC services**

Comprehensive post-abortion care in referral level facilities

Only three in ten referral facilities (29.6%) could provide all comprehensive PAC services. Majority of referral facilities with all comprehensive PAC capabilities were found in FCT (57.1%) and in Bauchi (42.9%). The lowest number of referral facilities with comprehensive PAC capacities were reported in Cross River (15.8%) and Edo (17.7%) states.

Using less restrictive criteria for evaluating ability to deliver comprehensive PAC services in referral facilities (i.e., excluding staff capable of conducting caesarean section and availability of short and long-acting contraceptives, or permanent family planning methods) had an influence on the proportion of facilities capable of providing comprehensive PAC services across the states except in Anambra, FCT and Kogi (Figure 6). Nonetheless, after excluding the requirement to have a fueled vehicle at the facility, 45.9% of referral facilities in Nigeria could deliver comprehensive PAC services, with the greatest increase in capacity observed in FCT (100%).

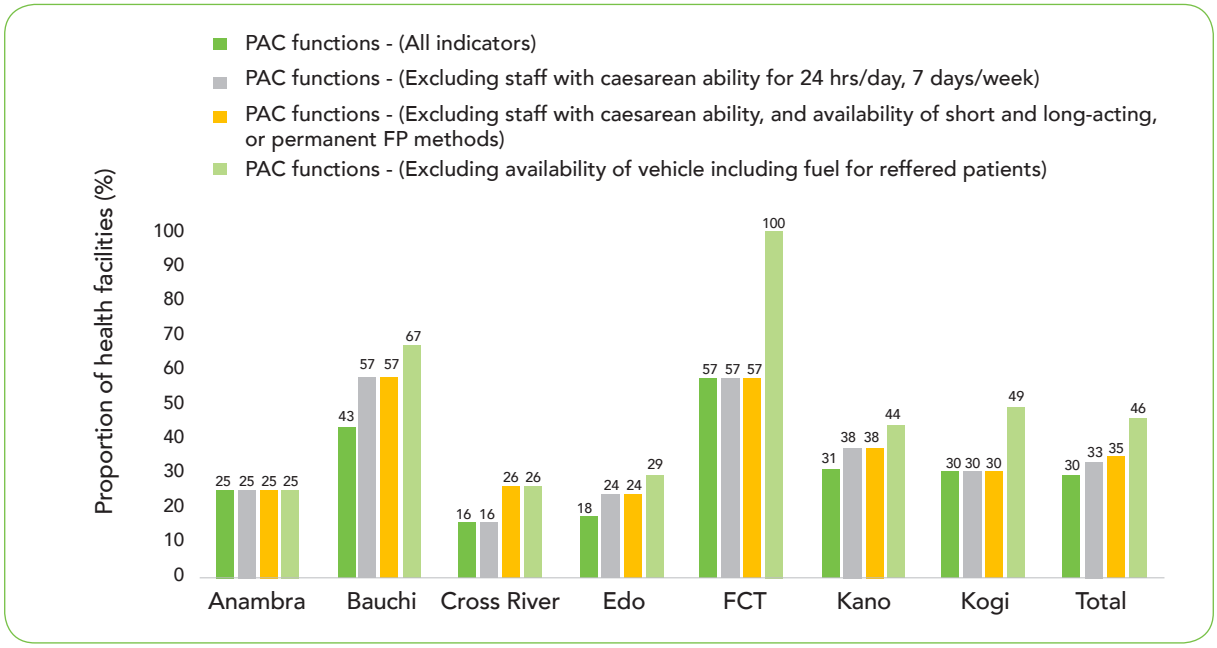


Figure 6: **Availability of PAC services in referral facilities**

Provision of specific PAC Services

Turning to specific PAC services provided within the referral facilities, nearly all facilities were able to administer intravenous fluids (97.8%), administer parenteral antibiotics (95.6%), remove retained products of conception (92.6%), and administer parenteral uterotonics (91.6%). Most facilities could provide modern short/long-acting FP methods (91.7%) and had staff capable of carrying out caesarean sections (80.7%). Slightly more than half (54.1%) could undertake a major abdominal surgery. However, less than half (48.2%) were able to facilitate transport of patients needing referral (Figure 7).

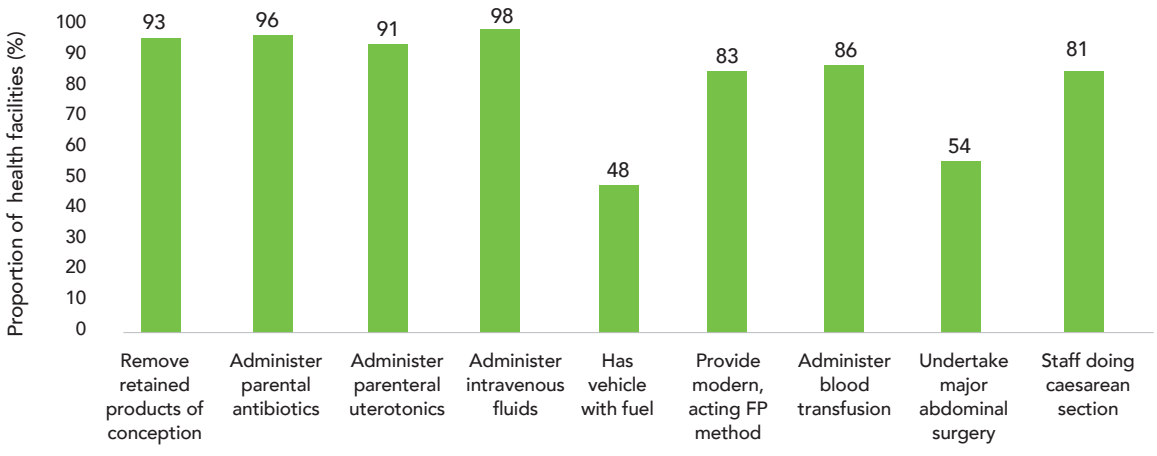


Figure 7: **Proportion of referral level facilities with specific PAC services**

Reasons for lack of PAC services

The lack of trained providers, equipment and commodities or supplies were cited among the most common reasons for the inadequate provision of basic and comprehensive PAC services in public health facilities. For instance, the main reason for not offering surgical procedures to manage abortion complications was due to the lack of trained providers (63.3%), lack of equipment (56.7%) and absence of commodities and supplies (48%). Surprisingly, some facilities that were not able to administer IV fluids indicated that it was against the hospital policies (Figure 8).

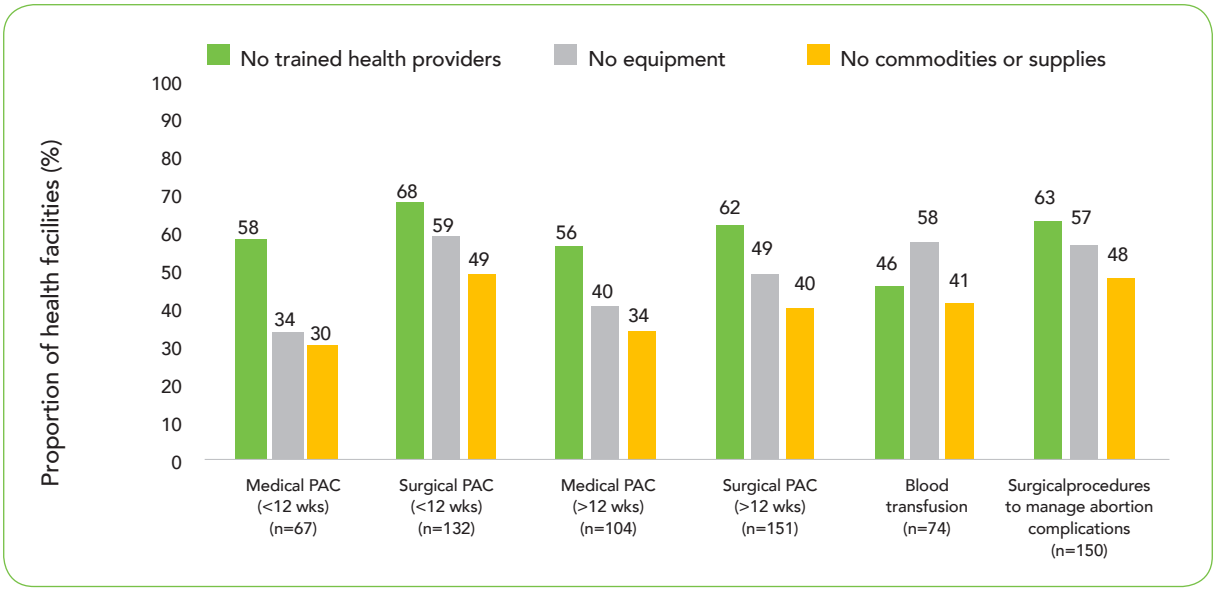


Figure 8: **Main reasons for non-provision of medical/surgical PAC, blood transfusion and surgical procedures for PAC**

Referral of post-abortion care patients

In-depth interviews revealed the varying circumstances under which healthcare providers (mainly those from primary level facilities) initiated referrals of PAC patients. Providers suggested that the severity of the patient's clinical complications played a key role in the decision to refer, in addition to the lack of sufficient resources (such as drugs, supplies (e.g., blood transfusion), and equipment) as well as absence of staff trained to manage clinical conditions, as explained by one health provider:

> *We refer our patients to another higher facility if the patient's complication is severe. For example, where the woman is still having heavy bleeding, or …., becoming complicated and is getting weaker and weaker, we refer her (...) so that blood can easily be transfused to the patients after evaluation which we cannot do here because we don't have the equipment to help us do so here. So we don't even (have) the place to keep such patients because the equipment to use in taking care of such severe cases. In fact we don't (have) reasons for handling such severe cases, we refer them away* (Nurse, referral facility, Anambra)

In a few cases, when providers discovered or suspected an undiagnosed medical condition such as infections and cancer that may pose a serious health risk to the patient, healthcare providers indicated that they would initiate referral for more advanced care. Though rarely reported, some staff explained that during their night shifts when doctors are unavailable and the patient's condition is dire, healthcare providers would refer patients without even "touching them" to a reliable higher level health facility as reported by the provider below:

Yes, I told you that sometimes during the night duty, you will call the doctor but they will refuse to come, if the case is so serious that the person cannot wait till tomorrow, that the bleeding is much, I will tell you, "madam, where is your husband, oga (boss) carry this woman to water side, it is closer, I will not refer the person to any other place except water side or Boromi hospital (where) they work 24/7. (Nurse, referral facility, Anambra)

The destination of referral was mostly dictated by proximity to the nearest higher level facility and any pre-existing referral arrangements with such facilities. Other providers also reported that they would refer based on the knowledge that certain facilities are operational for 24 hours, 7 days a week.

Patients' experiences of PAC services

Patients' socio-demographic characteristics

A total of 1,247 patients treated for abortion-related complications in the 227 health facilities across the seven states were interviewed at exit. More than half (55%) of these respondents were aged below 30 years. The respondents aged 25-29 years accounted for 26%, those 20-24 years old were 19%, while those 14-19 years were 10%. There were more teenagers in Cross River (12%), while the majority of those aged 35 and above (39%) were in Anambra (Figure 9).

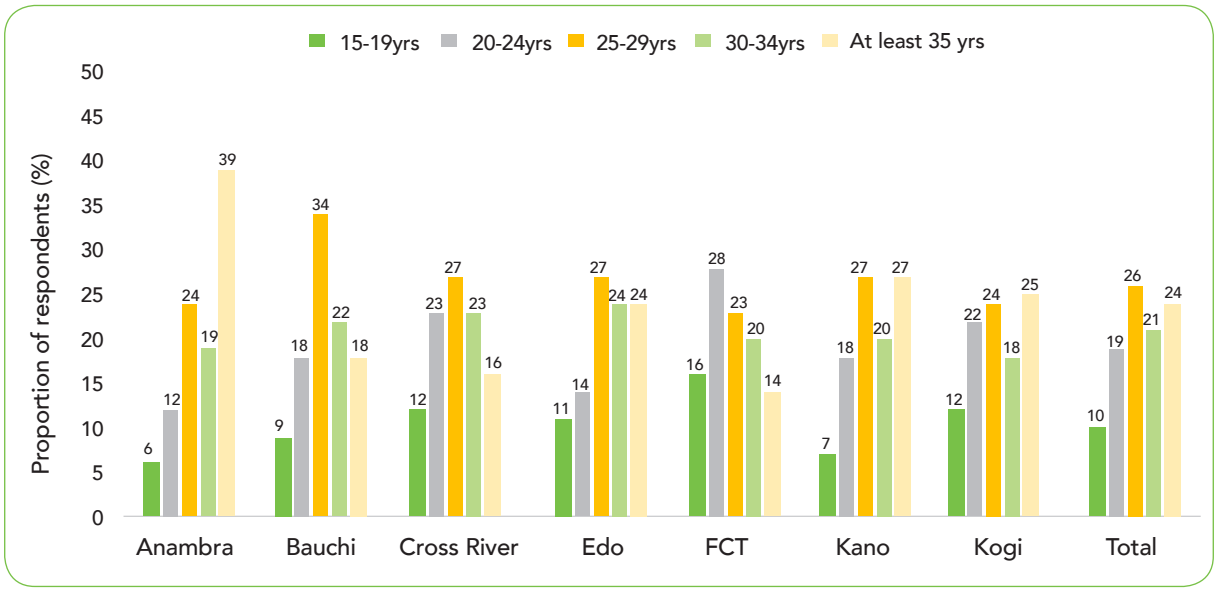


Figure 9: PAC patients' distribution by age categories

The sociodemographic characteristics of the exit interview respondents are summarized in Table 11. Though more than half (54.5%) of the respondents resided in urban areas, the majority of patients who visited primary level facilities (61%) were from rural areas, while most (77%) of those who visited tertiary facilities were resident in urban areas. About four in five (84%) of respondents had attended school, with 45.8% and 36.1% of them having completed secondary and tertiary education respectively. More than half (57.5%) of the respondents were unemployed. Among the employed, the majority (68%) were earning over NGN 15,000 (≈ USD 40) monthly, while about one in ten (9.5%) had a monthly income of NGN 5,000 (≈ USD 14) and below.

Most of the respondents (80%) were married/cohabiting, 18% were single, while only 2.1% were separated/divorced/widowed. About half (45.1%) of the respondents were Muslims, while Protestants and other Christians accounted for 11% and 25.5% of the respondents respectively.

Table 11: Patients' socio-demographic characteristics

Characteristic	Primary N=116 n (%)	Secondary N=880 n (%)	Tertiary N=251 n (%)	Total N=1247 n (%)
Age of respondents (years)				
15-19	14 (12.1)	92 (10.5)	19 (7.6)	125 (10.0)
20-24	22 (19.0)	175 (19.9)	44 (17.5)	241 (19.3)
25-29	34 (29.3)	221 (25.1)	74 (29.5)	329 (26.4)
30-34	20 (17.2)	185 (21.0)	54 (21.5)	259 (20.8)
Above 35	26 (22.4)	207 (23.5)	60 (23.9)	293 (23.5)
Area of residence				
Rural	71 (61.2)	441 (50.1)	56 (22.3)	568 (45.5)
Urban	45 (38.8)	439 (49.9)	195 (77.7)	679 (54.5)
Education				
Ever attended school (yes)	91 (78.5)	746 (84.8)	215 (86.0)	1052 (84.4)
Highest level of education*				
Primary	14 (15.4)	121 (16.2)	25 (11.6)	160 (15.2)
Secondary	53 (58.2)	355 (47.6)	74 (34.4)	482 (45.8)
Tertiary	24 (26.4)	240 (32.2)	116 (54.0)	380 (36.1)
Employment				
Working (employed/self-employed)	41 (35.3)	368 (41.8)	122 (48.6)	531 (42.6)
Monthly income (N=531)				
≤NGN 5,000	6 (15.0)	36 (10.1)	7 (5.8)	49 (9.5)
NGN 5,000-10,000	10 (25.0)	55 (15.4)	9 (7.4)	74 (14.3)
NGN 10,001-15,000	3 (7.5)	37 (10.4)	5 (4.1)	45 (8.7)
> NGN 15,000	21 (52.5)	229 (64.2)	100 (82.6)	350 (67.6)
Religion**				
Catholic	14 (12.1)	169 (19.2)	40 (16.0)	223 (17.9)
Protestant	21 (18.1)	82 (9.4)	34 (13.6)	137 (11.0)
Other Christian	19 (16.4)	220 (25.0)	79 (31.5)	318 (25.5)
Islam	62 (53.5)	403 (45.8)	98 (39.1)	563 (45.1)
Marital status				
Married/cohabiting	95 (81.9)	693 (78.6)	209 (83.3)	996 (80.0)
Separated/divorced/widowed	3 (2.6)	18 (2.1)	5 (2.0)	26 (2.1)
Single	18 (15.5)	170 (19.3)	37 (14.7)	225 (18.0)

* 2.9% of respondents enrolled in Arabic/Qu'ranic curriculum
**Six participants reported that they don't have any religion affiliation

Pregnancy desirability

About one in five patients (21%) did not want the index pregnancy at all and 13% wanted it later. The undesirability of pregnancy was higher among single (65.8%) and separated/divorced/widowed (38.5% respondents). About 10% of married/cohabiting patients did not want their pregnancy at all (Figure 10). Among the respondents who did not want their pregnancy or wanted it later, one in five (20.8%) had considered terminating it.

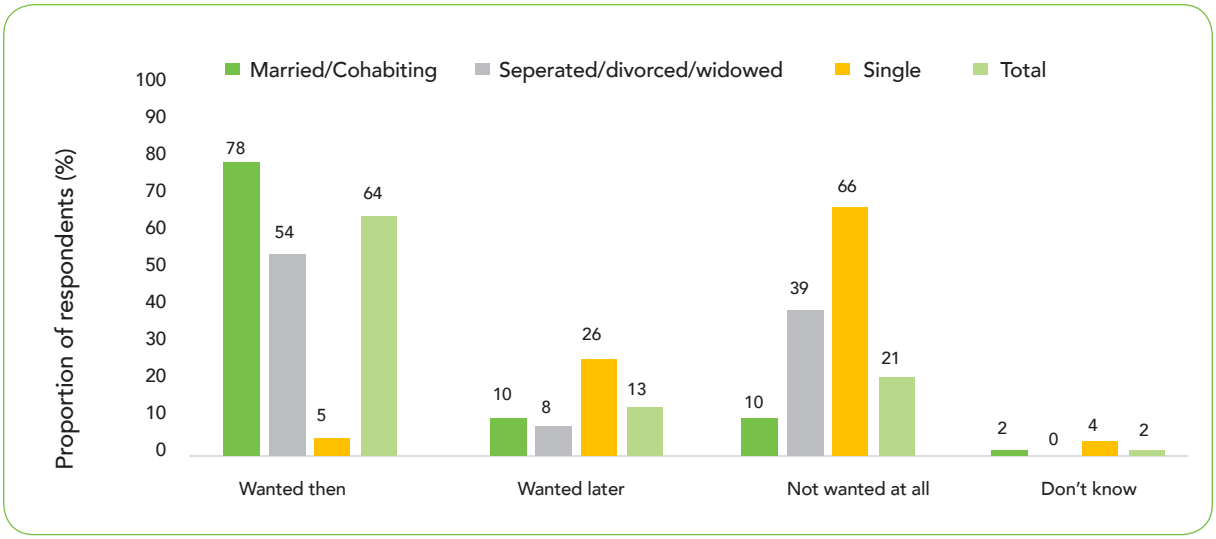


Figure 10: **Pregnancy desirability among PAC patients by marital status**

Quality of PAC services received

PAC patients shared their experiences on perceptions of good and bad care. Most of the patients spoke from the lens of providers' attitudes, as well as the facility's environment. An example of bad care is described by one patient in Kano and encompasses poor providers' attitudes as well as an unclean facility environment:

> *Some people would just humiliate you or not even attend to you at all. Some people don't even care about you and they say they are health workers, while health workers are known to heal the sick, not the opposite. So, if they don't pay attention to people's needs, it's still bad care. Even if they don't clean the environment it's still a bad care* (35 years, married, house-wife, urban, Kano)

The patient's decision to visit a particular facility for PAC was informed by their previous experience of quality care. However, most of those who visited a primary health facility went there as the first resort "I first went to (the) clinic where they referred me to general hospital (as) they can't handle it" (29 years, single, unemployed, urban, Cross River State). Patients' experiences were expressed using key constructs summarized in Table 12.

Table 12: **Proportion of patients who rated their experience as good by facility level**

Construct	Primary N=116 (%)	Secondary N=880 (%)	Tertiary N=251 (%)	Total N= 1247 (%)
Treated with dignity and respect	100 (86.2)	706 (80.2)	175 (69.7)	981 (78.67)
Privacy and confidentiality observed	61 (52.6)	467 (53.1)	92 (36.7)	620 (49.7)
Autonomy given	98 (84.5)	738 (83.9)	210 (83. 7)	1046 (83.9)
Effective communication	108 (93.1)	752 (85.5)	222 (88.5)	1082 (86.8)
Supportive care given	97 (83.6)	737 (83.8)	168 (66.9)	1002 (80.4)
Patient trust/confident with care received	108 (93.1)	772 (87.7)	188 (74.9)	1068 (85.7)
Transparency of payment	113 (97.4)	825 (93.8)	231 (92.0)	1169 (93.7)
Patient never discriminated against or stigmatized	108 (93.1)	853 (96.9)	231 (92.0)	1192 (95.6)
Environment favorable	16 (13.8)	187 (21.3)	72 (28.7)	275 (22.1)
Patient provided with post-abortion counselling	66 (56.9)	470 (53.4)	142 (56.6)	678 (54.4)

Dignity and respect

Dignity and respect was rated highly, with 78.7% of patients reporting that they felt respected and were treated in a dignified manner while seeking PAC at the health facilities (Table 12). However, slightly more than one in five patients (21.3%) experienced poor quality care. Among those who reported a poor experience, 40.5% explained that the providers failed to introduce themselves during their first interaction, majority of which were in referral facilities (secondary and tertiary). In addition, 22.7% felt they were not treated in a friendly manner or providers did not care for them (20%).

Across the states, patients from Kogi accounted for the highest proportion (92%) of those treated with dignity and respect and the lowest (60%) number was recorded in Edo (Figure 11). In Edo for instance, 61.5% of patients reported that providers did not introduce themselves, and 39.5% felt they were not respected.

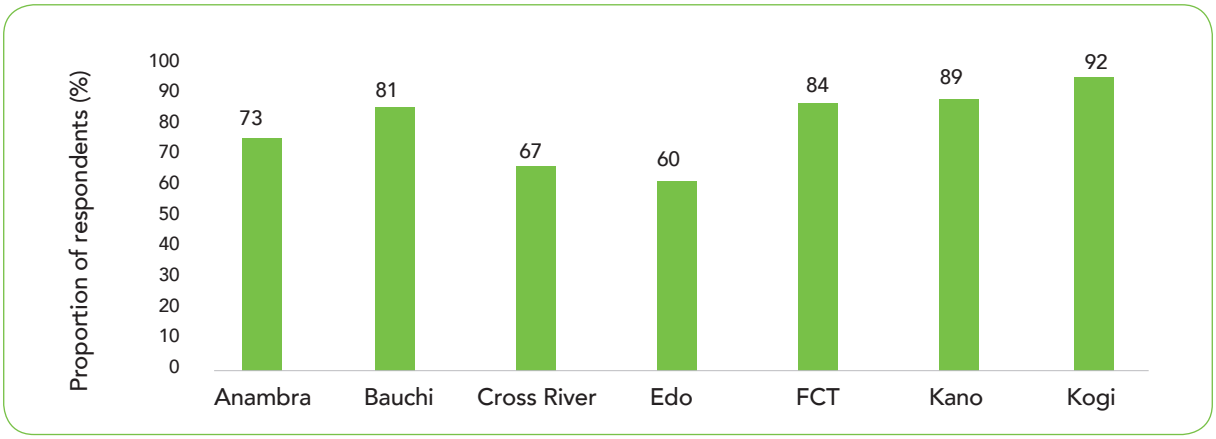


Figure 11: Proportion of respondents treated with dignity and respect by state

Qualitative data shows that patients who reported lack of dignity and respect experienced, in most cases, long waiting times before receiving care or poor interactions with healthcare providers. Indeed, some patients took long to receive care while they were going through heavy pain or bleeding. Such situations were due to long queues of patients, medical team shifts, referrals between nurses and doctors, absence of trained PAC providers, readiness of equipment for procedure or the need for patients to pay before receiving care. This is described by two patients in FCT and Cross River:

> *I had not been attended to on time so I have to go through a lot of pain…. In hospital it is life first, they don't need to wait until money has been completely paid before they could attend to a patient…I told my husband to get me my folder thinking that while my husband is bringing the folder they will attend to me but nobody did that* (37 years, married, business-woman, urban, Cross River)

> *I have to wait for some time, maybe an hour before I went in and explained the situation to him (...) He suggested that I see a senior colleague that will be in a better position to talk with me. So I had to go back again and queue, unfortunately, the senior colleague wasn't around. I went back home then went back another day and on the second, I met him and when we went in I explained everything to him and he said I have to go for a D and C* (26 years, single, business-woman, urban, FCT)

In addition, most patients reported that they had to undertake an ultrasound scan and other tests before receiving care. This happened even in situations where patients were carrying ultrasound scans done before being referred:

> *When I entered, I met one doctor and explained to him that my baby is not moving and they asked me for the paper [ultrasound] to prove what I said, I gave them the paper but they said that I should go and do the scan in their own facility to confirm it* (29 years, separated, cleaner, urban, FCT)

And yet, going through the ultrasound scan requires time as patients have to queue, sometimes waiting when the sonographers are absent or having to go to another facility. One patient in Kano ended up having a miscarriage while waiting to see the doctor because she took long to get the ultrasound done:

> *When I got to the hospital, I met a doctor on duty. I explained to him exactly how the bleeding started and how I was feeling. So the doctor asked me to go for a scan and bring the result of the scan to him, after which I did, but it took me long to do the scan. So I had the miscarriage while at admissions.* (27 years old, married, housewife, urban, Kano)

Moreover, patients lamented that the services were scattered across the hospital and required movement back and forth, hence delaying access to services.

> *(What) I do not like about this place is that they will be sending you to different places to make payment; they will write it and send you to another place for collection. It is very stressful* (22 years, married, housewife, urban, Edo)

Regarding their interactions with providers, patients complained about providers being rude, unfriendly and lacking empathy. One patient explained that she received care only after she complained about the lack of attention from the providers

> *… they were supposed to attend to me but nobody did until I had to shout before they started running up and down to do one or two things* (37 years old, married, business-woman, urban Cross River State).

It is noteworthy that these attitudes would vary among the different cadres of healthcare providers, and also depended on the time patients visited facilities for care. For instance, many patients reported poor attitudes from healthcare providers at night, as well as from nurses or matrons, as reported in the quote below:

> *The doctor that is in, the doctor that is in charge of the night duty, the man is just too rude. It was the help of another person that came, that the person now had to treat me. Both the nurses, they were just on their own shouting up and down* (17 years, married, tailor, rural, Kogi)

Privacy and confidentiality

Privacy and confidentiality was rated poorly, with slightly more than half (50.3%) of PAC patients reporting that their privacy and confidentiality was compromised (Table12). Tertiary level facilities recorded the highest rate of lack of privacy and confidentiality (63.3%) as compared to primary and secondary facilities (47.4% and 46.9% respectively). At the state level, the highest score for lack of privacy (59.1%) was reported in Cross River, followed by Kano (57.4%), while FCT had the lowest score (40.2%) (Figure 12).

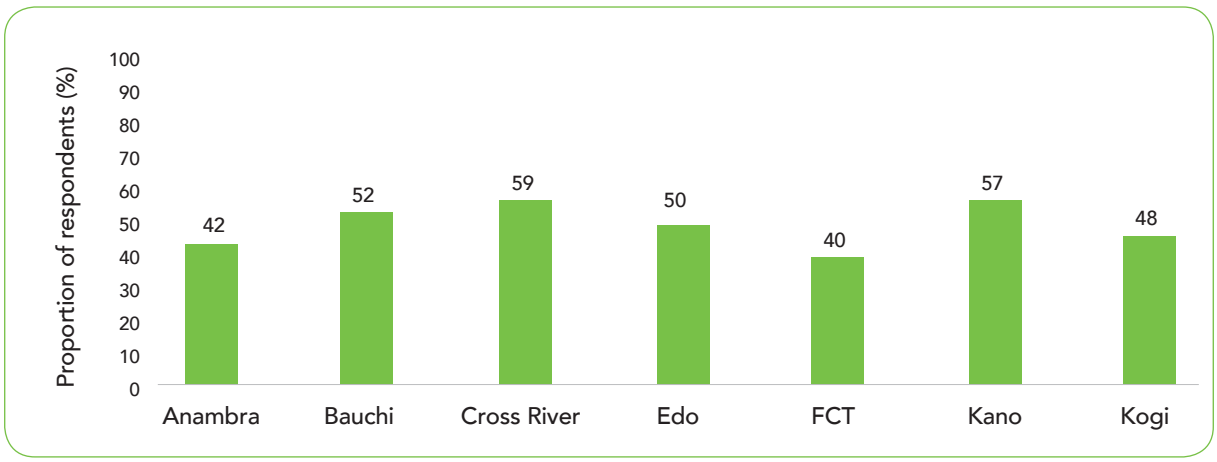


Figure 12: Proportion of respondents who reported lack of privacy and confidentiality by state

Patients' concerns about lack of privacy and confidentiality were related to interactions happening in open and crowded spaces, or rooms that did not allow for privacy, as explained by two patients in FCT and Kogi:

> *When I went for scanning the room was not structured the way it can protect privacy because whatever is being discussed inside the room can be overheard outside the room* (26 years, single, business-woman, Urban, FCT)

> *That place is too full. So you can't talk, like you can't talk privately on your own there because people are (many) there* (17 years, married, tailor, rural, Kogi)

In some cases, patients were treated in rooms where "people were walking in and out, and yet I was not covered" (32 years, married, business-woman, urban, Cross River), while others complained about being treated with too many healthcare providers "watching":

> *I don't think so because privacy is not only covering but they were about four nurses watching what the doctor was doing to see what was happening. So I lack privacy not from the general public but from the health officials* (15 years, single, students, FCT).

This patient and others feared that the information could be leaked putting them at risk in a very stigmatized context.

Autonomy

Autonomy was meant to capture the involvement of patients in the decisions regarding their care. Overall, about 83.9% of the PAC patients reported being involved in their treatment decision-making, with slightly the same level of involvement across the different facility levels. Only 16.3% of the PAC patients who were treated at the tertiary health facilities indicated their non-involvement on the same (Table 12). Across the states, the highest proportion of involvement was noted in FCT state (95%) whereas Kano had the lowest scores at 74% (Figure 13).

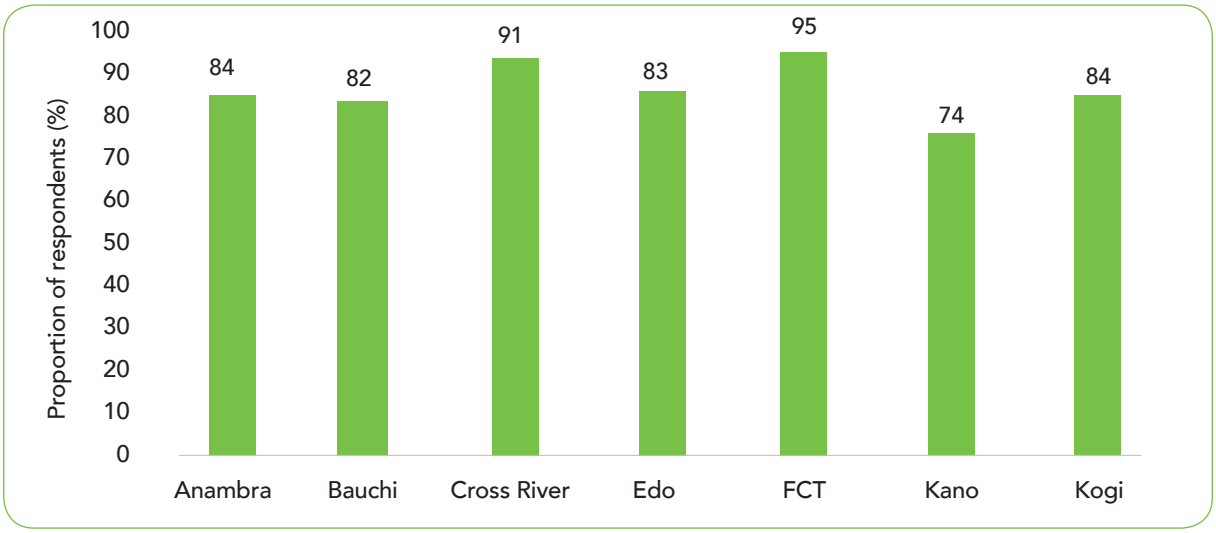


Figure 13: Proportion of respondents who reported autonomy by state

Although most patients reported that they were not consulted in the decisions regarding their care and they considered it "normal", some were frustrated by this non-involvement in the decisions. Some extreme cases were reported where patients decided to leave the health facilities because providers were not communicating with them and were solely making decisions regarding their care, as described by one patient in Edo State:

The doctor brought out blood that he wants to transfuse me, I said "even though I do not have strength and power, you are supposed to explain what is wrong with me before you make any attempt". He said "no, we want to help you, let us give you blood". I said "no, I will not take it", that I am going to another hospital (36 years, married, trader, urban, Edo)

Communication

A high proportion of PAC patients interviewed (86.8%) reported they had effective or good communication with healthcare providers (Table 12). For patients who experienced poor communication (13.2%), majority were in secondary (14.6%) and tertiary (11.6%) level facilities. Most of them (35.0%) reported that healthcare providers did not explain the reason for medicines prescribed, or they did not understand the language spoken by the provider (18.0%). Across the states, the highest scores for effective communication were reported in Bauchi (98.8%) and Kogi (97.0%) states. Even so, it is worth noting that close to one in four patients in Anambra (24%) and Kano (22%) felt that there was poor communication between them and the providers (Figure 14).

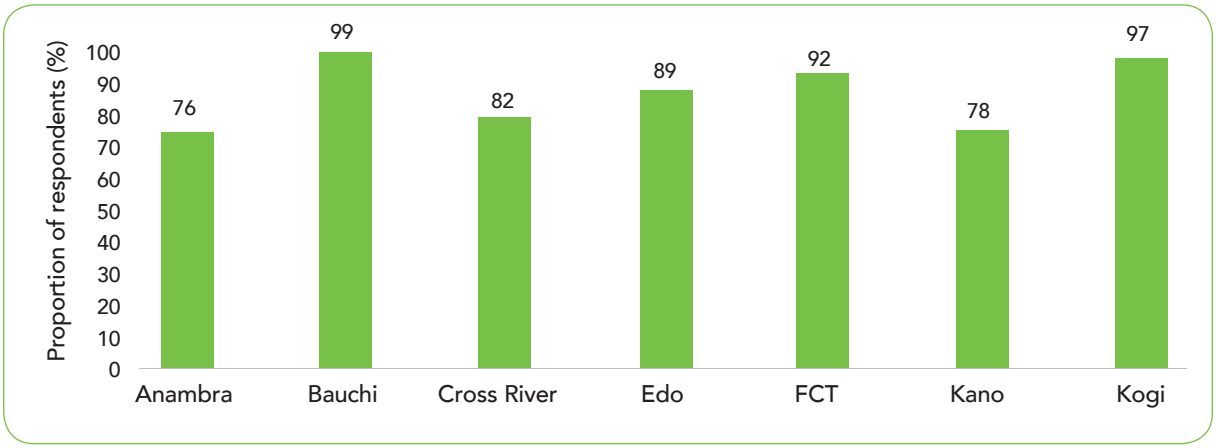


Figure 14: Proportion of respondents who reported effective communication by state

Qualitative information revealed that providers had opportunities to discuss with the patients on matters such as medications and procedures. However, some patients reported lack of effective communication with providers in the form of poor explanations or information on prescriptions, as well as being spoken to rudely.

Past midnight, at least you are supposed to hear, "Madam, what happened"? So that they know what to do for me. He was just saying that "she is losing blood, let us transfuse blood". I said, "What type of blood? Don't bother yourself, let me go to where they will understand me more" (36 years, married, trader, urban, Edo)

While this patient asked questions and even objected to some of the providers' decisions, most patients who faced such situations explained that they could not ask questions as they feared providers' reactions. One patient felt like asking questions about the procedure used to wash her womb as the same procedure was used to induce her abortion, but she decided to keep quiet:

Where I went to, it is still the same thing they did for me there that they did here. So I wanted to ask because I don't know what they are treating or what they are doing with that thing again. But I couldn't ask any question because of the way they react, like you know if you want to talk to somebody about something and you are seeing the face of the person from far you will be afraid to tell the person whatever you are going to tell the person (28 years, married, trader, urban, Kogi)

Moreover, those who were courageous enough to ask questions reported that they did not receive any answers or were not "answered well". It is worth noting that most situations with poor communication were recorded among patients who experienced challenges in their interactions with providers.

Supportive Care

Overall, there was a high proportion of PAC patients (80.4%) who reported that they received supportive care from the healthcare providers. Majority of them were treated at primary (83.6%) and secondary (83.8%) facilities, while the lowest number of those who received supportive care was recorded at tertiary level facilities (66.9%) (Table 12). In the different states, the health facilities had varying proportions of patients who reported receiving supportive care from the providers, with the highest score in Kogi (95.2%). The poorer experiences were reported in Anambra and Cross River states with 32.1% and 28.7% of patients not receiving supportive care respectively (Figure 15).

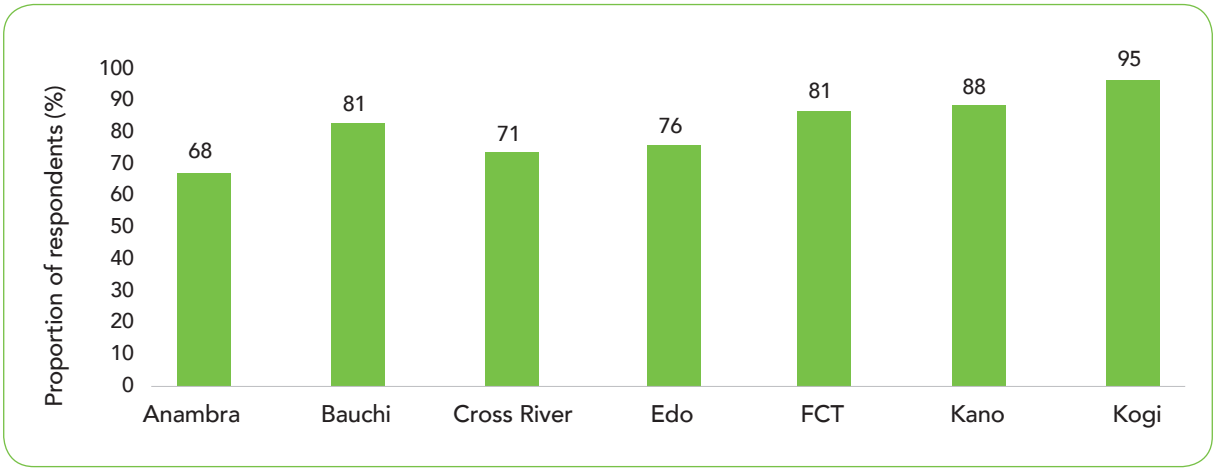


Figure 15: Proportion of respondents who were given supportive care by state

Qualitative data shows that supportive care was provided to most participants who went through spontaneous abortion. According to them, providers took time throughout the care process to listen to their sorrow and comfort them for their loss. This is described by one of the patients in Bauchi:

> *... Yes, they were soft spoken and calming me down telling me to bear it with faith. They were telling me sorry not to worry everything will be alright. Honestly, I didn't have any problem with them* (32 years, married, housewife, urban, Bauchi)"

Unlike those patients, others, especially the young girls, unmarried young women and those who induced their abortion, only went through questioning to find out what they did and counselling to avoid repeating the same "mistakes". In addition, some patients were blamed and called out on their responsibility for their distressful condition. The following quotes highlight such experiences:

> *...The man was like, 'Why will you not have money and do this kind of a thing? When you people were doing it did you tell anybody?' Those people they are just being rude and I felt maybe they are not human, they don't have the feelings of whatever you are going through* (28 years, married, traders, urban, Kogi)

Trust

Majority of PAC patients (85.7%) felt that they could trust healthcare providers and had confidence in the services provided at the health facilities. Majority of these were mainly treated at the primary level facilities (93.1%) with the lowest proportion (74.9%) treated at the tertiary facilities (Table 12). Across the states, there were variations in proportions of clients who reported trust and confidence in the care received from the providers. The highest rate was in Kogi (96.4%) and the lowest in Anambra (73.9%) (Figure 16)

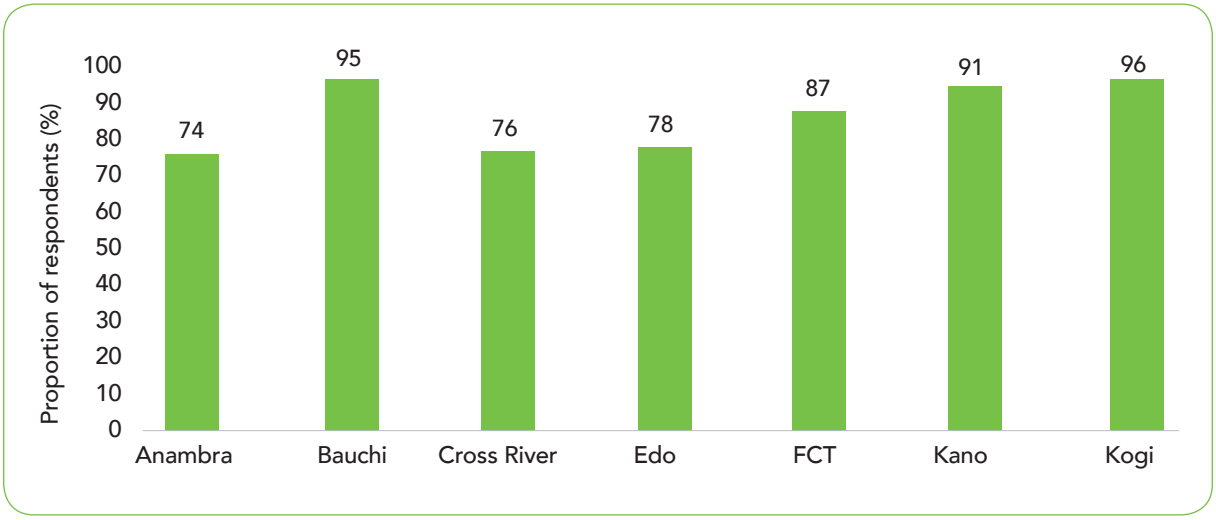


Figure 16: **Proportion of respondents who trusted the providers by state**

Predictability and transparency of payments

The vast majority of PAC patients (93.7%) reported that there was transparency in payment as they were never asked for bribes to facilitate the care process. The level of transparency was highest at the primary level facilities with 97.4% of PAC patients indicating that they were never asked for any bribes (Table 12). The high level of transparency was also maintained across the various states. All PAC patients in Kogi reported that they were not asked for bribes to hasten their treatment process. The lowest level of transparency of payment (86.7%) was in Kano (Figure17)

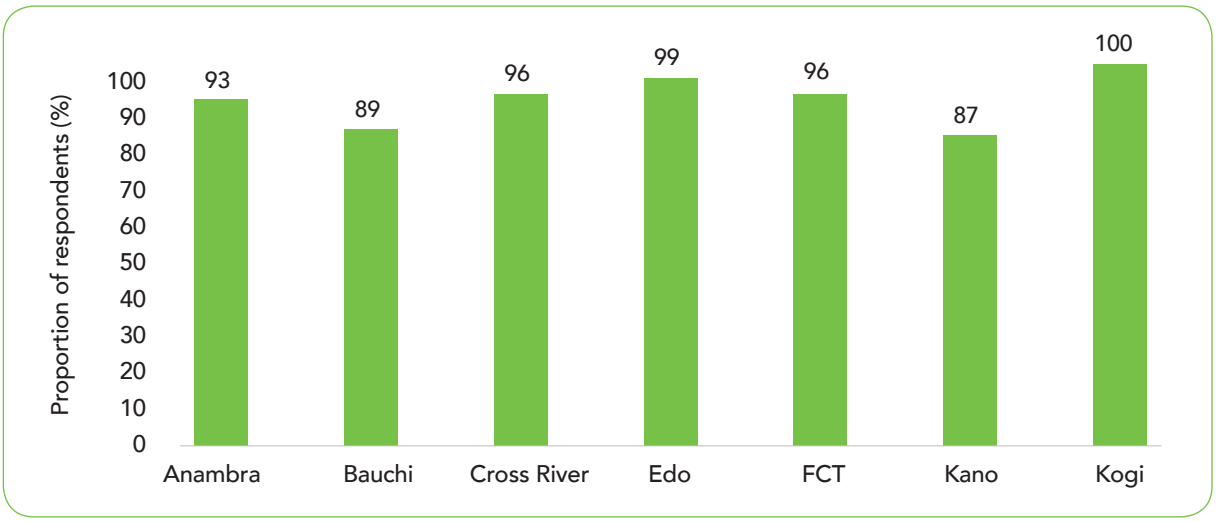


Figure 17: **Proportion of respondents who reported predictability and transparency of payments by state**

Stigma and discrimination

Data across the facilities has shown that most patients were not treated differently from other patients. While about 96% of the PAC patients indicated that they did not experience any type of stigma during their care seeking process, about 8% of patients treated at tertiary facilities reported being treated differently because they had an abortion or because of their personal attributes (Table12). The highest response rate for no stigma and discrimination among PAC patients was reported in Kano (98%) and the lowest in Anambra (92.1%) (Figure 18).

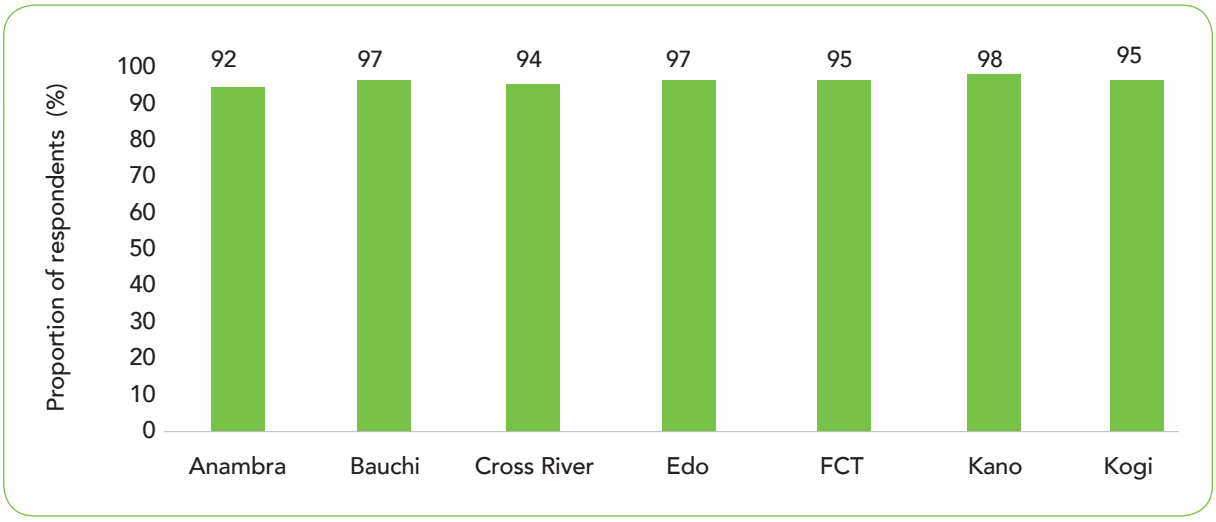


Figure 18: Proportion of respondents who reported lack of stigma and discrimination by state

Although most patients from the quantitative survey reported lack of stigma and discrimination in their interactions with providers, qualitative participants who induced their abortion (or were suspected to have done so) and the younger and unmarried ones depicted a different picture. Indeed, majority of those participants felt discriminated against and stigmatized in comparison to other patients treated for PAC, as explained by two patients from FCT:

> *When I came they started looking at me and said "small girl like you want to put yourself in trouble", and be talking to me anyhow* (15 years, single, student, urban FCT)
>
> *Interviewer: Do you think that the nurses were not kind to you because of your age?*
>
> *Respondent: Yes, my age, marital status, the society, their orientation and the policy in general. If abortion is legalized, probably I wouldn't have been seen as the worst sinner and their orientation in term of religious always creates an avenue for people to say it is against their faith* (26 years, single, business-woman, urban, FCT)

This stigma and discrimination was expressed either in an open way through unfriendliness, rudeness and lack of support, or in an insidious manner as described by one patient:

> *So I think that at that point I did not look at the nurses' face because I did not want to see what was going to be in their eyes. So as much as they told me sorry I don't know whether it is because, maybe I was being paranoid, but I swear I heard an underlying tone of sarcasm...* (26 years, single, business-woman, urban, FCT)

To avoid this type of discrimination and stigma, most of these patients reported that they delayed seeking care, or chose to visit private health facilities, although they ended up being referred to public health facilities (thereby delaying access to care and facing increased costs).

> *I was expecting the worst and that is the reason why I did not go to the public hospital, though they finally referred me there* (18 years, single, students, urban, Kogi).

Facility environment

The facility environment covered availability of health staff, adequate space in the wards, crowding, cleanliness, and availability of running water, electricity and a safe environment. Overall patients rated the facility environment poorly (78.0%). Primary facilities accounted for the largest number of PAC patients (86.2%) who regarded the facility environment as unfavorable, followed by secondary facilities (78.8%) (Table 12). The poor scores on facility environments were also recorded across the various states. The highest score regarding unfavorable environment was reported in Anambra (88.5%), followed by Kogi (86%) and Cross River (85.4%). The better score for favorable environment was reported in Bauchi (32%) and Kano (30%) (Figure 19).

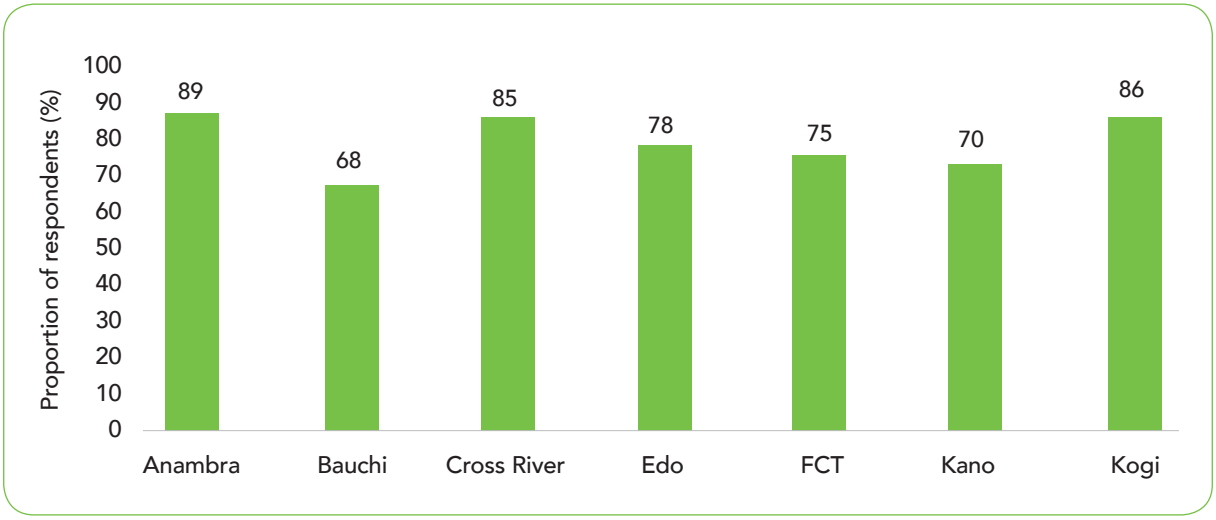


Figure 19: Proportion of respondents who reported unfavorable health facility environment by state

Qualitative data highlighted the poor state of health facilities and the surrounding environment. Participants decried the crowding in the facilities, disorganized and unkempt treatment rooms. Patients also complained about hygiene and cleanliness as well as recurrent power outages and lack of running water that was common place in most facilities. For instance, some patients used the word "manageable" to qualify the facility environment. In the Nigerian context, this is an indication of poor conditions. These experiences are captured in the following quote:

> *The environment is only manageable and all that we want is just to get well and leave this place. There are some dirty things you can be seeing and smelling when you come to this place* (29 years, married, trader, urban, Anambra)

Post-abortion contraceptive counselling

On post-abortion contraceptive counselling, close to half of the PAC patients (45.6%) were not offered post-abortion contraceptive counselling as part of PAC services. Among the patients who reported not receiving post-abortion contraceptive counseling, majority were in primary (56.9%) and tertiary (56.6%) facilities (Table 12). At the state level, FCT had the highest rate (87.8%) of patients being offered post-abortion contraceptive counselling, while Kano had the lowest percentage (36.7%) (Figure 20).

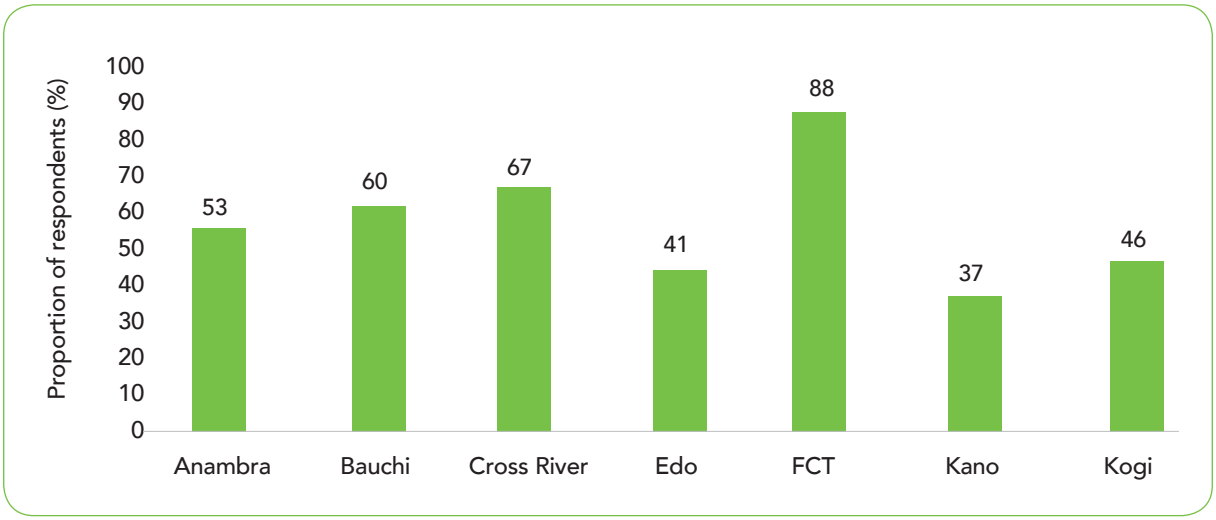


Figure 20: Proportion of respondents provided with post-abortion counselling by state

With regards to contraceptive methods offered during counselling, majority of PAC patients (89.4%) reported that they were given or informed about short acting methods (i.e., pills, condoms, injectables), while about 67% were informed or offered Long-acting reversible methods (IUD, implants). The highest rate of patients offered LARC was in tertiary facilities (85.9%), followed by primary facilities (69.7%), while secondary facilities were at 60.8%. Close to one in five patients (18.3%) was informed about traditional methods. Across the states, the majority of PAC patients were offered or informed about short acting methods, with the highest rate in Kogi (97.4%), followed by FCT (95.8%) and Edo (95.7%). The majority of patients who were offered LARC were in Bauchi (81.8%) (Figure 21).

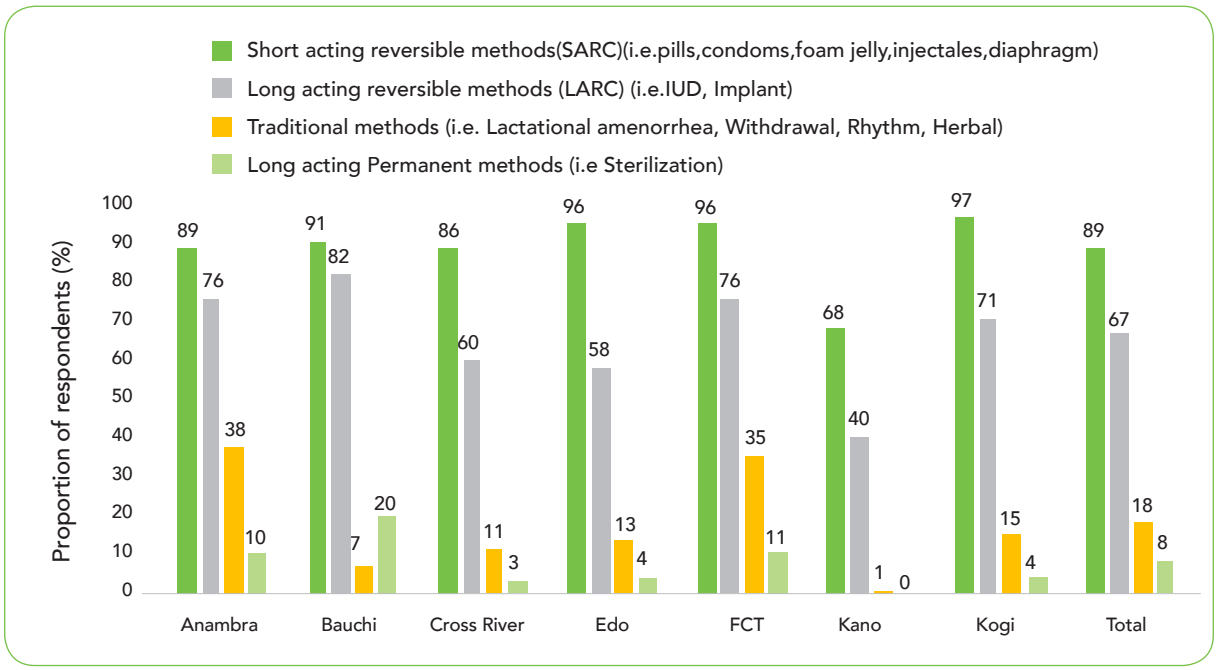


Figure 21: Type of contraceptive methods offered to respondents by state

Qualitative data pointed out the existing missed opportunities in post-abortion contraceptives' counseling. Many patients explained that providers did not mention contraceptive use throughout their interactions. Some patients took the initiative to ask questions about family planning and contraceptives, and were advised to come back later, as highlighted in the following quotes:

> *The only question that I asked the person that took care of me most was, what do I do so that I will not give birth again, they said that I should come back after some months to know the type of family planning service, so that I will not have this type of experience again* (29 years, married, trader, urban, Anambra)

For patients who received contraceptive counselling, some left the facility without a method because they were advised to come later for it, while some could not afford the cost for the method they wanted. One participant who visited a health facility seeking contraceptives following abortion was asked to come back once her menses return. As a consequence, she ended up with repeated abortion, as described in the following quote:

> *"After I did the abortion in October, I came to this place to enquire about family planning, they told me that they have the injectables and the one they can put in the hand. I told them that I want to do it, I was with money then, they said that I should go home until I see my menses and I have been waiting for the menses till now without knowing that I have this kind of problem [unplanned pregnancy and abortion]"* (28 years, married, housewife, urban, Edo)

Discussion

Public health facilities preparedness to offer PAC services

The capacity of public health facilities to deliver basic and comprehensive PAC services was described based on availability of healthcare providers, staff training, and resources including PAC equipment, medical commodities and supplies. Our findings revealed that most primary and secondary health facilities had limited capacity to provide basic and comprehensive PAC services. These findings are consistent with previous studies in sub-Saharan Africa (SSA) [11,12]. The greatest weakness was reported at the primary level where most facilities lacked staff who were trained on PAC or functional PAC equipment, supplies and commodities. Moreover, majority of primary facilities lacked ambulances for referral or evacuation of patients with severe complications. Such weaknesses in the referral system translate to delays in accessing PAC services, and create gaps in key services such as post-PAC contraceptive counselling with implications for health outcomes. While secondary facilities received referred patients from primary facilities, a substantial number also lacked key equipment, supplies and commodities to provide the required quality of PAC services. The few primary or secondary facilities with reported capabilities to deliver all PAC services are often overwhelmed and overcrowded with emergency cases, translating into long hours of work for healthcare providers, burnouts and diminished quality of care to patients, and ultimately poor health outcomes as described in other studies in SSA [13].

Patients' experiences on quality of PAC

Findings show significant disparities in PAC patients' experiences in terms of the quality of care received across states and levels of health facilities. Generally, patients reported good experiences on transparency of payment and stigma/discrimination. On the other hand, a significant proportion of patients had concerns regarding privacy and confidentiality, as well as facility environment across all levels. Patients reported instances where they were not covered or doors were opened during examination. Crowded wards and shared hospital beds increased the risk of abortion disclosure in a context of stigma and strong anti-abortion sentiments. More than one in five patients reported disrespect and lack of dignity during the provision of care (e.g., they were scolded, insulted, threatened, or talked to rudely). Such concerns around dignity and respect were higher at the tertiary facilities and may perpetuate lack of trust which was also proportionately higher at the tertiary level facilities (25%). The few patients who experienced poor communication with providers reported language barriers and poor medication counselling especially at referral facilities. Moreover, the climate did not afford the patients the freedom to ask questions. Yet, good patient-provider communication during provision of reproductive health services has been shown to be a critical factor for quality services [14].

Even though about three out of every four respondents thought that all PAC patients should be offered post-abortion contraceptive counselling and methods, close to half of the patients did not receive family planning counselling. Factors which may have contributed to such situations include language barriers, fragmentation of services and patient flow processes in each facility. For instance, most facilities were assigning PAC counselling at the last stage of care before discharge or during their follow-up appointment visits. This increases the number of missed opportunities, especially for patients treated with medical abortion, who are discharged with medications to complete at home and may fail to return for their follow-up appointments. Considering reports that one in five (20%) PAC patients had considered terminating the pregnancy, not providing quality post-abortion counselling is a significant missed opportunity to address patients' awareness on the use of contraceptives, promote uptake and prevent subsequent unsafe abortions.

Key barriers impairing access to PAC in the public health facilities

While some indices of quality PAC services provided in the Nigerian public health facilities have been observed, this study revealed substantial barriers to delivering quality PAC services. As findings showed, most primary level facilities were not well staffed (especially with staff trained on PAC) and did not have sufficient PAC equipment, supplies and commodities. Yet, most patients turned to these facilities as a first resort when they experienced complications because of their proximity. Patients frequently ended up being referred, thereby delaying their access to care.

Facility-specific policies also appeared to be major impediments to quality PAC delivery in public hospitals in Nigeria as findings surprisingly revealed that some could not provide key services as it was against the hospital policies or the task shifting policy between cadres. The cultural and moral context of abortion in Nigeria also appeared to present barriers to quality PAC services. For instance, some facilities could not offer PAC because it was against the health workers' moral and ethical positions. Personal and ethical stances can also drive negative provider attitudes towards PAC patients and contribute to difficult patient-provider interactions, resulting in poor quality of care and negative health outcomes.

Limitations

As per the norm for research on such topics, it is important to note the potential influence of courtesy bias on participants' responses as they might not have been at liberty to give negative feedback about the care they received.

This study focused on two of three elements of quality care [6], namely health system preparedness to provide quality PAC and patient's perspectives on the quality of PAC received within the public health facilities in Nigeria. We did not examine patient health outcomes after receiving PAC services. Further, considering the five components of comprehensive post-abortion care, this study addresses three, including treatment complications, contraceptive and family planning services provision, and availability of reproductive and other health services. The signal function assessment did not assess counselling to identify and respond to women's emotional and physical health needs as well as community and service provider partnerships.

Policy recommendations

1. Upgrade the capacity of primary and secondary facilities to provide basic and comprehensive PAC services through enhanced PAC training, and the provision of equipment and supplies. This will bring PAC services closer to women and girls who require such services, and who mostly visit primary healthcare facilities due to their accessibility while reducing referrals and its burdens (i.e., delays in care, additional costs, risk of disclosure among others).
2. Strengthen the supply chain of medical supplies for PAC, especially medical uterine evacuation (MUE) drugs and contraceptives.
3. Establish and strengthen resilient referral systems for post-abortion patients.
4. Investment in values clarification and attitude transformation (VCAT) of healthcare providers
5. Integrate capacity building sessions on patient-centered communication as a critical component of SRH for healthcare providers.
6. Integration of other reproductive health services as part of PAC and further studies to investigate the effective integration of other reproductive services to PAC as well as linkages with community.

7. Development of information and educational communication (IEC) materials that can help in educating patients on treatment options, their autonomy and rights, family planning and supportive care for PAC patients.
8. Advocacy to non-government actors such as NGOs and charity organizations to increase funding support for PAC infrastructure and services at public health facilities.
9. Implementation of continuous medical education to build the capacity of health care providers to provide the full continuum of care for PAC patients.

References

1. Bankole A, Adewole IF, Hussain R, Awolude O, Singh S, Akinyemi JO. The Incidence of Abortion in Nigeria. IPSRH. 2015;41:170–81.
2. Brookman-Amissah E, Moyo JB. Abortion Law Reform in Sub-Saharan Africa: No Turning Back. Reproductive Health Matters. 2004;12:227–34.
3. Singh S. Hospital admissions resulting from unsafe abortion: estimates from 13 developing countries. The Lancet. 2006;368:1887–1892.
4. Awoyemi BO, Novignon J. Demand for abortion and post abortion care in Ibadan, Nigeria. Health Economics Review. 2014;4:3.
5. Faúndes A. Strategies for the prevention of unsafe abortion. International Journal of Gynecology & Obstetrics. 2012;119:S68–71.
6. Donabedian A. The quality of care. How can it be assessed? JAMA. 1988;260:1743–8.
7. Ziraba AK, Izugbara C, Levandowski BA, Gebreselassie H, Mutua M, Mohamed SF. Unsafe abortion in Kenya: a cross-sectional study of abortion complication severity and associated factors. BMC Pregnancy Childbirth [Internet]. 2015;15. Available from: http://dx.doi.org/10.1186/s12884-015-0459-6
8. African Population and Health Research Center, Ministry of Health [Kenya], Ipas, Guttmacher Institute. Incidence and complications of unsafe abortion in Kenya: Key findings of a national study. Nairobi: APHRC, Ministery of Health Kenya, Ipas, Guttmacher Institute; 2013.
9. Healy J, Otsea K, Benson J. Counting abortions so that abortion counts: Indicators for monitoring the availability and use of abortion care services. Int J Gynaecol Obstet. 2006;95:209–20.
10. Sudhinaraset M, Afulani PA, Diamond-Smith N, Golub G, Srivastava A. Development of a Person-Centered Family Planning Scale in India and Kenya. Stud Fam Plann. 2018;49:237–58.
11. Owolabi OO, Biddlecom A, Whitehead HS. Health systems' capacity to provide post-abortion care: a multicountry analysis using signal functions. The Lancet Global Health. Elsevier; 2019;7:e110–8.
12. Izugbara C, Wekesah FM, Sebany M, Echoka E, Amo-Adjei J, Muga W. Availability, accessibility and utilization of post-abortion care in Sub-Saharan Africa: A systematic review. Health Care for Women International. Taylor & Francis; 2020;41:732–60.
13. Riley T, Madziyire MG, Owolabi O, Sully EA, Chipato T. Evaluating the quality and coverage of post-abortion care in Zimbabwe: a cross-sectional study with a census of health facilities. BMC Health Services Research. 2020;20:244.
14. Dehlendorf C, Anderson N, Vittinghoff E, Grumbach K, Levy K, Steinauer J. Quality and Content of Patient-Provider Communication About Contraception: Differences by Race/Ethnicity and Socioeconomic Status. Womens Health Issues. 2017;27:530–8.

African Population and
Health Research Center

West Africa Regional Office: 5e étage, Immeuble Diallo-Lo, 325-327 CICES VDN,
Dakar Senegal BP 45933 Dakar VDN NAFA
Téléphone: +221 33 869 60 17, +221 33 867 99 36
Email: info@aphrc.org - infowestafrica@aphrc.org

ISBN 978-9914-40-127-1