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Attitudes and practices of private medical providers towards family planning and abortion services in Nigeria

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Context. The study was designed to investigate the attitudes and practices of private medical practitioners towards abortion, postabortion care and postabortion family planning in Nigeria.

Methods. Three hundred and twenty-three private practitioners who were proprietors of private clinics in three states of the country were interviewed with a structured questionnaire that elicited information on their knowledge and experiences of abortion and postabortion care in the cities.

Results. Twenty-four percent of the doctors reported that they routinely terminate unwanted pregnancies when requested to do so by women, while 82% reported that they frequently treat women who experience complications of unsafe abortion. Over 45% reported that they use manual vacuum aspiration (MVA) for the management of abortion in the first trimester, while 25% use dilatation and curettage (D&C). Nearly 28% reported the use of MVA followed by D&C in the first trimester. Fifty-seven percent reported their lack of expertise in managing second-trimester abortions, while those admitting that they manage second-trimester abortions reported nonstandard methods and procedures. In addition, there was evidence of inadequate counseling of women, lack of institutional protocols and poor use of postabortion family planning by the doctors.

Conclusions. These results suggest the need for a program of retraining of private practitioners on the principles and practices of safe abortion, postabortion care and family planning in Nigeria and the integration of these topics into medical training curricula in the country.

Key words: abortion; family planning; Nigerian women; reproductive health; sexually transmitted diseases

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Induced abortion is currently accepted to be one of the most serious problems associated with women's reproductive health in many sub-Saharan African countries (1,2). Nigerian law does not permit the termination of pregnancy unless it is needed to save the life of a woman, and penalties for the offense are severe (3). As a result of the restrictive abortion law, several reports indicate that untrained providers in the

country frequently carry out induced abortions clandestinely with many resulting in severe complications and unnecessary maternal deaths (4,5). By contrast, it is well known that induced abortion performed safely under a less restrictive law presents few health problems (6,7).

In a community-based study, we reported that Nigerian women frequently resort to termination of unwanted pregnancies to resolve immediate

social problems affecting their lives (8). A recent survey estimated that about 610 000 induced abortions are carried out in Nigeria annually (9), with an abortion ratio of nearly 50 per 1000 women exceeding those from many developing countries. In addition, the Federal Ministry of Health reports that about 20 000 Nigerian women die annually from the complications of unsafely induced abortions (10).

To date, it is known that several providers of abortion exist in Nigeria. These include orthodox public and private medical practitioners, paramedical professionals (pharmacists, patent medicine dealers, nurses/midwives, laboratory technologists) and traditional practitioners. The paramedical and traditional practitioners in particular use a variety of methods for inducing abortion, many of which are unacceptable by international standards and are clearly harmful to women. However, our study interviewing women in south-west and north-central Nigeria revealed that private medical practitioners are the most important abortion providers used by Nigerian women (8). In the study, 1516 randomly selected women were interviewed privately in their homes in urban and rural areas of Ile-Ife and Jos metropolis and they were asked questions about their previous experiences of unwanted pregnancies and induced abortion using the value-free technique. The results showed that 20% of the women have had unwanted pregnancies, with 58% of them resolving such pregnancies with induced abortion. Over 80% of the women who reported having had induced abortions indicated that private medical practitioners carried out the abortions. To a large extent these include practitioners who work privately on a full-time basis, as well as public practitioners who provide abortion services on a part-time basis while working full time in public service.

Even though these are trained doctors, it is widely known that a significant proportion of abortions performed by private medical practitioners in Nigeria are unsafe. Experiences from many tertiary hospitals that treat women with complications of botched abortions indicate that private practitioners carried out several abortions that resulted in severe morbidity and mortality (11,12). In addition, in our study interviewing women who had had induced abortions carried out by private doctors, up to 34% reported that they experienced immediate complications after the procedures (8). Several of the women also reported that they did not receive any counseling after abortions performed by private doctors and neither were they told of the need to receive contraceptives to prevent a repeat abortion.

Because of their more comprehensive and robust initial training, it is clear that physicians in private and public service are an important group of professionals that can be enlisted in efforts to improve women's access to safe abortion practices in Nigeria. However, abortion services in public health institutions are currently limited to the treatment of complications of incomplete abortions and do not include the provision of comprehensive services for the prevention of complications of abortion and repeat abortions. Indeed, there is evidence that public health institutions in Nigeria are rarely used by adolescents for reproductive care because of their perceived lack of confidentiality (13,14). By contrast, private health services are perceived to be friendlier and more flexible to the needs of adolescents. In addition, there has been a recent substantial decline in the quality of services offered by state-funded medical facilities in Nigeria, which makes the use of private facilities more compelling.

However, to date, despite the increasing use of private facilities for health care in Nigeria, very little is known about the nature and quality of services in this sector, especially for reproductive health care, family planning and postabortion care. In particular, there is a need to understand the nature of abortion and postabortion services provided by private medical professionals. Such an understanding is necessary to provide a framework for designing interventions to improve the quality of postabortion care provided by private doctors in Nigeria. A similar approach has now permitted the development of a network of private practitioners in Kenya who are active in providing comprehensive reproductive health services for family planning and postabortion care (15,16).

In a qualitative study, Makinwa-Adebusoye et al. (17) described the perceptions of 67 Nigerian health professionals (physicians, nurses, midwives and chemists) on issues relating to abortion and postabortion care. However, they did not describe the actual practices of abortion and postabortion care by the health professionals, an important piece of information needed to identify the retraining needs of health professionals for improving the quality of postabortion care in the country. To date, there have been limited reports of training in postabortion care provided for medical and nursing staff in public health institutions in Nigeria. However, there is no evidence that any significant changes have occurred in the incidence of abortion complications, not only because private practitioners who form the bulk of abortion providers in Nigeria have not been trained but also because the training was not

based on a preliminary analysis to identify the appropriate context for conducting and sustaining such training programs.

In January 2000, an initiative was commenced in parts of Nigeria to identify a framework for improving the quality of services for postabortion care provided by private medical practitioners in Nigeria. As part of this initiative, a formative study was carried out in three Nigerian cities to determine the knowledge, attitudes and practices of private medical practitioners towards issues relating to abortion and postabortion care. This paper presents the results of the survey, which we believe will provide a basis for targeting interventions for improving the quality of abortion and postabortion care provided by private medical doctors in Nigeria.

Methodology

Study population

The study was carried out among private medical practitioners in Edo and Delta States in the Niger Delta area, and Kaduna State in northern Nigeria. In each of the three states, the capital cities were studied, as these contained a large concentration of private medical practitioners. Edo and Delta States were chosen because previous studies have shown that these states have some of the highest rates of induced abortion in the country (18). Kaduna State was included as a core northern and predominantly Muslim state to make comparisons with the predominantly Christian and southern Edo and Delta states. Thus, the cities included in the study were Benin City, Edo State, Warri in Delta State and Kaduna in Kaduna State. The three cities are densely populated and contain highly mobile and cosmopolitan populations. In particular, Warri is the epicenter of the oil industry in Nigeria and has a mixed population of young migrant workers actively involved in oil prospecting.

We determined that the three cities have large numbers of private medical practitioners who have private clinics/hospitals that provide postabortion care along with other clinical services. In order to practice in the states, the proprietors of these hospitals/clinics are registered by the states' Ministries of Health and given certificates of registration. Thus, at the onset of the study, we approached the Ministries of Health in the states and obtained the lists of private clinics/hospitals registered to practice in the three states. The lists contained the names and addresses of 226 private hospitals in Benin City, 105 in Warri and 175 in Kaduna and those of their proprietors. However, the lists also contained the names of clinics that were no longer in existence or that were managed by nonmedical professionals. Thus, the actual numbers of clinics that could potentially be enlisted in the study in the three cities were much less than these official numbers.

The proprietors of the clinics/hospitals in the cities were visited individually to explain the purpose and methods of the study and to solicit their interest and consent in participating in the study. They were required to sign a consent form indicating their willingness to participate in the study. Only those who agreed and signed the consent forms were included in the study. They were assured of confidentiality of information obtained for the study. In particular, the names of clinics or individual practitioners were not included in the study protocol, and all interviews in relation to the study were conducted in private. The Ethical Review

Committee of the University of Benin Teaching Hospital approved the protocol for the study.

Survey methods

A structured questionnaire was prepared by a multidisciplinary team of social science and medical researchers to conduct the study. The questionnaire was organized in four broad sections. In Section 1 of the questionnaire we solicited information on the sociodemographic characteristics of the proprietors of the hospitals that responded to the questionnaires. In Section 2 of the questionnaire we asked questions about the characteristics of the clinics/hospitals, especially the patients load and the types of clinical services provided in the clinics/hospitals. In Section 3 of the study questionnaire we obtained information on the hospitals' experiences and practices of abortion and postabortion care – whether they see women with unwanted pregnancies and abortion complications, how they handle such cases, and the methods they use. In the final section of the questionnaire we inquired about the attitudes and practices of the clinics relating to postabortion family planning and treatment of sexually transmitted diseases (STDs) and human immunodeficiency virus (HIV) in patients presenting for abortion treatment.

The questionnaire was pretested and validated, and then administered on proprietors of consenting clinics/hospitals in the three cities. The technical committee conducted the pretests while working collaboratively with the Association of General Medical Practitioners (AGMP) in the states. As we predicted that medical practitioners might be reluctant to answer the questions as a result of the illegal status of abortion in Nigeria, we requested doctors who were officials and members of the AGMP in the states to distribute the questionnaires to the private practitioners in their clinics. This was necessary to gain the confidence of the practitioners and to increase the probability that honest and correct answers to the questions would be provided by the respondents. The doctors received training on a uniform method for distributing the questionnaires and were requested to approach the respondents in their clinics with great sensitivity and confidentiality. They were to explain the questionnaire to the practitioners and then to request the practitioners to complete the questionnaire in their private hours for it to be retrieved later by project staff. The proprietors of the private clinics and hospitals completed the questionnaires.

Data analysis

Data from the questionnaires were entered into a computerized database. The dataset was cleaned by investigating whether outlying values were consistent with the responses in the questionnaires and by checking the validity of outlying values with the study interviews. For analysis, both univariate and bivariate analyses were used to describe the data. In addition, determinants of willingness to terminate an unwanted pregnancy by the practitioners were modeled using multiple regressions. The covariates that were included in the multivariable model were age, sex, marital status, level of professional practice, religious affiliation and area of practice. The analysis was performed using SPSS PC+.

Results

Characteristics of respondents and clinics

The aim was to interview all registered private practitioners in the three cities. Of the 226 clinics in the official register in Benin, 80 had closed

down, five proprietors could not be seen after repeated visits, while four doctors refused to participate in the study. In Kaduna, of the 175 in the register, 45 had closed down, 10 proprietors could not be found after repeated visits, while five refused to participate in the study. In Warri, of the 105 registered clinics, 28 had closed down, three proprietors could not be found after repeated visits, while five refused to participate in the study. Thus, 137 doctors were interviewed in Benin City, 71 in Warri and 115 in Kaduna, giving a total of 323 participating doctors. The doctors who did not participate in the study either because they had closed down their clinics/hospitals, or could not be found in their clinics after repeated visits, or who refused to complete the questionnaires were not significantly different in sociodemographic characteristics, years of practice and types of clinics from those who participated in the study. The 323 participating doctors were drawn from 323 hospitals and clinics in the three cities.

Table I presents the sociodemographic characteristics of the doctors who completed the study questionnaire. The respondents ranged in age from 27 to 70 years (median 40 years). Over 92% of the doctors were males, with Kaduna having the highest proportion of female private practitioners. Among the doctors, 81% were married, 93% were Christians and 13% were Muslims.

Most of the doctors were general practitioners who had no postgraduate specialist training. The proportion of private practitioners with specialist qualifications was highest in Benin City (41%), followed by Kaduna (29%) and then Warri (21%). The main specialist fields were obstetrics and gynecology (13%), internal medicine (6%), surgery (5%), pediatrics (2%) and others (6%) comprising family medicine, anesthesiology, pathology, psychiatry, dermatology, industrial medicine and ophthalmology.

On average, the clinics had two attending doctors (median 2; range 1–11) and five nurses (median 4; range 1–63). Ancillary services offered and the proportion of doctors who reported that they offered the services included obstetrics and gynecology (92%), family planning (85%), STD treatment (93%), laboratory services (62%) and surgical services (91%).

Attitudes towards unwanted pregnancies and abortion complications

The respondents were asked whether they saw women with unwanted pregnancies requesting induced abortion in their clinics. Unwanted pregnancy was defined as a confirmed pregnancy

that women reported that they did not wish to continue. The proportions responding that they attended to such patients included 94% in Benin City, 83% in Warri and 90% in Kaduna, giving an overall proportion of 90% in the study sample. The median number of cases of unwanted pregnancies seen per week in the three cities was 2, with a range of 1–105 cases. One clinic in Benin City kept detailed records and reported attending to a median of 40 cases of unwanted pregnancies per week.

When asked how they resolved such pregnancies for the women, 31% of private practitioners in Benin, 30% in Warri and 12% in Kaduna responded that they assisted the women in terminating the pregnancies. Thus, 24% of the doctors reported that they terminate unwanted pregnancies when requested to do so by women. The median number of terminations reportedly carried out each week per doctor in Benin City was six terminations, whereas it was two in both Warri and Kaduna. Over 80% of the doctors who reported that they terminate unwanted pregnancies mentioned the need to protect women's health as their primary reason for terminating the pregnancies. A small proportion reported that they believed in women's rights to seek

Table I. Sociodemographic characteristics of respondents

Characteristics	Benin City (n = 137) (%)	Warri (n = 71)* (%)	Kaduna (n = 115)* (%)	Total (n = 323)* (%)
Age (years)				
Median (range)	43 (27–70)	38 (27–64)	40 (28–60)	40 (27–70)
Sex				
Male	96	92	90	93
Female	4	8	10	7
Marital status				
Married	84	79	78	81
Single	14	21	21	18
Divorced	0	0	1	0
Others (widower)	2	0	0	1
Religion				
None	6	3	1	3
Catholic	40	39	14	31
Protestant	14	27	24	20
Muslim	2	1	35	13
Pentecostal	34	25	26	29
Jehovah witness	3	3	0.0	2
Others†	1	2	0.0	2
Specialist				
Yes	41	21	29	32
No (General practitioners)	59	79	71	68
Years of practice				
1–10	32	42	42	38
11–20	42	38	44	42
21 and above	26	20	14	20
Median (range)	15 (2–43)	12 (1–35)	12 (1–30)	12 (1–43)
Mean	15.56	13.3	12.95	14.1

* = Sample size

† Ekist, Grail Message, Rosicrucian

abortion, while the remaining gave no specific reasons.

As shown in Table II, among practitioners who would not terminate unwanted pregnancies, the majority indicated that they often preach morals to women with unwanted pregnancies and counsel them to continue with the pregnancies. About 22% of the doctors refer such women to clinics that carry out terminations. Interestingly, the proportion that preaches moral codes and counsels the women to continue with the pregnancies was equally distributed between the three study centers.

We asked practitioners to identify the most important and the least important reasons among a list of potential alternatives why they would not terminate unwanted pregnancies when requested to do so by women. As shown in Table II, the most important reason was religious consideration followed by moral obligations and the perception that abortion is against their professional ethical code of conduct. Only 29% of the doctors mentioned obedience to the Nigerian abortion law as the most important reason and only 6% referred to the fear of police harassment. Similarly, as shown in Table II, the fear of harass-

ment by the police, past experience with abortion complications and obedience to the Nigerian law were identified by the practitioners as the least important reasons for their decision not to terminate unwanted pregnancies. Thus, it was clear that the restrictive abortion law in Nigeria was not the major consideration in the doctors' failure to carry out termination of unwanted pregnancies. The responses provided for this category of questions were similar in the three study sites.

To determine the factors that predict the doctors' willingness to terminate unwanted pregnancies in women, we carried out a multiple regression analysis with the data. The variables included in the model were age of respondents, sex, marital status, religious affiliation, years of training and type of medical specialization. The results as shown in Table III indicate that private practitioners who specialized in internal medicine were less likely to carry out induced abortion in Benin City [odds ratio (OR) 0.18; confidence interval (CI) 0.03–0.89; $P < 0.05$]. In Warri, unmarried private doctors were more likely than married doctors to carry out induced abortion (OR 7.7; CI 2.3–63.5, $P < 0.05$). There were no specific significant predictive factors in Kaduna.

Table II. Methods of resolving unwanted pregnancies for women by private health providers

Reasons	Benin City (n = 137) (%)	Warri (n = 71)* (%)	Kaduna (n = 115)* (%)	Total (n = 323)* (%)
Terminate unwanted pregnancies	31	30	12	24
How do you resolve abortion problems if you do not terminate				
Counsel to continue with pregnancy	37	34	23	31
Preach moral codes to them	4	3	5	4
Refer them to other doctors	15	11	10	12
Counsel to continue + preach morals	24	34	34	30
Counsel to continue + refer to other doctors	12	11	12	12
Preach moral codes + refer to other doctors	2	0	0	1
Do all of the above	2	3	12	6
Other reasons†	4	5	4	4
Extremely important reasons for not terminating unwanted pregnancies				
Religion	76	76	84	79
Against ethics	34	46	62	48
Police harassment	5	4	8	6
Obedience to Nigerian law	22	22	39	29
Past experiences	3	2	4	3
Moral obligation	55	62	69	62
Reasons not regarded as important for not terminating unwanted pregnancies				
Religion	11	10	6	9
Against ethics	33	10	18	22
Police harassment	71	66	70	70
Obedience to Nigeria law	40	38	29	35
Past experience	87	68	93	86
Moral obligation	26	20	8	17

* = Sample size

† Politely explain that it is against my practice, preach word of God, inform parent, refer to my pastor, let her make her decision, go elsewhere

Table III. Odds ratio with confidence intervals for selected factors influencing termination of pregnancy among health providers in Edo, Delta and Kaduna States, Nigeria

Variables	Edo		Delta		Kaduna		Combined	
	OR	CI	OR	CI	OR	CI	OR	CI
Ages (rc 25–30)								
31–40	1.68	0.58–13.35	4.71	0.53–41.99	na	na	3.21	0.71–14.38
41–50	1.95	0.54–12.76	2.45	0.23–25.99	na	na	2.82	0.62–12.88
over 50	2.13	0.57–15.81	3.42	0.29–40.76	na	na	4.09	0.83–20.12
Sex (rc Female)								
Male	2.36	0.48–10.69	2.22	0.24–20.26	15.43	na	3.56	0.82–15.55
Marital status (rc Married)								
Single	1.27	0.22–1.32	7.7	2.3–63.5	1.02	0.26–3.98	1.83	0.88–3.80
Religion (rc Jehovah witness)								
None	3.00	0.46–19.59	na	na	na	na	9.00	0.81–100.14
Catholic	3.33	0.23–2.24	na	na	0.00	0.34–49.65	2.17	0.24–19.14
Protestant	3.00	0.48–10.24	na	na	0.00	0.34–35.60	2.67	0.29–24.21
Muslim	0.27	0.06–15.98	na	na	0.00	0.71–53.01	1.14	0.12–11.18
Pentecostal	0.20	0.04–1.03	na	na	na	na	0.39	0.04–3.89
Years of practice (rc 25 +)								
1–5	1.99	0.16–4.25	0.00	na	0.53	0.04–6.95	0.76	0.19–2.96
6–10	2.47	0.56–9.07	2.18	0.19–24.21	0.36	0.03–4.66	1.45	0.43–4.83
11–15	2.75	0.91–13.99	5.00	0.46–54.04	0.39	0.03–5.08	2.03	0.62–6.67
16–20	2.19	0.47–8.44	2.00	0.15–26.73	0.57	0.05–6.98	1.44	0.42–4.91
21–25	4.58	0.68–12.28	0.50	0.02–10.25	0.00	na	1.55	0.43–5.57
Specialist (rc specialist)								
Not a specialist	1.44	0.76–2.77	1.89	0.47–7.56	1.55	0.40–5.95	1.39	0.79–2.45
Area of specialization (rc Obs & Gyne)								
Internal medicine	0.18	0.07–1.39	0.00	na	1.10	0.08–15.15	0.29	0.07–1.18
Surgery	0.00	0.03–1.85	0.00	0.08–51.99	0.0	na	0.11	0.01–0.93
Paediatrics	0.13	0.05–1.22	0.00	na	1.0	0.00	0.00	na
Others	0.53	0.02–1.19	0.12	na	0.00	na	0.09	0.01–0.77
General practice	na	na	0.53	0.16–5.66	0.85	0.17–4.37	0.59	0.29–1.18

OR, odds ratio; CI, confidence interval; Obs & Gyne, obstetrics and gynecology; na, not applicable; rc = reference category

However, in the overall sample, being a surgeon or being another subspecialty doctor reduced the likelihood of carrying out induced abortion ($P < 0.05$). Contrary to our expectations, age, sex, religious affiliation and years of practice of the doctors did not significantly predict their willingness to carry out induced abortion.

When asked whether they treat patients who experience abortion complications in their clinics, 86% of doctors in Benin City, 83% in Warri and 81% in Kaduna indicated that they did so. The number of women with abortion complications reported by the clinics ranged from 1 to 10 per week. The most common abortion complications listed by the respondents were incomplete abortion (57%), followed by septic abortion (19%), bleeding (16%), uterine perforation (1%) and intraabdominal injuries (1%).

Methods used for management of unwanted pregnancies and abortion complications

Among respondents who reported that they terminate unwanted pregnancies and treat incom-

plete abortions, they were asked to identify the method they used in the first and second trimesters of pregnancy. The results of the analysis of the responses to this question are presented in Table III. The most common method used in the first trimester was manual vacuum aspiration (MVA), reported by 46% of the doctors in the overall sample. Another 28% indicated that they use MVA followed by dilatation and curettage (D&C), as they were often not satisfied with the results of MVA alone. Only 25% in the overall sample reported that they used D&C alone, citing the lack of knowledge of MVA as the most important reason for nonuse of the procedure. With the exception that doctors in Benin City were more likely to use MVA alone in the management of first-trimester abortions, the pattern of reported use of methods for managing first-trimester abortions was similar between the three study sites.

With regard to second-trimester abortion, the results in Table IV indicate that 57% of the doctors reported that they do not carry out induced abortions or treat abortion complications in the second trimester of pregnancy, citing their lack of

Table IV. Methods of pregnancy termination reported by respondents in the first and second trimesters of pregnancy

Pregnancy duration	Benin City (n = 137) (%)	Warri (n = 71)* (%)	Kaduna (n = 115)* (%)	Total (n = 323)* (%)
*Pregnancy < 12 weeks				
D&C	26	29	27	25
MVA	51	38	40	46
D&C + MVA	21	38	33	28
MVA + ARM and oxytocin Stimulation	2	0	0	1
†Pregnancy > 12 weeks				
Do not perform second trimester abortion	44	81	60	57
D&C	12	0	0	6
MVA	5	0	0	3
ARM	5	0	0	3
Oxytocin stimulation	5	0	7	4
ARM and oxytocin	28	19	20	24
D&C + ARM	2	0	0	1
Other methods	0	0	13	3

D&C, dilatation and curettage; MVA, manual vacuum aspiration; ARM, artificial rupture of membranes

†Among all practitioners who reported that they carry out terminations

* = sample size

expertise as the most important reason for not doing so. As shown in the table, the doctors in Benin City were most likely to manage second-trimester abortions followed by doctors in Kaduna and then Warri. Among doctors who do not terminate pregnancies in the second trimester, many reported that they often refer such women to hospitals that have expertise to manage second-trimester abortions. In particular, many of them reported that they refer abortion complications in the second trimester to tertiary-level referral hospitals.

Among doctors who reported that they carry out abortions in the second trimester, a large proportion indicated that they used artificial rupture of fetal membranes (ARM) followed by uterine stimulation and high-dose oxytocin. Indeed, this was the only method reported by doctors who perform second-trimester abortion in Warri. Other reported methods included oxytocin alone, MVA, D&C, ARM alone and ARM followed by D&C. Interestingly, none of the doctors reported the use of methods such as mifepristone, misoprostol or methotrexate in the management of abortion in either the first or the second trimester of pregnancy. In particular, none reported the use of osmotic dilators, prostaglandins or misoprostol prior to oxytocin stimulation in the second trimester of pregnancy. All the doctors reported that they reused MVA canulae. However, less than one-third of the doctors reported using standard procedures for disinfecting or sterilizing the MVA kits.

We asked the doctors to identify the methods they used in evacuating an incomplete abortion in the second trimester. An analysis of the answers they gave is presented in Table V, which indicates that 27% of the doctors reported that they used the MVA method. However, this is contrary to current practice, which does not recommend the use of MVA alone for management of second-trimester abortions (19). About 12% of the doctors used the D&C method, whereas 7.8% used the dilation and evacuation (D&E) method and 2.8% the electric vacuum aspirator (VA). Several others used a combination of these methods, which most often involved both D&C and MVA.

Table V. Most frequently used techniques of uterine evacuation for incomplete/inevitable abortion and methods of pain relief in the second trimester as reported by private practitioners

Techniques	Benin City (n = 137)* (%)	Warri (n = 71)* (%)	Kaduna (n = 115)* (%)	Total (n = 323)* (%)
Dilatation & curettage (D&C)	15.4	14.1	7.8	12.4
Vacuum aspirator (VA) (electric)	0.7	7.0	2.6	2.8
VA + D & C	0.7	2.8	1.7	1.5
Manual Vacuum Aspirator (MVA)	29.9	14.1	31.3	27.0
MVA alone	14.6	14.1	16.5	15.2
MVA + D & C	7.3	7.0	14.8	10.0
MVA + VA	0.7	0	0.9	0.6
MVA + D & E	7.3	9.9	5.2	7.1
Dilatation and Evacuation (D & E)	8.0	9.9	5.2	7.4
D & E + D & C	6.6	14.1	7.0	8.3
All	8.8	7.0	7.0	7.7
Use of pain relief for complete and Incomplete abortion				
Intravenous ketamine alone	23.4	20.1	25.2	23.5
Intravenous diazepam alone	18.2	22.5	19.1	19.5
Ketamine and diazepam	20.4	18.1	20.9	20.7
Paracervical block	3.6	2.8	3.5	3.4
No anaesthetic used	34.4	36.5	31.3	32.9

* = sample size

The reported methods of pain relief for the MVA procedures are also shown in Table V. Nearly 33% of the respondents in the three study sites were most likely to report that they did not use any pain relief method. This was followed by those who reported that they used intravenous ketamine alone, intravenous diazepam alone or both drugs in combination. A small fraction of respondents reported that they used paracervical block, consisting of the injection of local anesthetic in the paracervical tissues. There was no difference between the study sites in the pattern of responses to the question on use of pain relief methods.

As we regarded MVA as being the most preferred method for the management of abortion complications in developing countries, especially in the first trimester, we sought to know the proportion of the doctors who had received formal training in the use of the MVA method. Overall, 65% of the respondents (65% in Benin City, 55% in Warri and 75% in Kaduna) reported that they had received formal training in MVA use. Most of the respondents (59%) indicated that they received training at refresher courses organized by teaching hospitals and sponsored by the Ipas between 1975 and 1990. It was of interest that none of the doctors reported that they received training in MVA during their undergraduate medical training and only 6% reported that they received training as part of their specialist training. Other sources of training reported by the respondents included: private hospitals (16%), seminars and conferences (3%), experts (3%), Ipas literature (2%) and courses outside the country (5%).

When asked whether they had ever used MVA, 72% of the doctors reported that they had. Among those who had never used MVA, the most important reason for nonuse was lack of familiarity with MVA (47%), followed by non-availability of MVA (26%), dislike of abortions (8%) and high cost of equipment (8%).

Postabortion family planning and STD treatment

When asked whether they offered family planning services after treatment of abortion, 83% of the doctors reported that they did. Interestingly, the responses to this question were similar between the three study sites. As shown in Table VI, the most common type of postabortion family planning services included counseling, followed by the provision of services reported by 83% of those who provide such services. A few do not have their family planning services and

therefore reported that they counsel women and refer to other clinics.

As shown in Table VI, many of the clinics reported that they have a broad range of family planning commodities including pills, condoms, intrauterine contraceptive devices and injectable contraceptives. By contrast, only a few reported that they have vaginal foaming tablets and diaphragms. Only one-third of the providers reported that they have Information, Education and Communication (IEC) materials for counseling women about postabortion care and postabortion family planning.

With regard to STD treatment, almost half of the providers reported that they offer STD screening and treatment as part of their management of abortion. Many of them reported that they carried this out through visual inspection of the vagina and cervix for the presence of abnormal discharges, followed by microbiological testing in the laboratory. However, none specifically reported the use of the syndromic approach to management of STDs in their patients.

Discussion

This study was designed to investigate how Nigerian private medical practitioners manage women who experience unwanted pregnancies and complications of unsafe abortion. Our results

Table VI. Postabortion family planning services and STD treatment reported by private practitioners

Technique	Benin City (%)	Warri (%)	Kaduna (%)	Total (%)
Offer postabortion family planning (FP)	83	86	81	83
Method used				
Offer FP counseling only	8	3	1	4
Offer FP services only	4	8	2	4
Offer both	76	80	92	83
Refer to other FP clinic	2	7	2	3
Offer both and refer	10	2	3	6
Family planning commodities				
Pills	88	90	98	92
Condoms	71	72	65	69
IUCDs	78	87	80	81
Foaming tablets	18	21	27	22
Diaphragm	3	5	6	4
Injectables	82	79	91	85
Have IEC on family planning	31	31	36	33
Screen patient for STDs	42	56	55	50
Methods used for STD screening				
Inspect cervix for infection	16	10	6	11
Take vaginal swab	19	39	21	25
HIV screening	4	0	5	3
Inspect cervix + take vaginal swab	23	29	18	22
Inspect cervix + HIV screen	2	0	3	2
Take vaginal swab + HIV screen	9	7	25	14.9
Do all	28	15	22	22.4

indicate that although a large proportion of the doctors receive women with unwanted pregnancies in their clinics, only 24% of private doctors in the three cities routinely assist the women in terminating such pregnancies. Most of the doctors would not terminate unwanted pregnancies but would counsel the women to continue the pregnancies or refer them to other doctors who perform terminations. By contrast, over 80% of the doctors overall reported that they treat women who experience complications of unsafe abortions, especially those with incomplete and septic abortions. These results indicate that unwanted pregnancies and abortion are major problems in the three cities for which private practitioners have taken personal positions on ways to resolve them for women. It was of interest that despite the existence of a restrictive abortion law in the country, respect for the law was not the most cited reason for the doctors' reluctance to carry out induced abortion. Instead, religious and moral obligations were the most offered reasons; however, the religious backgrounds of the doctors were not significant predictors of the doctors' willingness to carry out induced abortions in the multivariate analysis. Thus, it is clear that while religion may be important, these views are not held tenaciously and that more doctors might be willing to assist women more pragmatically if they were presented with alternative views such as the need to protect women's health and their reproductive rights and choice.

By contrast with their desire to carry out induced abortions and treat women with abortion complications, the results of this study suggest that a large proportion of the doctors still use nonstandard methods for the management of abortion and abortion complications. To date, MVA is the recommended method of choice for pregnancy termination or management of incomplete abortions in the first trimester in developing countries as it is easier to perform than the traditional D&C method and less likely to result in life-threatening complications (19,20). Yet only 45.6% of the private doctors in this study reported that they use MVA alone for the routine management of abortion in the first trimester. Most reported that they often combine MVA with D&C or carry out D&C alone in the management of abortion and abortion complications. Although MVA followed by a gentle sharp curettage to exclude retained products is an acceptable practice in Western countries, experience in African countries indicates that this often results in uterine perforation or postevacuation endometrial synechiae. Thus, the prevailing clinical consensus in African countries is to discourage this

practice as it increases the risks for postabortion complications, especially among practitioners with low levels of skills for uterine evacuation.

The results of this study also indicate that a large proportion of the respondents used intravenous sedation for pain relief during MVA and D&C procedures. In private health institutions with poor anesthetic backup, this practice would appear to be dangerous as it increases the risk of anesthetic-related morbidity and mortality. As currently designed, MVA can be carried out with minimal noninvasive methods of pain relief, and more practitioners ought to be encouraged to gain experience in the technique of paracervical block.

Similarly, while a large proportion of the doctors reported that they do not manage abortions in the second trimester of pregnancy, those who manage such abortions appear to use nonstandard and dangerous methods for the second trimester. The standard and acceptable methods for terminating pregnancies in the second trimester include dilatation and evacuation with cervical ripening using laminaria tents, prostaglandins (21) or misoprostol (22). By contrast, most of the doctors in the sample reported that they use artificial rupture of the membranes followed by uterine stimulation with high-dose oxytocin without priming with cervical dilating agents. Clinical experiences in Nigeria indicate that this method is not safe for pregnancy termination as it often results in prolonged induction–evacuation intervals with high risks of reproductive tract infection and increased rates of maternal morbidity and mortality.

Medical methods of pregnancy termination have become available worldwide. However, mifepristone is still not available in Nigeria probably because of its high cost. Although misoprostol has not yet been registered in Nigeria, it has been available for nearly 4 years on the black market and is being used for induction of labor at term and for the management of postpartum hemorrhage. More work is needed to increase physicians' knowledge of the use of this life-saving drug, which we believe can be promoted in Nigeria within the context of prevention of severe hemorrhage associated with incomplete abortion.

The results of this study therefore provide a compelling justification to provide continuing education to private doctors in these cities on the modern principles and practice of safe abortion care for women. Such education should include a description and practical demonstration of appropriate methods for managing abortion and abortion complications in the first and

second trimesters of pregnancy. It was of interest that none of the respondents reported the use of medical abortifacients such as misoprostol or mifepristone in the management of abortion complications or other methods such as laminaria tents or prostaglandins. This may be due to their lack of knowledge of these methods or the nonavailability of the methods in a country like Nigeria where the drugs are generally lacking or expensive. Thus, part of the training should include a description of the mechanism of action of these alternative methods as well as the identification of a mechanism to link the providers with sources of supply for the methods.

The results of this study suggest that the lack of knowledge of MVA was the most important reason for doctors' failure to use the method routinely for the management of abortion in the first trimester. In particular, none of the doctors reported that they received training on MVA use during their undergraduate training and only 6.4% received training during their postgraduate specialist education. Most of the doctors who had received training were trained under special refresher courses organized by teaching hospitals with funding received from Ipas. As these training programs are currently not active, there is a need for a sustainable program of training on MVA and postabortion care that would be integrated into all levels of the medical training curriculum, including undergraduate, postgraduate and continuing medical educational programs. We believe that such an approach would more effectively extend the scope of knowledge on postabortion care to all doctors at all levels and reduce the incidence of complications associated with induced abortions in Nigeria.

The extent to which the doctors practiced post-abortion family planning and integrated STD management into their care for women with abortion was also investigated in the study. The results suggest that over 80% of the doctors reported that they provide postabortion family planning services, while 50% reported that they offer integrated STD treatment. However, the reliability of the answers is suspect, as the providers may be particularly likely to provide "socially acceptable" answers to the questions. A more appropriate method to elicit this information is to conduct exit interviews with women who have attended the clinics for the management of abortion and abortion complications. Physical inspection of the clinics to identify the facilities available and their organization of services for abortion and postabortion family planning would also be helpful. However, only

one-third of the clinics reported that they had IEC material in their clinics for counseling women on postabortion family and none reported the use of the syndromic approach for STD management. These observations suggest that the available facilities in these clinics may be less than optimal for providing postabortion family planning and integrated STD management.

The reliability of the question on the actual practice of abortion by the doctors may be questioned. Although it is tempting to suggest that the doctors are unlikely to report their actual practice of abortion in a country where abortion is not legal, nevertheless we believe that every step was taken to increase the accuracy of self-reporting of abortion use or nonuse. First, we mobilized the AGMP in the states for the study, and held a series of seminars on abortion for private practitioners in the immediate weeks before the commencement of the study. Second, members of the AGMP were trained to administer the questionnaires and to explain the purposes of the study in a careful and sensitive manner. Third, the practitioners were assured of confidentiality of information they provided and their names and those of their clinics did not appear in the questionnaire. We believe that these approaches increased the probability that reliable answers to the question on abortion use were provided by the practitioners. Further insights into the reliability of the question on abortion can be gained from the fact that some clinics reported much higher rates of abortion use than others. Indeed, one clinic in Benin City reported terminating up to 105 unwanted pregnancies each week, while some indicated that although they terminated pregnancies previously, they had stopped because of a change in their attitudes toward induced abortion. Thus, it would be more cost-effective to target the high-volume clinics to receive training on abortion and postabortion care, especially for second-trimester abortion.

In conclusion, the results of this study suggest that private medical practitioners in three cities in Nigeria carry out termination of pregnancy for women who experience unwanted pregnancies and abortion complications. However, their reported methods and procedures for managing these women in the first and second trimesters of pregnancy do not conform to currently accepted international standards and practices, and could contribute to the high rates of abortion-related morbidity and mortality in the country. In particular, there is poor use of MVA and medical induction methods and poor conceptualization of methods to integrate postabortion care and STD treatment into the management of women with

abortion and abortion complications. We recommend a comprehensive program of retraining of private practitioners as a principal short-term measure to address these issues in Nigeria. On a long-term basis, we believe that the theory and practice of safe abortion care should be integrated into undergraduate and postgraduate medical training curricula in the country so that future doctors become knowledgeable in the acceptable methods of managing unwanted pregnancies and complicated abortions. This approach could provide a framework for achieving significant and sustainable reductions in abortion-related maternal mortality and morbidity in Nigeria.

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References

- Okonofua FE. Preventing unsafe abortion in Nigeria. *Afr J Reprod Health* 1997; 1: 25–36.
- Whitaker C, Germaine A. Safe abortion in Africa: ending the silence and starting a movement. *Afr J Reprod Health* 1999; 3: 7–10.
- Okagbue I. Pregnancy termination and the law in Nigeria. *Stud Fam Plann* 1990; 21: 197–207.
- Okonofua FE, Onwudiegwu U, Odunsi OA. Illegal induced abortion: a study of 74 cases in Ile-Ife. *Niger Trop Doctor* 1992; 22: 175–6.
- Adetoro OO. A 15-year study of illegally induced abortion at Ilorin. *Niger Int J Gynaecol Obstet* 1989; 29: 65–8.
- Nunes FE. Unsafe abortion: from awful silence to positive action. *Afr J Reprod Health* 2000; 4: 7–9.
- Nunes FE, Delph YM. Making abortion law reform happen: a success story in Guyana. *Reprod Health Matters* 1995; 6: 12–13.
- Okonofua FE, Odimegwu C, Ajobor H, Duru PH, Johnson A. Assessing the prevalence and determinants of unwanted pregnancies and induced abortion in Nigeria. *Stud Fam Plann* 1999; 30: 67–77.
- Henshaw SK, Singh S, Oye-Adeniran B, Adewole IF, Iwere N, Cuca Yvete P. The incidence of induced abortion in Nigeria. *Int Fam Plann Perspect* 1998; 24: 156–64.
- Brabin L, Kemp J, Obunge OK, Ikimalo J, Dollimore N, Odu NN et al. Reproductive tract infections and abortion among adolescent girls in rural Nigeria. *Lancet* 1995; 345: 300–4.
- Ladipo OA. Preventing and managing complications of induced abortion in third world countries. *Int J Gynecol Obstet* 1989; 3: 21.
- Megafu OA, Ozumba BC. Morbidity and mortality from induced abortion at the University of Nigeria Teaching Hospital Enugu: a five-year review. *Int J Gynecol Obstet* 1991; 34: 163–7.
- Temin MJ, Okonofua FE, Omorodion FO, Renne ED, Coplan F, Heggenhougen HK et al. Perceptions of sexual behavior and knowledge about sexually transmitted diseases among adolescents in Benin City. *Niger Int Fam Plann Perspect* 1999; 5: 186–9.
- Otoide VO, Oronsaye F, Okonofua FE. Why Nigerian adolescents seek abortion rather than contraception: evidence from focus group discussions. *Int Fam Plann Perspect* 2001; 27: 77–81.
- Rogo K, Bolimer L, Onibaka C. Community level dynamics of unsafe abortion in Western Kenya and opportunities for prevention: summary of findings and recommendations from pre-intervention research. Los Angeles, CA: Pacific Institute for Women's Health and Center for the Study of Adolescence, 1999.
- Rogo KO, Orero S, Oguttu M. Preventing unsafe abortion in Western Kenya: an innovative approach through private practitioners. *Reprod Health Matters* 1998; 6: 77–83.
- Makinwa-Adebusoye P, Singh S, Audam S. Nigerian health professionals' perceptions about abortion. *Int Fam Plann Perspect* 1997; 23: 148–54.
- Okojie SE. Induced illegal abortion in Benin City. *Niger Int J Gynecol Obstet* 1976; 14: 517–21.
- Greenslade FC, Leonard AH, Benson J, Winkler J, Henderson VL. Manual vacuum aspiration. A summary of clinical and programmatic experience worldwide. Carrboro, NC: Ipas, 1993.
- King T, Benson J, Stein K. Comparing the costs of post-abortion care in Africa and Latin America. The DataPac project. Paper presented at the Global Meeting on Post-abortion Care, New York, Population Council, 1998.
- Porry KG Jr, Rinehart BK, Terrone DA, Martin RW, May WL, Roberts WE. Second trimester uterine evacuation: a comparison of intra-amniotic (15S-15-methyl-prostaglandin F₂ alpha) and intravaginal misoprostol. *Am J Obstet Gynecol* 1999; 5: 1057–61.
- Jain JK, Meekstooth KR, Mishell DR Jr. Early pregnancy termination with intravaginal administered sodium chloride solution moistened misoprostol tablets: a historical comparison with mifepristone and oral misoprostol. *Am J Obstet Gynecol* 1999; 181: 1386–91.

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