

“We have either obsolete knowledge, obsolete equipment or obsolete skills”: policy-makers and clinical managers’ views on maternal health delivery in rural Nigeria

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ABSTRACT

Objective The objective of this paper is to explore policy-makers and clinical managers’ views on maternal health service delivery in rural Nigeria.

Design This is a qualitative study using key informant interviews. Participants’ responses were audio recorded and reflective field notes supplemented the transcripts. Data were further analysed with a deductive approach whereby themes were organised based on existing literature and theories on service delivery.

Setting The study was set in Esan South East (ESE) and Etsako East (ETE), two mainly rural local government areas of Edo state, Nigeria.

Participants The study participants consisted of 13 key informants who are policy-makers and clinical managers in ESE and ETE in Edo state. Key informants were chosen using a purposeful criterion sampling technique whereby participants were identified because they meet or exceed a specific criterion related to the subject matter.

Results Respondents generally depicted maternal care services in primary healthcare centres as inaccessible due to undue barriers of cost and geographic location but deemed it acceptable to women. Respondents’ notion of quality of service delivery encompassed factors such as patient-provider relationships, hygienic conditions of primary healthcare centres, availability of skilled healthcare staff and infrastructural constraints.

Conclusion This study revealed that while some key aspects of service delivery are inadequate in rural primary healthcare centres, there are promising policy reforms underway to address some of the issues. It is important that health officials advocate for strong policies and implementation strategies.

INTRODUCTION

Reducing maternal mortality is highly reliant on effective service delivery which in turn ensures the provision and uptake of quality maternal healthcare services.¹ Quality maternal healthcare is particularly important in Nigeria where maternal mortality remains an issue. Nigeria recorded 917 maternal

Key points

Question

► This study explored policy-makers and clinical managers’ views on maternal health delivery in rural Nigeria.

Findings

- The rural primary healthcare (PHC) sector operates within a selective, rather than comprehensive, approach to PHC. The vast proportion of expenditure on the nation’s healthcare system is allocated to curative services; therefore, the PHC sector in Nigeria remains largely underfunded to adopt a multisectoral, multidisciplinary and holistic approach to maternal healthcare service delivery.
- Maternal healthcare services in rural areas can be inaccessible due to barriers of cost, geographic location and sociopsychological factors such as beliefs, degree of participation in the healthcare process and nature of patient–provider interactions.
- While some key aspects of service delivery are sub-optimal, there are promising policy reforms underway to address some of the issues.

Meaning

- Findings from this study have highlighted the need for renewed policy commitments towards strengthening maternal healthcare service delivery in rural PHCs. There should be effective coordination within the health system, optimal capacity building and skill development of healthcare personnel and continued emphasis on strong leadership within the healthcare system.

deaths per 100 000 live births in 2017 and it is estimated that a woman in Nigeria faces a 1 in 22 lifetime risk of complications during pregnancy or childbirth.^{2 3} The delivery of high-quality maternal healthcare through the country’s primary healthcare (PHC) system is key to preventing and treating the major

causes of maternal mortality particularly for resource poor communities. This is because PHC in Nigeria remains the most accessible and affordable form of care that serves most of the population.⁴

Over the years, Nigeria has embarked on policies in efforts to improve delivery of maternal healthcare services through PHC. The Basic Health Service Scheme (1975–1983) was created to avail quality healthcare to the entire population with emphasis on improved delivery of maternal and child health services.^{4,5} Between 1985 and 1992, a national health delivery system in line with the principles of the Alma-Ata Declaration was implemented and Nigeria saw the greatest boost to maternal healthcare service delivery during that period.^{6–8} More recently, the country implemented the 2009 National Midwifery Service Scheme which was designed to increase coverage of skilled birth attendants in rural PHCs to reduce maternal, newborn and child mortality.⁷ Despite these efforts towards strengthening the delivery of maternal healthcare services through PHC in Nigeria, challenges persist. PHC services remain grossly underutilised for maternal healthcare particularly in rural communities.⁹

Studies in Nigeria have examined service delivery of maternal healthcare using indicators such as quality, accessibility and availability. Quality of maternal care services is commonly assessed using structural and process indicators such as lack of equipment and lack of policy, respectively.^{10,11} Safety of care provided should also be assessed.¹² Accessibility of maternal health services in PHC centres is gauged using dimensions of physical and economic accessibility¹³; however, the sociopsychological considerations of people's ability to use health services is often missed. Furthermore, studies on the availability of maternal healthcare services often consider the physical delivery of services,¹⁴ but considerations of service delivery should also include the range of services provided.¹²

Arguably, the aforementioned commonly used indicators provide a narrow picture of service delivery of maternal healthcare in PHC centres. WHO prescribed key characteristics that offer a broad understanding of appropriate service delivery mechanisms in a health system.¹² These characteristics include: comprehensiveness, accessibility, coverage, continuity, quality, person-centredness, coordination and accountability. Also crucial in the delivery of maternal healthcare services are the wide range of human actors (stakeholders) such as policy-makers and clinical managers who establish and operationalise frameworks that shape the delivery and uptake of skilled care. Engaging these key stakeholders in efforts to improve maternal healthcare service delivery enhances the likelihood of impactful systemic changes.¹⁵ Against this backdrop, this study aims to examine the delivery of maternal healthcare services through PHC in rural Nigeria. This is done from the perspectives of policy-makers and clinical managers in rural Edo's PHC sector. This study forms part of a larger initiative in Edo State by the Women's Health Action Research Centre and the University of Ottawa. As part of the formative phase of the larger study, this study

was designed to inform the development of interventions for improving access to, and the use of PHC services for maternal healthcare in rural Nigeria.

METHODS

This study uses a qualitative research design within which thematic analysis was applied. Thematic analysis is a method for identifying, analysing and reporting themes within data.¹⁶ The authors applied this method in its contextualist sense, meaning that through this method, the authors acknowledge ways individuals make meaning of their experience and also how those meanings are influenced by the broader context. Specifically, the authors applied a theoretical thematic analysis whereby analysis is driven by a theoretical knowledge of service delivery.¹⁶

This study uses data from key informant interviews in rural Edo State, Nigeria and focuses on maternal healthcare service delivery from the perspective of policy-makers and clinical managers. Key informant interviews are in-depth interviews with individuals possessing particular knowledge and understanding of a subject matter. The authors deemed policy-makers and clinical managers key informants based on Gilchrist and Williams's description of key informants.¹⁷ These are individuals who possess essential knowledge of the subject matter and have access to perspectives or observations that would ordinarily be inaccessible to the researcher.¹⁷ Our findings were reported based on the Consolidated Criteria for Reporting Qualitative Research (see online supplemental file 1).

Research setting

This study was conducted in Edo state, one of Nigeria's thirty-six States. Specifically, this study was conducted in Esan South East (ESE) and Etsako East (ETE), two mainly rural local government areas (LGAs) of Edo state with 10 political wards each. These study sites were chosen because preliminary baseline assessments revealed high maternal mortality rates and low use of PHC facilities.¹⁸ ETE is located in the northern part of Edo State and comprises of 213 940 residents, while ESE is located in the southern part with 241 492 residents in 2020. The principal source of maternal healthcare in the two LGAs is PHC. ETE has 28 PHC centres and two general hospitals (secondary health facilities), while ESE has 25 PHC centres and one general hospital.

Participants and sampling

The study consisted of 13 stakeholders from different institutions in ESE and ETE. Participants included one senior official with the State Ministry of Health, one senior official with the State Primary Healthcare Development Agency, two senior officials responsible for PHC at each LGAs, two senior LGA officials, and seven clinical managers in PHC centres.

Key informants were chosen using a purposeful criterion sampling technique.¹⁹ The criteria for selection was

that participants were in a key leadership position within the PHC sector. The lead investigators (FEO, WI and LFCN) contacted each participant by email (or phone) with information about the study, voluntary participation, and informed consent. Sample size was determined with a focus on attaining thick and rich data.²⁰ Following recommendation from studies and observing that in-depth interviews generally adopt a sample size of multiples of 10, this study purposefully recruited participants from different backgrounds and professions with the goal of obtaining detailed, nuanced and intricate data.^{20,21}

Data collection and procedures

The lead investigators (FEO, LFCN) conducted a 3-day training session for the research assistants who carried out this study. The training focused on the following factors: goals of the research, the art of qualitative data collection, using key informant interview guides in qualitative research, the role of the data collector, research ethics and data collection using electronic devices. The lead investigators developed a key informant interview guide and on the last day of training, the trained research assistants moderated the pilot of the guide in a community with similar characteristics to the study site. The key informant interview guide was moderately structured to allow for free description of opinions and experiences.

The trained research assistants conducted 13 key informant interviews. All data were collected in English between 16 July 2017 and 30 August 2017. The research assistants audio recorded the interviews and took reflective field notes to supplement the transcripts. Interviews lasted for 45 min on average and ended when no further issues arose.

Research instruments

The key informant interview guide consisted of open-ended questions and follow-up probes on stakeholders' perceptions of maternal healthcare service delivery across PHCs in rural ESE and ETE communities. The interview guide was developed based on the authors' experiences with influence from existing literature on service delivery. A full description of the key informant interview guide is available (see online supplemental file 2).

A sample of issues discussed with participants include:

1. Characteristics of maternal healthcare services delivered in PHCs in rural Edo.
2. Opinions on effective delivery of services in PHC centres in rural Edo.
3. Challenges and opportunities for service delivery in PHCs.

Data analysis

The primary author (OU) and corresponding author (SY) analysed the data, and the coauthors validated the data. The authors compared the transcripts with the audio recording and field-notes to ensure accuracy. In analysing the data, the authors applied an iterative process of inductive and deductive approaches to thematic coding.

Box 1 Definitions of key characteristics of service delivery

Participants' views of maternal healthcare service delivery in rural Nigeria are presented in five overarching themes. These themes are in consideration of the WHO's key characteristics of good service delivery.¹²

1. **Comprehensiveness:** A comprehensive primary healthcare (PHC) approach to maternal healthcare provides a range of services that are preventive, curative and promotive.
2. **Accessibility and coverage:** A key characteristic of good service delivery is one where services are designed to reach all patients in a defined target population without barriers of cost, geography or culture. Another important dimension of access is the sociopsychological aspect of women's ability to use PHCs for maternal care such as their beliefs, degree of participation in the healthcare process and nature of patient-provider interaction.
3. **Quality of service:** A key characteristic of good service delivery is that services are of high quality, safe and given in a timely fashion.
4. **Person-centredness and coordination:** This dimension of service delivery considers if services are organised around the individual with participation from them and their community in their own healthcare. Coordinated service delivery is represented by an actively coordinated service network across different levels of care and involving multisectoral collaboration.
5. **Accountability and efficiency:** A key aspect of good service delivery is the effective and efficient management of health services.

Following the recommendation of data analysis from Braun and Clark,¹⁶ the authors became familiar with the data, then proceeded to generate codes, then searched for themes, reviewed and defined themes. This was in line with an inductive approach to coding where themes emerged from the data not from any preconceived categories. The data was further analysed with a deductive approach whereby themes were organised based on existing literature and theories on service delivery.¹²

Themes were generated as follows: line-by-line reading generated words or phrases with similar meanings that were linked to the study's aim and existing literature on service delivery of maternal healthcare in rural Nigeria. These findings were categorised, noted, and subsequently grouped into a coding scheme with the purpose of creating subcategories. Subcategories gave a more general description of the content. Similar subcategories were grouped to formulate main themes. Multiple coders (SY and OU) worked independently to analyse the transcript, manually code the interview data using free codes and develop the various themes. To establish inter-rater reliability and ensure trustworthiness of the study, the coders conducted frequent discussions to examine consistency during the individual process of coding. The coauthors audited the data analysis and reached a consensus on emerging themes. Please see [box 1](#) for definitions of key themes under which findings were reported.

Trustworthiness

This qualitative study used various strategies to enhance trustworthiness of the data. The interview guides were

structured to allow for iterative questioning including the use of probes to elicit detailed data, and questions were rephrased to participants when necessary.²² After data collection, FEO and LFCN conducted member checks to ensure accuracy of the data. The coding process involved two coders (SY and OU) working independently to code the data and collaboratively to generate themes. The principal investigators FEO, SY and LFCN who have ample experience in reproductive health in sub-Saharan Africa audited the findings and provided feedback. Triangulation is important in promoting confirmability.²² This study approached triangulation via data sources by interviewing a wide range of key informants. In writing up the manuscript, the author (OU) described the aim of the research and provided thick descriptions of participants' responses, alongside relevant quotes to confirm interpretations. Quotes were also chosen to represent a typical response relative to the theme. These were necessary to enhance confirmability.²³

Patient and public involvement

Patients and the public were not involved in the design and conduct of this research.

RESULTS

Comprehensiveness

Study participants depicted PHC centres as providing a wide range of maternal healthcare services to women. As part of primary care, pregnant women received preventative services such as antenatal care and health promotive services focused on healthy nutrition and personal hygiene during pregnancy. PHCs offer family planning services including a constant supply of contraceptives to women. Participants commented on the range of services available in PHC centres.

Nationally, we have this free malaria program for pregnant children and children under 5...You have programs to eliminate mother to child transmission of HIV... You also have programs on nutrition...programs are running on increasing access to family services. (Senior official, Ministry of Health)

We teach and encourage some women to do backyard garden. (Clinical manager, ESE)

Furthermore, participants' comments demonstrated a strong partnership between PHC centres and the community in designing and implementing acceptable maternal health services. Beyond the provision of health services, some PHC centres enhanced the efforts of communities to build water tanks. Clinical managers explained that they prioritised a good working relationship with the community.

We summoned chiefs in all the quarters, they came there, we let them know what is happening here [PHC], so that it will not look like a taboo to them, We asked them to encourage their people to accept

[PHC], with that the chiefs went out to build the relationship [with the community]. (Clinical manager, ESE)

These positive reports notwithstanding, some participants felt that PHC centres did not provide a range of maternal health services. Participants felt that PHC centres were ill equipped to provide basic maternal healthcare. For instance, pregnant women were unable to undergo routine screening and testing at PHC centres due to the shortage of equipment. Women were often referred to secondary or tertiary health facilities to receive basic maternal healthcare. These facilities were often outside of their communities, thereby causing delay in reaching care.

So, we are trying to look for some basic things but [PHC] facility does not have a glucometer to instantly check the blood sugar of a patient in antenatal. (Senior official, PHC, ESE)

Accessibility and coverage

Participants reported that even with the range of maternal healthcare services currently provided in PHC centres, there were disparities in healthcare access and utilisation of various services. Factors such as out-of-pocket costs for services and the physical accessibility of PHC facilities meant that compared with wealthier women, women of low socioeconomic status in rural areas were less likely to receive maternal healthcare. There were discrepancies in perspectives of coverage between policy-makers and clinical managers. Some policy-makers in the ESE region believed that maternal healthcare services and basic medication during pregnancy were provided free of charge to women. A policy-maker commented:

Here even delivery is free, government policy, except it is not a normal delivery, then there may be some charges, but if it is normal it is free. Malaria treatment for instance for pregnant mothers and zero to five is also free, drugs are very available and are also free, so people are aware of these incentives and they try to take advantage of it. (Senior local government official, ESE)

Other policy-makers in the same region, however, did not share this view because women were often required to pay out of pocket for basic maternal healthcare services, which were supposed to be free of charge. For instance, some PHC centres required that pregnant women provide basic medical supplies such as surgical gloves and cord clamps, prior to assisting with deliveries. In addition, patients pay out of pocket for drugs and routine medical screening. Participants also noted that in some cases, the financial costs of PHC could get so expensive that it amounted to the same as secondary healthcare costs. Participants were concerned that these factors have added up to make maternal services unaffordable for most of the rural population, particularly poor families.

Policy-makers and clinical managers asserted that offering free maternal health services would improve women's use of PHC centres for maternal healthcare services.

It is supposed to be free to deliver, you know, but if a woman comes to deliver, provision of things like surgical gloves for you to be able to take a delivery is one of the criteria and then little things like cord clamps, but [after delivery], they pay 2000 naira [~\$5 USD] (Senior Official, PHCs, ESE)

[primary] health centre is supposed to be cheaper than general (secondary healthcare), but sometimes, you see the bill being the same because of no drugs (Clinical manager, ETE)

Furthermore, participants indicated that access to maternal care services was hampered by distance to PHC centres. Moreover, bad roads and lack of reliable transportation deterred women's access to maternal health services. Participants cited the need for more PHC centres because current centres were operating beyond capacity.

The distance to PHCs, those that really live very far can really find it very difficult to access the PHCs. Therefore, PHCs really need to spread out more and maybe on a ratio to population. PHCs ratio shows a little lower than what it is now. We have so many people attending just one PHC or being serviced by one PHC, so we want many more PHCs so that many more people will have where to go. I think that is what has reduced their usage. (Senior official, PHCs, ETE).

Participants indicated that factors related to beliefs, and nature of relationship with providers play a role in women's access to maternal healthcare services. Participants described efforts to make services accessible to communities. They reportedly enhanced the acceptability of services by consulting community members and encouraged their participation in designing and delivering health programmes. However, participants highlighted issues related to the nature of interactions between patients and healthcare providers. Healthcare workers were reportedly harsh and abusive to women, and this discouraged their use of PHCs for maternal care.

Another thing is the relationship of the nurse to the patient, do you understand? There are some people [nurses] who are harsh to them [patient] so they may change health facility. (Clinical manager, ETE)

While participants' views gave a general sense that maternal health service delivery was not always designed to cover all women seeking care, some applauded existing initiatives that aimed to increase the coverage of maternal healthcare services. One of such initiative is the drug revolving fund, a drug management initiative aimed at making essential medication accessible and affordable, particularly to pregnant women and children. The drug revolving fund initiative reinvests revenue from the sale of

drugs in the purchase of new drugs thereby making them more accessible and affordable in PHC centres.

The LGA has released One Million Naira (~\$3000 USD) for Drug revolving fund because no matter how beautiful a health centre is, no matter how equipped the state of the art, material, no matter how much, I mean the number of staff you have updated, if there are no drug, there is nothing you can do especially when a woman delivers (Clinical manager, ESE)

Quality of service

Quality maternal healthcare services particularly during pregnancy and childbirth were reported as the exception rather than the rule in rural communities. In the case of pregnancy care, participants linked quality care with adverse pregnancy outcomes. A PHC centre was reported to deliver quality skilled pregnancy care if there was an absence of adverse pregnancy outcomes such as stillbirths, prepartum/postpartum haemorrhage, and maternal deaths in the past year. Participants linked the quality of maternal health services to the provision of skilled care by qualified healthcare personnel. An overwhelming number of participants across the different LGAs expressed displeasure over the extreme shortage of the health workforce which has resulted in unsafe and inefficient service delivery. The shortage of doctors or midwives in rural PHC centres often meant that unqualified healthcare staff handled obstetric emergencies. There were reported instances of maternal deaths during obstetric emergencies due to the absence of qualified healthcare workers. A clinical manager described the current situation of staff shortage in rural communities:

Yes, for instance in all the health centers in this LGA, we just have one. One nurse per center but at least you are supposed to have four, four personnel on ground so that if one does morning, the other afternoon, the other one night. At least we should have one maybe on leave but in this case we have just one staff who runs 24 hours duty today, tomorrow, the same thing. So, there is shortage of staff, I mean a qualified nurse midwife in this local government, we are very much short staffed. (Clinical manager, ESE)

There are ongoing efforts to improve the quality of care provided by healthcare staff in rural PHCs. Policy-makers and clinical managers attested to various human resource training and skill enhancement opportunities in the PHC sector provided by various non-governmental organisations. They reportedly received training on a range of topics including immunisation, malaria treatment, skilled pregnancy care, healthcare management, drug revolving scheme and legal matters. Respondents believed that opportunities for training were impactful in boosting the morale of healthcare staff and keeping them motivated while on the job. Additionally, trainings were viewed as important in expanding the knowledge base of healthcare workers, particularly lower-trained cadre of workers such

as community health workers. Participants felt that basic pregnancy care training for community health workers would prepare them to assist during obstetric emergencies, which will go a long way in reducing maternal morbidity and mortality. However, training opportunities were not always distributed fairly as healthcare workers with relatives and friends in power were more likely to get more training and skill enhancement opportunities than other healthcare staff. Participants called for a more equitable distribution of training opportunities among healthcare workers to improve the quality of care.

The issue is that sometimes they organize trainings, and it is the same set of people that keep going because they are connected. So, we need to organize trainings in such a way that it goes round, everybody has an opportunity to be trained not just the same people just because they are connected in one way or the other. So, there is issue of training (Senior official, SPHCDA)

Respondents also considered quality of care in the context of cleanliness of the health centres. Quality indicated the capacity of PHCs to offer clean and hygienic care to women. Most health facilities were reportedly lacking consistent water supply and adequate toilet facilities. Furthermore, participants expressed negative views related to apathy, abusive practices of healthcare providers, and the lack of basic and life-saving equipment. Women were mistreated when seeking care in PHCs and services were delayed. Participants discerned that these conditions discouraged women's use of health facilities. Participants generally believed that more maternal deaths occur in underfunded, underequipped and understaffed PHCs compared with equipped facilities.

We have either obsolete knowledge, obsolete equipment and obsolete skills and all these things affect the overall effectiveness of health services and the satisfaction we get from it in our health facilities. (Senior official, PHCs, ETE)

Person-centredness and coordination

While participants agreed that PHCs were lacking in infrastructure and quality service, they believed that maternal health services were person-centred. They viewed services provided to patients as acceptable and responsive. Clinical managers reported being truthful and open in communicating health issues with pregnant women. They made pregnant women aware of any pregnancy complications when detected and swiftly referred them to secondary healthcare facilities when necessary.

Clinical managers across different PHCs reported that they worked collaboratively with their teams of healthcare workers to discuss appropriate care plans and procedures for patients. Clinical managers would occasionally refer women to better-equipped private facilities when necessary. A participant commented on services provided in PHC centres:

So, there are a host of advises you can give to the woman if they come to the hospital [PHC] which TBA [traditional birth attendant] will not be able to offer. I have a host of colleagues, either in private or in Irrua specialist hospital, around this place that I can call, so we can refer them to such people. Even the general hospital at Ewohimi, at Uhaikphen, the Doctor there is even a Gynaecologist. We have been collaborating in that area recently and we discuss a lot. (Senior official, PHCs, ESE)

Coordinated service delivery is represented by an actively coordinated service network across different levels of care and involving multisectoral collaboration. Narratives of participants indicated some level of coordination of care, which involved collaboration with other levels of care and other types of health providers. Participants commented on having an effective referral system, but there was no mention of provision for transportation to facilitate referrals.

I don't think we have a lot of people dying in the PHC. The reason being that the referral system is working so when they get cases that are serious, they usually will refer. Most of those death will occur on the secondary facility and not in the Primary Health Care Centres. (Senior official, Ministry of Health)

Accountability and efficiency

Participants expressed their discontent over the lack of cohesive and efficient management of health services in PHC centres. Different government bodies coordinate various aspects of PHC such as infrastructure, health programming and staff wages thereby leading to a fragmented system. Participants explained that a fragmented system has amplified gaps in PHC infrastructure, human resources management, and access to basic medical equipment, all of which have implications for service delivery. For instance, healthcare staff are not deployed to PHCs based on need. Therefore, PHCs end up with far too many administrative staff while lacking key healthcare workers. Furthermore, healthcare workers were lacking adequate support, supervision and accountability. Participant believed that PHC management generally lacks transparency and accountability.

There is so much fragmentation. So right now, we are trying to get it to be under one management, under one authority. So that there is one body regularizing everything, there will be one body in charge of discipline. So, somebody does not come to work, he is going to be disciplined. Somebody ensures that things are in place, there is security, there is equipment, there is [labour], there is funding. We will employ people that we need, not having so many administrative staff, meanwhile the key health personnel are lacking. By the time there is a body in charge of all that, less interference from politicians, I think this PHC will actually work. (Senior Official, SPHCDA)

Participants noted ongoing policy reforms to address issues of efficiency and accountability within rural PHC system. Policy-makers at the state and local government levels were making plans to implement a Primary Health Care Under One Roof policy which aims to address issues of fragmentation by integrating PHC under one authority. Participants believed that the policy would enable PHCs run effectively and in turn improve pregnant women's uptake of skilled maternal care services at PHCs.

The PHC's have been in existence for over a hundred years and yet the situation of things has not improved. I think with this PHC Under One Roof Policy that is being promoted, we are hopeful that things will get better. (Senior Official, SPHCDA)

DISCUSSION

Service delivery is a key function of a health system which should be monitored and strengthened to meet minimum quality standards. The WHO's key characteristics of good service delivery provide a bedrock to examine and monitor service delivery.¹² In this study, the authors interrogated policy-makers' and clinical managers' notions of service delivery of maternal healthcare in PHCs. Findings were organised in the context of WHO's key characteristics of good service delivery.¹²

A comprehensive model of service delivery in PHC is holistic, acceptable and operates beyond a biomedical understanding of health by considering social determinants of health.^{24 25} As a contrast, a selective model of PHC focuses mainly on curative services to fight diseases through medical intervention and no other factors such as social determinants of health.^{24 25} Participants' narratives suggest that even though PHC centres provide a range of services, PHCs operate within a selective, rather than comprehensive, approach to PHC. These findings closely mirror existing findings from studies in Nigeria and South Africa.^{26 27} The Nigerian health system has long favoured curative and medical-oriented services over preventive services. The vast proportion of expenditure on the nation's healthcare system is allocated to curative services, therefore, PHCs remain largely underfunded to adopt a multisectoral, multidisciplinary and holistic approach to service delivery.^{7 28}

Furthermore, participants generally depicted maternal care services in PHCs as inaccessible due to barriers of cost and geographic location. They agreed that despite claims of free maternal health services by the government, payment was required for delivery and other maternal healthcare services including costs for drugs and basic medical supplies. Participants were concerned that PHC maternal health services were unaffordable for poor women in rural communities. Indeed, Nigeria's Federal Ministry of Health in 2007 recommended that states implement free maternal and child health policies, however, the implementation of free healthcare policies in health facilities has been hampered by several

pre-existing challenges including weak decentralisation, inadequate funding of health facilities, inadequate physical infrastructure, poor governance and accountability, and shortage of healthcare staff.^{29 30} While participants believed that eliminating user fees for PHC would increase women's use of PHC centres for maternal care, findings elsewhere have shown contrary results.²⁹ Enugu State, one of Nigeria's 36 State, adopted free maternal healthcare in 2007 but has not recorded a sustained improvement in the use of PHC over time.²⁹ Evidence from Kenya, however, is consistent with participants' beliefs. Health facilities in Kenya observed an increase in women's use of healthcare facilities for deliveries with the removal of user fees. However, pre-existing systemic challenges were addressed prior to implementing free maternal care policies. The country's reduction in rural maternal mortality ratios was attributed to the high use of free delivery services among the poor population in rural areas.³¹

Beyond issues related to cost, participants indicated that issues of physical accessibility to PHC centres often hamper service delivery. This issue has been identified in rural communities elsewhere.^{9 32} Also emerging from this study is the recognition of the role of sociopsychological factors such as beliefs, degree of participation in the healthcare process and nature of patient-provider interaction, in people's ability to seek healthcare. This finding is corroborated by research that recognises that an individual's health outcomes can be determined by various factors including the degree of participation in the healthcare process, the degree of understanding of illnesses, and the nature of the interactions between patients and healthcare providers.³³ Furthermore, the WHO links the quality of service delivery to the effectiveness, safety and person-centredness of services.¹² Similarly, respondents' notion of quality of service delivery encompassed factors such as patient-provider relationships, hygienic conditions of PHC centres, availability of skilled healthcare staff and infrastructural constraints. Respondents were generally displeased with the poor quality of maternal care services delivered in PHCs. They identified the massive shortage of skilled health professionals as a major deterrent to service delivery. In some cases, lack of a skilled health professional to assist a delivery has led to maternal deaths. These findings reassert various views on the quality of service delivery in PHCs across Nigeria and sub-Saharan Africa.³⁴⁻³⁶

Participants intimated that efforts are underway to strengthen maternal health service delivery in rural PHCs. Policy-makers were embarking on a cost recovery mechanism known as the drug revolving fund, to improve access to drugs in rural PHCs. This initiative works by having governments (or donor agencies) make an initial investment of capital to aid PHC centres in the purchase of drugs, then PHC centres fund future purchases of drugs through user fees.³⁷ This initiative is not new in Nigeria. The drug revolving fund was established in Nigeria in 1987 as part of the Bamako Initiative. The goal was to

revitalise PHC centres through organising and sustaining efficient supply of essential drugs, among other things.³⁸ However, faulty implementation strategies of this policy in some Nigerian States have shifted the burden of healthcare financing onto the poor thereby making essential drugs unaffordable and inaccessible. Moreover, internally generated revenues are not often regulated or tracked, thereby limiting transparency on spending patterns of PHCs.³⁷

Participants also discussed another notable effort to strengthen service delivery. The Primary Health Care Under One Roof policy aims to address issues of fragmentation by integrating PHC under one authority.³⁹ Under this initiative, the State PHC Development Agency, a state level management agency, governs all aspects of PHCs and enhances access to funds for PHCs. Funds can be allocated towards the provision of essential drugs, maintaining health facilities, healthcare transportation and the development of human resources for PHCs.^{37 40} It is important to recognise, however, that national policies such as the Primary Health Care Under One Roof policy do not automatically translate into policies at the state level as state governments are encouraged but not obligated to adhere to national policies regarding health. Implications of this has been reported in some Nigerian states where functional aspects of the policy were only partially implemented resulting in an even more complicated and fragmented governance structure.⁴¹

Findings from this study have highlighted the need for renewed policy commitments towards strengthening maternal healthcare service delivery in rural PHCs. There should be effective coordination within the health system, optimal capacity building and skill development of healthcare workers and personnel, and continued emphasis on strong leadership within the healthcare system. Furthermore, health promotion, prevention and community participation should form a core part of maternal healthcare service delivery in rural PHCs. There are important limitations to this article. This study compares outcomes from similar policies in other African countries without accounting for confounding factors that contributed to the seemingly successful implementation of policies elsewhere, however, the authors presented relevant information to explain successes. Furthermore, the data from this study did not capture all aspects of a good service delivery due to the lack of relevant information; however, the authors thoroughly described the available data to contribute to a rich description of service delivery of maternal healthcare in rural PHCs in Edo State. The study aimed to capture views from a diverse group of stakeholders in Edo State, however, findings may not be generalisable to all of rural Nigeria as stakeholders' knowledge of service delivery within communities might differ, so will each community's priorities and experiences with PHC service delivery. Furthermore, the authors would like to point out that the participants have direct responsibility on delivering healthcare services and this may have impacted their narratives/perspectives.

CONCLUSION

This paper sheds light on maternal healthcare service delivery in rural PHCs in Edo state. Narratives of policy-makers and clinical managers suggest that even though PHC facilities provide a range of services, PHCs operate within a selective approach to PHC. Participants generally depicted maternal care services in PHCs as acceptable yet inaccessible due to undue barriers of cost and geographic location and poor quality. This study revealed that while some key aspects of service delivery are suboptimal, there are promising policy reforms underway to address some of the issues. These policies are works in progress as similar studies have noted that state governments are not obligated to adhere to national decisions regarding health. Therefore, there is likelihood for gaps in policies due to implementation strategies. It is important that health officials advocate for strong policies and implementation strategies. This also highlights the importance of active participation from intended beneficiaries of these policies who have a role in enhancing accountability of service quality and financial expenditure.

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REFERENCES

- WHO. Maternal Mortality: Key Facts. In: WHO Health Topics [Internet], 2019. Available: <https://www.who.int/news-room/fact-sheets/detail/maternal-mortality> [Accessed 2 Feb 2020].
- World Health Organization (WHO). WHO | Maternal health in Nigeria: generating information for action. In: Sexual and reproductive health [Internet]. World Health Organization, 2019. Available: <http://www.who.int/reproductivehealth/maternal-health-nigeria/en/> [Accessed 1 Jun 2021].
- WHO. UNICEF. UNFPA. *Trends in maternal mortality: 1990 to 2015 estimates by who, UNICEF, UNFPA, world bank group and the United Nations population division*. Geneva, 2015.
- Aregbeshola BS, Khan SM. Primary Health Care in Nigeria: 24 Years after Olikoye Ransome-Kuti's Leadership. *Front Public Health* 2017;5:127–31.
- Dunoy CI. Basic health services in Nigeria: models for primary care in America. *J Natl Med Assoc* 1979;71:693–5.
- World Bank. Improving primary health care delivery in Nigeria evidence from four states 2010.
- Omota GED, Onokerhoraye AG, Okonofua F. Perspective on primary healthcare in Nigeria, past, present and future. CPED monograph series 2014.
- Bear TC, Redmond S. Declaration of Alma-Ata. *Lancet* 1979;313:217–8.
- Ntoimo LFC, Okonofua FE, Igboin B, et al. Why rural women do not use primary health centres for pregnancy care: evidence from a qualitative study in Nigeria. *BMC Pregnancy Childbirth* 2019;19:277.
- Nnebue CC, Ebenebe UE, Adinma ED, et al. Clients' knowledge, perception and satisfaction with quality of maternal health care services at the primary health care level in Nnewi, Nigeria. *Niger J Clin Pract* 2014;17:594–601.
- Ugo O, Ezinne E-A, Modupe O, et al. Improving quality of care in primary health-care facilities in rural Nigeria: successes and challenges. *Health Serv Res Manag Epidemiol* 2016;3:2333392816662581.
- World Health Organization. *Monitoring the building blocks of health systems: a Handbook of indicators and their measurement strategies*. World Health Organization, 2010: 35. 1–92.
- Okafor IP, Sekoni AO, Ezeiru SS, et al. Orthodox versus unorthodox care: a qualitative study on where rural women seek healthcare during pregnancy and childbirth in Southwest, Nigeria. *Malawi Med J* 2014;26:45–9.
- Emmanuel NK, Gladys EN, Cosmas UU. Consumer knowledge and availability of maternal and child health services: a challenge for achieving mdg 4 and 5 in Southeast Nigeria. *BMC Health Serv Res* 2013;13:53.
- World Health Organization. *Multi-Stakeholder Dialogues for Women's and Children's Health: A Guide for Conveners and Facilitators*, 2014.
- Braun V, Clarke V. Using thematic analysis in psychology. *Qual Res Psychol* 2006;3:77–101.
- Gilchrist VJ, Williams RL, Second KILCrabtree BF, Miller WL, eds. *Doing qualitative research*. 2nd edn. SAGE Publications, Inc, 1999: 71–88.
- Yaya S, Okonofua F, Ntoimo L, et al. Increasing women's access to skilled pregnancy care to reduce maternal and perinatal mortality in rural Edo state, Nigeria: a randomized controlled trial. *Glob Health Res Policy* 2018;3:12.
- Patton MQ. Designing qualitative studies. In: *Qualitative evaluation and research methods*, 1990.
- Fusch PI, Ness LR. Are We There Yet ? Data Saturation in Qualitative Research Are We There Yet ? *Data Saturation in Qualitative Research* 2015;20:1408–16.
- Saunders B, Sim J, Kingstone T, et al. Saturation in qualitative research: exploring its conceptualization and operationalization. *Qual Quant* 2018;52:1893–907.
- Shenton AK. Strategies for ensuring trustworthiness in qualitative research projects. *EFI* 2004;22:63–75.
- Billups F. The quest for rigor in qualitative studies: strategies for institutional researchers. *NERA Res* 2014;52:1–5.
- Baum F, Freeman T, Lawless A, et al. What is the difference between comprehensive and selective primary health care? Evidence from a five-year longitudinal realist case study in South Australia. *BMJ Open* 2017;7:e015271–8.
- Obimbo EM. Primary health care, selective or comprehensive, which way to go? *East Afr Med J* 2003;80:7–10.
- Obembe TA, Osungbade KO, Ibrahim C. Appraisal of primary health care services in federal Capital Territory, Abuja, Nigeria: how committed are the health workers? *Pan Afr Med J* 2017;28:134.
- Bresick GF, Sayed A-R, Le Grange C, et al. Western Cape primary care assessment tool (PCAT) study: measuring primary care organisation and performance in the Western Cape Province, South Africa (2013). *Afr J Prim Health Care Fam Med* 2016;8:e1–12.
- Aregbeshola B. Towards universal primary health care in Nigeria. In: socialprotection.org [Internet], 2019. Available: <https://socialprotection.org/discover/blog/towards-universal-primary-health-care-nigeria> [Accessed 31 Jul 2020].
- Ogbuabor DC, Onwujekwe OE. Implementation of free maternal and child healthcare policies: assessment of influence of context and institutional capacity of health facilities in south-east Nigeria. *Glob Health Action* 2018;11:1535031.
- Okonofua F, Lambo E, Okeibunor J, et al. Advocacy for free maternal and child health care in Nigeria—Results and outcomes. *Health Policy* 2011;99:131–8.
- Gitobu CM, Gichangi PB, Mwanda WO. The effect of Kenya's free maternal health care policy on the utilization of health facility delivery services and maternal and neonatal mortality in public health facilities. *BMC Pregnancy Childbirth* 2018;18:1–11.
- Solanke BL, Rahman SA. Multilevel analysis of factors associated with assistance during delivery in rural Nigeria: implications for reducing rural-urban inequity in skilled care at delivery. *BMC Pregnancy Childbirth* 2018;18:1–15.
- Krantz DS, Baum A, Wideman Mv. Assessment of preferences for self-treatment and information in health care. *J Pers Soc Psychol* 1980;39:977–90.
- Oladapo OT, Iyaniwura CA, Sule-Odu AO. Quality of antenatal services at the primary care level in Southwest Nigeria. *Afr J Reprod Health* 2008;12:71–92.
- Emelumadu OF, Onyeonoro UU, Ukegbu AU, et al. Perception of quality of maternal healthcare services among women utilising antenatal services in selected primary health facilities in Anambra state, Southeast Nigeria. *Niger Med J* 2014;55:148–55.
- Berhan Y, Berhan A. A meta-analysis of socio-demographic factors predicting birth in health facility. *Ethiop J Health Sci* 2014;24 Suppl:81–92.
- Kress DH, Su Y, Wang H. Assessment of primary health care system performance in Nigeria: using the primary health care performance indicator conceptual framework. *Health Syst Reform* 2016;2:302–18.
- Pangu KA. The Bamako initiative. *World Health* 1997;50:26–7.
- Uzochukwu B, Onwujekwe E, Mbachu C, et al. Accountability mechanisms for implementing a health financing option: the case of the basic health care provision fund (BHCPF) in Nigeria. *Int J Equity Health* 2018;17:1–16.
- Eboreime EA, Abimbola S, Obi FA, et al. Evaluating the sub-national fidelity of national initiatives in decentralized health systems: integrated primary health care governance in Nigeria. *BMC Health Serv Res* 2017;17:227.
- Asoka T. State primary health care management boards or agencies: micromanagement or strengthening local government authority capacity? *Afr Health: Nigeria* 2016;38:47–8 <http://africa-health.com/wp-content/uploads/2016/08/Africa-Health-Nigeria-edition-September-2016.pdf>