IMPROVING ACCESS TO HEALTH CARE IN RURAL COMMUNITIES BY RE-ORIENTING AND INTEGRATING PATENT MEDICINE SELLERS INTO PRIMARY HEALTH CARE SERVICE DELIVERY IN NIGERIA

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ABSTRACT

BACKGROUND

Good health is fundamental to improved quality of life, and the goal of promoting the health of rural community dwellers in Nigeria is critical in improving the quality of life of a vast majority of Nigerians who reside in rural communities. The objectives of this study were to determine the purpose for patronage of patent medicine shops; determine the reason(s) for preference for patent medicine shops to local health care centres; review the major challenges of patent medicine sellers or patent and proprietary medicine vendors (PPMVs); ascertain the level of uptake of cases in patent medicine shops compared to health centres; and to proffer a functional policy framework involving the patent and proprietary medicine vendors and shops to improve the quality and access to primary health care especially in rural communities in Nigeria.

MATERIALS AND METHOD

This cross sectional pilot study made use of questionnaires containing semi structured questions, through direct one-on-one interviews, and information was obtained from both PPMVs and individuals who patronize their shops. This study was done in four rural communities of Delta State, Nigeria. Two major primary data sets and a secondary data set were generated. The Statistical Package for Social Sciences (SPSS) version 21 for windows software was used for analysis and a descriptive presentation of the data was given.

RESULTS

From a total of 51 patent medicine shop users, 21 (41.2%) males and 30 (58.8%), females, with mean age of 30.2 years, 35 (70.5%) patronize PPMVs to buy medicine, while 14 (27.5%) went for consultation and just one person went to buy condom.

Twenty two (43.1%) respondents claimed proximity to place of residence as a major reason for preference for PPMVs, 6 (11.8%), mentioned familiarity with PMS owners, 5 (9.8%) said there was no delay in receiving treatment. All but one of the 14 patent and proprietary medicine vendors that were interviewed was male, with a mean age of 36.43 years. Four (28.6%) PPMVs claimed there was no major challenge in their business, 3 (21.4%) mentioned financial constraint. A comparative look at the total attendance records of both patent medicine shops and the health centres revealed poor level of utilization of health centres.

CONCLUSION

Patent medicine shops are unique and very important in health care delivery especially in rural communities of Nigeria. There is need for a paradigm shift towards reorienting and integrating PPMVs and other related drug outlets into the mainstream primary health care delivery system. This will serve as an opportunity to improve the coverage and quality of the health system in Nigeria.

KEYWORDS

Access to health; Rural communities; Patent medicine sellers; Primary health care.

INTRODUCTION

Good health is fundamental to improved quality of life, and the goal of promoting the health of rural community dwellers in Nigeria is critical in improving the quality of life of a vast majority of Nigerians who reside in rural communities. A new approach is needed in delivery of primary health care (PHC) in Nigeria. To propagate the primary health care initiative declared at Alma Alta, the principles of Ottawa charter on health promotion can be brought to bear in the push for a paradigm shift in rural health care delivery.

Interventions to reduce the burden of disease and mortality in sub-Saharan Africa increasingly recognize the importance of drug retailers in delivering basic healthcare services. (Beyeler et al., 2015). In Nigeria, owner-operated drug retail outlets, known as patent and proprietary medicine vendors (PPMVs), are a main source of medicines for acute conditions (NPHCDA, 2011). PPMVs are a particularly important source of care in rural and lower income communities (Onwujekwe et al., 2011), and National surveys show that PPMVs are the first source of care for between 8% and 55% of illnesses occurring among children under five (NPC, 2012).

BACKGROUND

ACCESS TO HEALTH CARE

A lot of mortalities in sub-Saharan Africa are due to poor access to timely and quality health care interventions which are preventable using low-cost public health interventions (Jones et al., 2003; Grais et al., 2007; Adedini et al., 2014). Health care utilization is limited in sub-Saharan Africa for many reasons and a major barrier to health care utilization is the long distance to health care facilities (Thaddeus and Maine, 1994; Frankenberg, 1995; Amooti-Kaguna and Nuwaha, 2000; Kadobera et al., 2012; Adedini et al., 2014).

Other problems with accessibility to care include evaluation of the adequacy of the numbers of healthcare facilities and the proper distribution of these facilities to allow easy and immediate access to a medical facility for every patient who needs one, the affordability, and therefore the accessibility of quality healthcare to all patients (Nwangwu, 2015).

PRIMARY HEALTH CARE AND QUALITY HEALTH CARE DELIVERY

Though Nigeria has one of the largest stocks of human resources for health (HRH) in Africa, it still suffers like other HRH crisis countries, with densities of nurses, midwives and doctors that are still too low to effectively deliver essential health services. The primary challenge for Nigeria is inadequate production and inequitable distribution of health workers. (WHO, 2015). The health workforce is concentrated in urban areas. These challenges are compounded by the fact that the federal government regulates 3 systems of health care delivery: orthodox, alternative, and traditional, without proper coordination of a common HRH and data collection system (WHO, 2015).

Although there are challenges with access to primary health care delivery in rural communities, the issue of quality of care should not be overlooked. Problems with the quality of care include evaluation of the adequacy of healthcare facilities and systems, including healthcare policies at medical centres, adequacy of standard operating procedures at these centres, adequacy of the level and scope of care provided by physicians and nurses in light of current knowledge and accepted standards of medical practice (Nwangwu, 2015).

PATENT AND PROPRIETARY MEDICINE VENDORS

A patent medicine seller is ‘a person without formal pharmacy training, who sells orthodox pharmaceutical products on a retail basis for profit’ (Brieger et al., 2004). They were established as a category of retailer by the Ministry of Health to provide a source of medicine in communities with limited access to essential health commodities (Barnes, 2008; Beyeler, 2015). Patent medicine stores or shops are owned by the holders of patent and proprietary medicine vendors licenses; and the Pharmacy Law in Nigeria specifies that patent medicine sellers or

patent and proprietary medicine vendors (PPMVs) are authorized to sell pre-packaged patent medicines in their original packs and over-the- counter (OTC) drugs(Erhun et al., 2001).

The PPMVs have a wide distribution, especially in low income countries, and studies show that they are the major drug retailers both in terms of value of drugs sold and number of outlets [Foster, 1991; WHO 1997a). About 200,000 operated in the country compared to 2,639 retail pharmacies that were registered in the same year of 2005, and they outnumber all other cadres of health workers in the country (AHWO, 2008; Barnes, 2008; Beyeler et al., 2015).

OTTAWA CHATTER AND HEALTH PROMOTION

The Alma Ata Declaration gave a definition of primary health care as 'essential health care based on practical, scientifically sound and socially acceptable methods and technology, made universally accessible to individuals and families in the community through their full participation and at a cost that the community and country can afford to maintain at every stage of their development in the spirit of self-reliance and self-determination' (WHO/UNICEF, 1978).

The Ottawa Charter is a consensus statement developed by World Health Organization at the 1st international conference on health promotion in Ottawa in 1986. It uses the term "health promotion" to summarize new approaches to public health intervention. The Charter defines health promotion as: "the process of enabling people to increase control over the determinants of health and thereby improve their health". Five major themes to the "New Public Health" from the Ottawa Charter include: Build healthy public policy, Create supportive environments for health, Strengthen community action for health, Develop personal skills, and Re-orient health services. (WHO, 1986).

Health promotion strategies and programmes should be adapted to the local needs and possibilities of individual countries and regions to take into account differing social, cultural and economic systems. Health promotion efforts are essential, and these require an integrated approach to social and economic development which will re-establish the links between health and social reform (WHO, 2009). There is a possible opportunity for a more effective promotion of health and improvement of access to health care and the utilization in the rural communities, if changes can be made to the primary health care approach in the country.

PROBLEM STATEMENT

The quality of health care service delivery in the rural communities is low and patient utilization of rural health care facilities seems to be low also.

JUSTIFICATION OF THE STUDY

Patent and proprietary medicine vendors and attendance at patent medicine shops seem to be popular with the rural community dwellers. This study seek to understand the reasons for the

seemingly higher patronage of PPMVs by rural community dwellers; the challenges faced by PPMVs; and, the prospect of re-orienting the health care system towards integrating the PPMVs and patent medicine shops into the broader primary health care delivery system in Nigeria especially in rural communities.

OBJECTIVES

1. To determine the purpose for patronage of patent medicine shops.
2. To determine the reason(s) for preference for patent medicine shops to local health care centres.
3. To review the major challenges of PPMVs
4. To ascertain the level of uptake of cases in patent medicine shops compared to health centres.
5. To proffer a functional framework involving the patent and proprietary medicine vendors and shops to improve the quality and access to primary health care especially in rural communities in Nigeria.

METHOD OF STUDY

This cross sectional study made use of questionnaires containing semi structured questions, mainly open ended questions, and selected trained interviewers were involved in gathering information. Information was obtained from both patent and proprietary medicine vendors and individuals who patronize their shops.

STUDY AREA

This is a pilot study and was done in four rural communities of Delta State i.e. Kiagbodo, Ossissa, Ezionum, and Akoku-Uno. Kiagbodo is located in Patani Local Government Area in Delta south senatorial district; Ossissa is located in Ndokwa East Local Government Area, while Ezionum and Akoku-Uno are located in Ukwuani Local Government Area in Delta north senatorial district of Delta State, Nigeria (Delta State, 2015).

SOURCES AND COLLECTION OF DATA

The interviewers approached the PPMVs, politely stated the purpose of the study and requested for assistance in data gathering from both PPMVs and individuals that patronize them. The interviewers also confirmed daily peak attendance periods for patronage to enable effective data gathering. Participants were recruited after establishing the inclusion and exclusion criteria, and informed consent was obtained from participants verbally. The questions were administered through direct one-on-one interviews with PPMVs and individuals who patronize the shops. Two major primary data sets and a secondary data set were generated in this study.

FIRST DATA SET

The socio-demographic characteristics of users of patent medicine shops were obtained and the respondents were asked to:

- Indicate their reason(s) for patronizing the PPMVs
- State the major reason why s(he) prefers to visit a patent medicine shop to a public health center or facility in the locality
- Indicate the medical complaint(s)
- Confirm if there was prescription from a doctor for those buying medicine and the type of medicine or drug purchased, and
- State treatment that was received.

The inclusion criterion: only individuals who patronized the PPMVs were included in this study.

SECOND DATA SET

Besides the socio-demographic characteristics, the PPMVs were asked to state the major challenge they encountered in running or managing their patent medicine business.

The inclusion criterion: Only PPMVs that own patent medicine shops in the communities were approached to participate in this study.

THIRD DATA SET

A third data set on attendance records at patent medicine shops and available health care centre in Kiagbodo and Ezionum communities, was generated for specific days, paired, and compared.

The inclusion criterion: only days during the course of the study were included for collection of attendance records at both the health facilities and patent medicine shops in the communities.

All patent medicine shops located in the communities where this study was carried out were included in the study.

DATA ANALYSIS

The collected data were cleaned, coded and entered into Statistical Package for Social Sciences (SPSS) version 21 for windows software for analysis. A descriptive presentation of the data was given.

The different biases (i.e. Non-sampling) encountered in this study include: non-response - this can be minimized by increasing the sample size; and measurement error - this was resolved by writing clear and simple questions, and proper training and supervision of survey workers.

RESULTS

The results for this study are presented in three sections comprising the first, second and third data sets respectively.

FIRST DATA SET: PATENT MEDICINE SHOP USERS

A total of 51 respondents were involved, 21 (41.2%) males and 30 (58.8%) females. Three women brought a child each for medical attention. The mean age and range was 30.2 years and 9 years to 72 years respectively, with a standard deviation of 13.4. Twenty three (45.1%) respondents were from Kiagbodo community, 34 (66.7%) had secondary school qualification, and 16 (31.4%) were students (see Table 1 for details).

PURPOSE FOR RESPONDENTS' PATRONAGE OF PATENT AND PROPRIETARY MEDICINE VENDORS

The purpose for most respondents' (35, i.e. 70.5%) patronage of PPMVs was to buy medicine, while 14 (27.5%) went for consultation at the patent medicine shop and just one person went to buy condom.

REASONS WHY RESPONDENTS PREFER TO VISIT A PATENT MEDICINE SHOP TO A PUBLIC HEALTH CENTRE

Twenty two (43.1%) respondents claimed proximity to place of residence as a major reason for preference, 6 (11.8%) mentioned familiarity with PMS owners, 5 (9.8%) said there was no delay in receiving treatment and received quick relief. The other reasons given are as shown on Table 2.

MEDICAL COMPLAINTS OF RESPONDENTS

More than half of the respondents (30, i.e. 58.8%) did not present any medical complaint. Seven (13.7%) complained of fever and/or malaria, 5 (9.8%) mentioned pain and/or headache. See Table 3 for the other medical complaints presented.

PRESCRIPTION FROM DOCTOR AND TYPE OF MEDICINE OR DRUG PURCHASED AND FORM OF TREATMENT RECEIVED

Only 3 (5.9%) respondents presented doctors' prescription, the others didn't. Sixteen (31.4%) purchased analgesic tablets, 18 (15.7%) bought antibiotics tablets, 1 (2%) bought Antibiotics

injection, while 14 (27.5%) bought antimalaria tablets. The other purchases made are also shown on Table 3. Forty two (82.4%) respondents were administered oral tablet drugs, while 2 (3.9%) received topical medication such as antifungal cream and aboniki balm. Also see Table 3 for the other forms of treatment received.

SECOND DATA SET: PATENT AND PROPRIETARY MEDICINE VENDORS

All but one of the 14 patent and proprietary medicine vendors that were interviewed was male. Two of them were from Kiagbodo community while 4 each were from Ossissa, Ezionum, and Akoku-Uno communities. Half of them have secondary school certificate qualification and the other half have tertiary qualification (including a Bachelor of Science degree while others are mostly National Diploma degrees).

The mean age of patent medicine shop operators (and the range) is 36.43 years (26 years to 66 years), while the standard deviation is 10.14 . The mean number of years in business of patent medicine shop operators is 8.29, with a minimum of 3 years and a maximum of 15 years. The approximate mean length and width of patent medicine shop premises and ranges in the communities visited are 11 feet (6 feet to 16 feet) and 9.93 (6 feet to 12 feet) respectively.

CHALLENGES OF PATENT AND PROPRIETARY MEDICINE VENDORS

Four (28.6%) operators of patent medicine shops claimed there was no major challenge in their business, 3 (21.4%) of them mention financial constraint as a major challenge in successfully running the patent medicine shop, while the other challenges mentioned are as shown on Table 4 below. Other minor challenges mentioned include - ‘customers receiving both orthodox and traditional drugs at the same time’, ‘unavailability of drugs’ and ‘the business not profit oriented’.

THIRD DATA SET: ATTENDANCE RECORDS AT PATENT MEDICINE SHOPS AND HEALTH CENTRE

A comparative look at the total attendance records of both patent medicine shops and the health centres in two communities revealed poor level of utilization or attendance to health centres (see Table 5 for details).

DISCUSSION

Access to health care is an important part of an overall health system and has a direct impact on the burden of disease that affects many countries in the developing world (Baker et al., 2008). Access to primary care services has been clearly shown to positively affect health systems and health in populations (Starfield et al., 2005). Proximity or distance from residence to health facility is the major reason given for preference for attendance at the patent medicine shop compare to the health centre. This is in line with other studies (Thaddeus and Maine, 1994;

Frankenberg, 1995; Amooti-Kaguna and Nuwaha, 2000; Baker et al., 2008; Kadobera et al., 2012; Adedini et al., 2014) done in Nigeria and other parts of the world, which also concluded that distance from residence to health facility is a key factor or barrier to accessing health care.

A study by Sule et al. (2008) concluded that community perceptions of poor quality and inadequacy of available services was responsible for low use of primary health care services. In addition, studies by Brugha and Zwi (2002), and Adetunji (1991), revealed other reasons for preference for PPMVs which include geographical accessibility, shorter waiting times, more reliable drug stocks, longer opening hours, greater confidentiality, more personable social interaction, ease of seeking advice, lower cost and flexible pricing policies and no separate fee charged for advice. These are in line with the findings from this study.

Statutorily, patent and proprietary medicine vendors can only sell patent medicines or over the counter drugs (OTC) that the Nigerian regulatory authorities, such as the Pharmacists Council of Nigeria (PCN), consider safe for unsupervised public use, as long as they are sold in their original manufacturer packages (Egboh, 1984; Ross-Degnan, 1996; Brieger et al., 2005 Okonkwo and Okonkwo, 2010). OTC drugs include common drugs like pain relieving tablets, antimalarials, cough syrups etc. PPMVs often stock controlled drugs such as antibiotics, and perform procedures that are outside the scope of their licensing (Adikwu, 1996; Okonkwo and Okonkwo, 2010) as observed in this study.

Antimalarial drugs rank high among the drugs administered by PPMVs in Nigeria (Okeke et al., 2006). This is also true for this study; the antimalarial drugs rank high after analgesic tablets, followed by antibiotics which are administered in significant quantity, as shown on Table 3. The lack of proper regulation of patent medicine practice in Nigeria is associated with the prevalence of fake medicines; the high incidence of self-medication; unforeseen side effects of drugs; treatment failures; antimicrobial resistance; attrition of public confidence in the drug market; protracted ill health etc (Peterson and Obileye, 2002).

Nigeria leaves the most important level of health care—primary health care—to the weakest tier of government with insufficient funding, resulting in poor coordination and integration between levels of care, giving rise to a weak and disorganised health system (Abimbola, 2012).

A World Bank commissioned study on Nigeria (2008) identified primary health care as the weakest chain in the entire health sector and the level of care the poor use the most.

A study by Beyeler et al., (2015) concluded that ‘although the quality of services provided by PPMVs is poor, they provide a source of access to essential medicines throughout Nigeria, across a wide range of disease areas’. With the current population growth in Nigeria and the limited number of trained health care providers, PPMVs are highly needed especially in the rural areas for the supply of drugs in treating minor illnesses (Awodele et al., 2012).

They can also importantly serve as potential pools of health promoters (including oral health) at the rural communities if adequately trained, retrained, equipped and properly incentivised. In addition, the PPMVs can also funnel attendance at patent medicine shops into the rural primary health care facilities when necessary, for improved access and utilization; and into the community based health insurance scheme that is been initiated in some communities, thereby contributing to its success and improving quality primary health care delivery. This can only occur if there is a rethinking and re-tweaking of the approach to primary health care especially at the rural communities.

The National Primary Health Care Development Agency (NPHCDA) is a federal government agency with policy and oversight roles on primary health care implementation at the state and local government levels in Nigeria, though not constitutionally empowered to implement programmes or policies at these two lower levels (Abimbola, 2012). A better understanding of the role of PPMVs and the quality of care they provide is needed in order to inform ongoing national health initiatives that aim to incorporate PPMVs as a health care delivery mechanism (Beyeler et al., 2015). A proactive role by NPHCDA would be important in formulating and propagating this innovative concept of reorienting and integrating patent medicine vendors and their operations into the primary health care delivery system in Nigeria.

LIMITATION

Since this is a pilot study, a more comprehensive study with a larger sample size and corrections made from this study with regards to study design, will be needed to give a more acceptably generalised result and statement about the topic of focus.

CONCLUSION

Patent medicine shops are unique and very important in health care delivery especially in rural communities of Nigeria. Since nearly 80% of illness episodes in most of the developing world are self-treated with modern pharmaceuticals obtained from community pharmacists and PPMVs (WHO, 1990; 1997b; Adikwu and Okoye, 1992), with its attendant complications, there is need for a paradigm shift towards reorienting and integrating PPMVs and other related drug outlets into the mainstream primary health care delivery system. This will serve as an opportunity to improve the coverage and quality of the health system in Nigeria and will be most beneficial to the health of the public in general in the long term.

Table 1. Socio-demographic characteristics of patent medicine shop users

Socio-demographic characteristics	**N**	**%**
Location		
• Kiagbodo	23	45.1

• Ossissa	14	27.5
• Ezionum	8	15.7
• Akoku-Uno	6	11.8
Qualification		
• Nil	4	7.8
• Primary certificate	8	15.7
• Secondary certificate	34	66.7
• University certificate	5	9.8
Occupation		
• Student	16	31.4
• Business/trade	12	23.5
• Farming	11	21.6
• Artisan/vocational e.g. mechanic, electrician, brick layer, hair stylist	6	11.8
• Teacher	2	3.9
• Youth Corper	2	3.9
• Civil servant	1	2
• House wife	1	2

Table 2. Reasons for patent medicine shop preference

Major reason user prefers patent medicine shop to public health centre	**N**	**%**
• None	2	3.9
• Proximity	22	43.1
• Familiarity with PMS owner	6	11.8

• No delay in receiving treatment	5	9.8
• Cheaper drugs in PMS	4	7.8
• Health centre closed most times & proximity	3	5.9
• Drug not available in health centre	3	5.9
• Health centre doesn't have customer's needs	1	2
• Financial constraint	1	2
• Can't locate health centre	1	2
• Never being sick	1	2
• As good as the health centre	1	2
• Receive free treatment sometimes	1	2

Table 3. Respondents medical complaints, type of medicine/drug purchased and form of treatment received

Characteristics	**N**	**%**
Medical complaint		
• None	30	58.8
• Fever/malaria	7	13.7
• Pain/headache	5	9.8
• Body injury or trauma	4	7.8
• Infection	3	5.9
• Catarrh and cough,	1	2
• Family planning	1	2
Major type of medicine/drug purchased by patent medicine shop users		
• None	3	5.9

• Analgesic tablet	16	31.4
• Antibiotics tablet	8	15.7
• Antibiotics injection	1	2
• Anti-malaria tablet	14	27.5
• Contraceptive tablet	3	5.9
• Antacid	2	3.9
• Topical medication (antifungal cream and aboniki balm)	2	3.9
• Antifungal tablet	1	2
• Expectorant	1	2
Form of treatment received		
• None	3	5.9
• Tablet drugs	42	82.4
• Topical medicament such as antifungal cream, aboniki balm	2	3.9
• Syrup/Oral fluid such as gestid suspension	2	3.9
• Injection	1	2
• Counsel/advice	1	2

Table 4. Major challenges of patent and proprietary medicine vendors

Challenges	N	%
• None	4	28.6
• Financial constraints	3	21.4
• Self prescription	1	7.1
• Low customer turnout	1	7.1
	1	7.1

• Harassment by pharmacists	1	7.1
• Insults from customers	1	7.1
• Drugs expiration before purchase by customers	1	7.1
• Customers/Patients can't afford cost of treatment	1	7.1
• Customers/Patients refusal to follow treatment plan		

Table 5. Attendance Records at Patent Medicine Shops and Health Centres

Name of Community (data collection date)	**N**	**%**
Kiagbodo (22/07/14 - 28/07/14)		
• Total attendance at health centre for 1 week	137	29.8
• Total attendance at 2 available patent medicine shops for 1 week	323	70.2
Ezionum (08/05/14 - 14/05/14)		
• Total attendance at health centre for 1 week	7	6.5
• Total attendance at 4 available patent medicine shops for 1 week	100	93.5

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APPENDIX A: QUESTIONNAIRES

QUESTIONNAIRE FOR PATENT MEDICINE SHOP OWNERS

Age: Sex: Qualification: Location:
Number of years in business: Size/space of shop:

Major challenge in running/managing the business:

_____

_____

QUESTIONNAIRE FOR PATENT MEDICINE SHOP USERS

Age: Sex: Qualification: Occupation:
Location:

1. Reason(s) why the user came to the patent medicine shop/pharmacy.

   (a) Consultation (b) Buy medicine/drugs (c) Others, specify

   _____

2. If user came for consultation/medical treatment, what was/were the medical complaint(s)?

   _____

3. What treatment did s (he) receive?

   _____

   _____

4. If user came to buy drugs, was there prescription from a doctor? (a)Yes (b) No

   What kind of medicine(s)/drug(s) was/were bought? Please specify

   _____

   _____

   _____

5. Major reason why user prefers patent medicine shop/pharmacy to a public or private health center/facility

   _____

   _____