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Problems of Effective Primary Healthcare Delivery in Owan East and Owan West Local Government Areas of Edo State, Nigeria

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ABSTRACT This study examines primary healthcare in Owan east and Owan west local government areas of Edo State, with emphasis on the impacts of personnel and equipment inadequacies in the primary health centres. The study utilized primary and secondary sources of data. There are 30 primary health centres in the area. 4 doctors service these centres, this is too few to adequately meet the primary healthcare needs of the population. In the case of medical equipment, Only very few centres were adequately equipped. The implication of these adequacies on healthcare is such that primary healthcare is not well dispensed in the area, and this has led to several people suffering from different sicknesses and diseases and sometimes death.

INTRODUCTION

The Ama-Ata conference of 1978 declared that by the year 2000 countries especially in the developing world should have to attained a level of healthcare that would permit people to live a socially and economically productive life (WHO 1978). This year has come and gone and the goal of this conference has remained unattainable in Nigeria. The conference was emphatic on the provision of primary health care as a means of meeting the primary health needs of the majority of the people who incidentally reside in the rural areas.

In Nigeria, the local government councils are constitutionally responsible for the provision of primary health care and primary health care facilities. In the last 15 years efforts have been made by this tier of government to provide primary healthcare facilities. With complementary effort from the federal government more centres have been established. While this increase is in real terms, personnel and medical facilities are not been commensurately provided. The centres in Owan east and Owan west local government areas lack basic infrastructural facilities such as electricity, water and telecommunication services and medical equipment and personnel. By implication primary health centres are ill equipped to perform their primary objectives in the area. This has indeed increased mortality rate and diseases infection among children and adults. This study is an attempt to determine the effectiveness of primary health facilities in the study area. In this regard, the study will identify the types, number and location of the primary health centres in the study area and also determine the medical and personnel adequacy of the centres, and the impacts.

METHODOLOGY

The study area, is the two Local Government Areas of Owan east and Owan west in Edo State, Figure 1. It comprises several settlements that are basically rural (Fig. 2). This area is located within Latitude 6^0 47' and 7^0 15' north of the equator and Longitude 5^0 49' and 6^0 14'east of the Greenwich Meridian. It is bounded in the west by Ondo State and in the South by Ovia North east, Esan west and Uhunmwode Local Government areas. In the east it is bounded by Etsako west Local Government Area and in the north by Akoko-Edo Local Government Area. This area has a total land area of 1952.72km^2 with Owan west having 716.41km^2 while Owan East has 1236.31km^2 (Ministry of Lands and survey Benin City).

The local government creation of 1991 split this formerly Owan Local Government Area into the two local government areas. For political and other administrative purposes the study area is divided into 22 political wards comprising 11 wards in each local government area. The area is

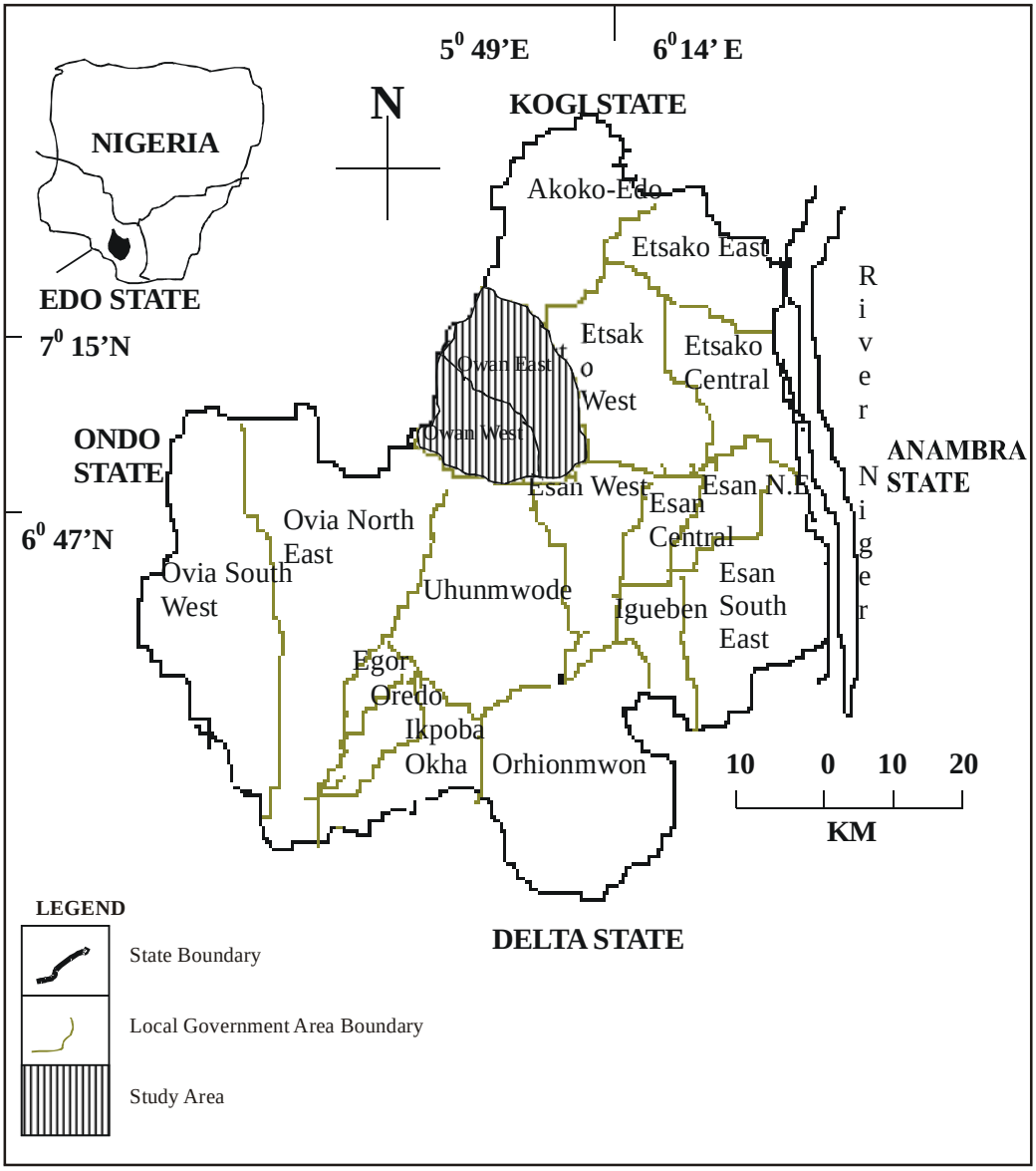

Fig.1. Edo State: Location of the study area

located in the tropics dominated by marked dry and wet seasons. The features of this climate type especially high temperatures and rainfall make it favourable for the inhibition of many tropical diseases. The geology of the area comprises the basement complex rocks and the soil type is the sandy loam, favorable for the cultivation of various food and cash crops.

The people are predominantly farmers with very few in secondary and tertiary activities such as electrical, mechanics, barbing, banking, teaching, transport and saw milling. Public facilities in the area include roads, electricity, water, schools, health facilities and educational facilities. The population of Owan in the 1991 census was 191,664. While Owan East had 121,290, Owan

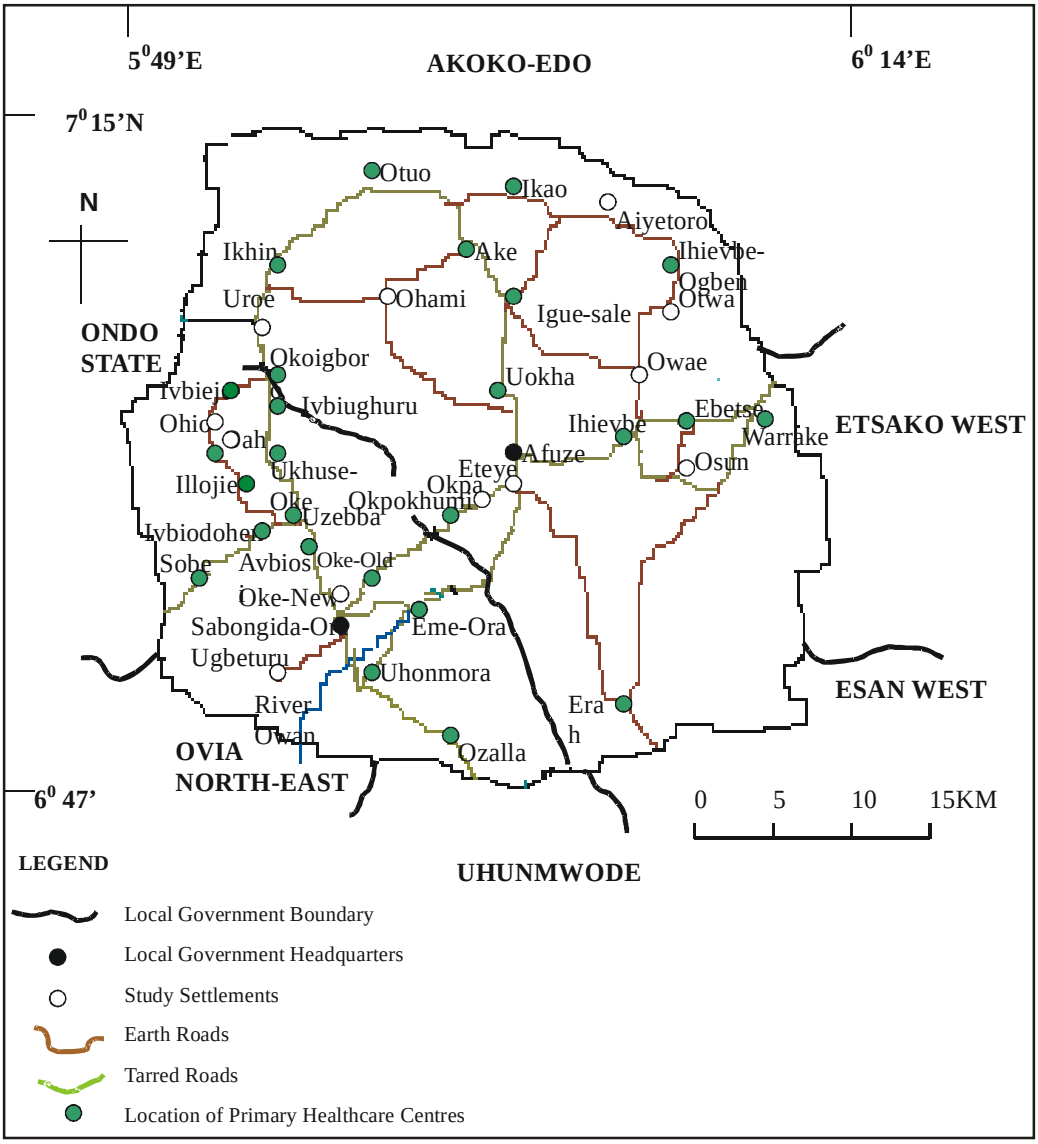

Fig. 2. Owan East and Owan West local govt. areas: distribution of primary healthcare centres.

West was 70,374 (National Population Commission, Benin City, 1993). With the national standard of 3.0% annual growth rate, the 1991 figures were projected to 2004 and the population was 228,480.

This study utilized both the primary and secondary sources of data. The primary sources involved the use of questionnaire, interview schedule and personal observation. For the questionnaire, 400 were made and distributed 10 each among 40 selected settlements from each of the 11 wards of the two local government areas. The stratified sampling method was used to select the settlements and three settlements from each ward were sampled in the order of highest, medium and least populated using the 2004 projected population. Twenty-one (21) settlements were thus sampled in Owan east while nineteen (19) were sampled in Owan west. The questionnaires were administered randomly among the segments of the population of each

sampled settlement. Information relating to personnel and medical equipment problems that patients encounter in the use of these facilities was drawn with the questionnaire.

The interview schedule prepared was directed at the management of the health centres. It was meant to ascertain among others, service provided, level of attendance, common ailments, the work force and facilities available. To augment data from the questionnaire and interview schedule, the researcher also conducted detailed personal observation especially on the physical condition of the health facilities. Secondary data on the other hand was sourced from documentary sources such as textbooks and journals. Data collected from the various sources were analyzed descriptively using tables and maps. The number of facilities in the centres was compared with the WHO standard to determine their adequacy.

GUIDELINE FOR THE ESTABLISHMENT OF PRIMARY HEALTH CENTRES IN NIGERIA

In Nigeria, the establishment of primary healthcare centres is the responsibility of the local government councils. This tier of government is closest to the people, a reason it was charged with managing this aspect of health care that will provide preventive, promotive and curative services at home, villages and in communities (Onokerhoraye, 1982). For equity, primary health care centres are usually located in each political ward of a local government area. How many are located in a ward however, depends on the factors of population and physical size of the ward. Using population, the settlements in each ward are hierarchically arranged according to their population figures. Obviously, the largest populated settlement or settlements are selected for location. These settlements should have a threshold population of between 2000 to 4,000, which is the size for Nigeria. Where no settlement in a ward have this threshold population, the highest populated takes the location. The use of settlement hierarchy according to Okafor (1984) is to ensure the optimal utilization of social facilities.

Primary health centres are also located in Nigeria on the basis of physical size of the ward. Where the land area of the ward is large, many primary health centres may be located. This is generally to reduce the problem of physical accessibility. Okafor, (1990) and Ariyo and Datong, (1991), identified distance as a problem of access to health care in rural Nigeria.

DISTRIBUTION OF HEALTH FACILITIES

There are 30 primary health care centres in the area. While the federal government owns 2 the remaining 28 belong to the local governments. 16 of these centres are located in Owan east while 14 are located in Owan west. These health centres service a population of 228,480 people. Those in Owan west serve 88,782 persons while those in Owan east serve 139,698 persons (2004 Projections). These 30 primary healthcare centres are randomly distributed. The distribution of the primary health centres in the study area is further illustrated in Fig. 2. By all standards, this distribution pattern shows that the entire area is not adequately covered. Studies have shown that health facilities are not equitably distributed in Nigeria. Adebiyi (2002) remarked that as much as 35% of Nigeria population is presently not covered by any form of modern facility due to inadequate distribution.

PERSONNEL

Personnel inadequacy is one of the major problems confronting health care delivery in Nigeria. The present doctor/population ratio of 1:12,300 and nurse/population ratio is 1:3360, which is against the WHO (1961) recommendation of 1: 10,000, and 1:1500 respectively is enough evidence of this problem (Omofonmwan 2004). This problem is worse in the rural areas where about 70% of the population lives and where only about 20% of the facilities and personnel are concentrated (Bello-Imam, 2002). It is established that doctor/population ratio in the rural areas is between 1:40,000 to 1:200,000 (Akhayere, 2002)

In the study area, one doctor oversees the local government owned primary healthcare centres in each of the local government areas, while one doctor is also employed in each of the two federal primary health care centres in the area. This brings to 4 the number of doctors employed in the health centres for the two local government areas. This number is however too few for the number of health centres in each local government area and also too few compared with the population they serve. By the population of the study area

the doctor/population ratio is 1:57,120. This figure is excessive when compared with the United Nations recommended standard of 1:10000. The indication therefore is that the number of doctors overseeing the affairs of the primary health care centres is inadequate for the population they serve. The study area therefore requires a minimum of 23 doctors (228,480 / 10,000 = 23). While 14 may be required to meet the primary health needs of the people of Owan East, 9 may be required to meet that of Owan West. From the field surveys it was observed that the doctors in both local government areas neither have timetable for visitation nor visit regularly. It was also observed that their visits depended on their disposition and the condition of the vehicles attached to their offices. The availability of few doctors and the inability of the doctors to cover the areas effectively have put health care at risk in the area.

Apart from doctors, the primary health centres particularly the ones owned by the local governments' are characterized by shortages of nurses and other personnel. Presently a total of 46 nurses are employed in the health centres with one or two attached to each health centre. Against the fact that 4 nurses is preferred to 1 doctor (WHO, 1961) 1 nurse should have a population of 2500. But with a ratio of 1 nurse to 7,586 persons, it can be said that the number of nurses is inadequate. By the population of the study area, 91 nurses (228,480 / 2500 = 91) are therefore required to adequately attend to patients attending primary health centres.

The centres also lack personnel such as community health workers and orderlies where 14 and 61 are employed respectively. Other categories of workers in the centres total 44 and these include environmental health officers, accountants, medical record staff, health officers, pharmacists and technicians. These figures by health standards reflect the inadequacy of personnel in the health centres of the study area.

MEDICAL EQUIPMENT

Majority of health care centres in Nigeria lack basic medical equipment. One of the effects according to Ojeifo (2005), has been low patronage especially of rural health centres. There is inadequacy of necessary medical equipment as observed in the various centres. For example only 21 sterilizers, 1 vacuum extractor and 1 set of delivery forceps were found in the centres. Other equipment includes 38 circumcision scissors, 37 thermometers, 40 child and adult scales and 37 delivery tables. There is variation in the number and type of equipment available in the various centres. The federal health centres have more facilities than the local government owned. The reason is simply because these centres are funded by the federal government. The local government lack resources to adequately fund its health centres a reason it is characterized by a general lack in personnel and equipment. The average number of equipment a health centre should have according to their type as identified in the field surveys is shown in Table 1.

When the average number of equipment required on Table 1 is compared with the number available in each of the health centres, then it could be seen that inadequacies of medical equipment exist in the primary health centres of the study area. More pathetic was the situation of the local government owned health centres at Warrake, Ake, Igue-Sale, Uzebba, Oah and Ikao where little or no equipment was found. The implication of this is that primary health care is not available to the people of these areas. As a result many people travel distances to reach available health facilities or in the alternative resort to local herbs, spiritual means, or roadside chemist whenever they fall ill. The inadequacy of medical and personnel resources in the centres has made primary health care difficult to obtain.

Table 1: Average number of equipment required for effective health care.

Type of equipment	*Number required*
Sterilizers	4
Circumcision	5
ScissorsThermometers	5
Vacuum	1
Extractors	1
Autoclave	3
Baby Scale	5
Adult Scales	
Delivery Tables	2
Sets of Delivery Forceps	2
Drip stands	5

Source: Owan East and Owan West Local Governments Primary Health Care Centres, 2004.

THE EFFECTS OF FACILITY INADEQUACIES ON THE HEALTH CENTRES

The most significant effect of facility inade-

quacies in the primary health care centres is low patronage. Data obtained with the questionnaire and from the primary health care centre attendance records show that patronage is relatively low. Table 2 shows patronage to the 10 selected centres between 1998-2004.

Table 2: Patronage of some Primary Health Centres between 1998-2004

Health centre	*Total No. of patrons*
Otuo 1	5223
Warrake (Fed.)	5373
Uokha	4675
Ivbiodohen	4165
Eruere	3214
Sobe (LG)	2811
Afuze	8263
Ihievbe	5208
Ivbiughuru	4676
Avbiosi	63

Source: Primary Health Centres (2004)

The figures in Table 2 clearly indicate the low patronage of the PHC's. An average of 4367.1 patients attended the PHC's in 6 years, while average attendance was 727.85 per year. Patronage however varies among the PHC's. While some were highly patronized others were almost not patronized. Those highly patronized are the federal and some local government centres, which have few equipment and personnel capable of carrying out some primary health activities, or are the only health establishment within the reach of the patients. The most patronized centres and the records of attendance between 1998-2003 are shown in Table 3.

These most patronize centres in Table 3, accounts for 37583 or 59.7 percent of the total number of patrons between 1998-2003. Afuze primary health care centre is the most patronized with 8263 or 21.9 percent. This primary health care centre is a referral health centre for Owan east local government area. All cases beyond the primary health care centres at the local level are usually referred to Afuze primary health care centre where the local government doctor and matrons reside. The federal government centre at Warrake closely follows Afuze primary health care centre and accounts for 5373 or 14.3 percent of the total number of patrons. This primary healthcare centre has been able to record this number within two years of establishment, because it has adequate human and material resources. Otuo (located in ward 9) followed with 5223 or 13.9 percent while Ihievbe had 5208 or 13.9 percent. Ivbiughuru, Ivbiodohen and Uokha had 4676 or 12.4 percent, 4165 or 11.1 percent and 4675 or 12.4 percent respectively. The high rate of patronage of these primary healthcare centres is largely due to the population of the settlements of location, available personnel, facilities and proximity.

The least patronized health centres on the other hand are the local government centres at Okpokhumi, Avbiosi, Ikhin, sabongida-Ora and Warrake. These centres are least patronized because there are little or no equipment and personnel. Table 4 shows records of attendance to the least patronized primary health care centres between 1998-2003.

Table 4 shows clearly that patronage is relatively low in these primary health care centres. The attendance record shows that 270 or 0.42 percent of patients attended the health centres between 1998-2003. This figure is very insignificant considering the total number of patrons to primary healthcare centres. As observed in Table 4, some primary health care centres had no records of attendance for some years, (0) was therefore recorded against such years. Lack of materials such as attendance registers, poor documentation and handling of records is attributed to this occurrence. Most astonishing is the 0 patronage of Okpokhumi primary

Table 3: Attendance to the most patronized PHC's in the study area

Year	*Otuo (9)*	*Warrake (FG)*	*Uokha*	*Afuze*	*Ivbiughuru*	*Ivbiodohen*	*Ihievbe*
1998	1217	N.A	814	683	806	906	1298
1999	579	N.A	763	554	851	668	913
2000	824	N.A	927	619	1052	881	615
2001	603	N.A	763	1015	724	696	673
2002	853	2611	693	1762	718	587	1186
2003	1147	2762	715	2630	525	427	523
Total	5223	5373	**4675**	**8263**	**4676**	**4165**	**5208**
%	13.9%	14.3%	**12.4%**	**21.9%**	**12.4%**	**11.1%**	**13.9%**

Source: Owan East and Owan West Local Government's Primary Health Care Centres, 2004. (N.A = None Applicable)

Table 4: The least patronized PHC's in the study area

Year	*Ikao II*	*Ikhin*	*Okpokhumi*	*Sabongida-Ora*	*Avbiosi*
1998	0	14	0	13	34
1999	0	18	0	19	15
2000	0	23	0	28	14
2001	21	15	0	0	0
2002	15	34	0	0	0
2003	34	43	0	0	0
Total	70 or 0.11%	147or 0.23%	0 or 0.00%	60 or 0.09%	63 or 0.10%

Source: Owan East and Owan West Local Government's Primary Health Care Centres, 2004

healthcare centre. Investigation revealed that Okpokhumi primary healthcare centre is though well located and has facilities but very poor in terms of personnel. Presently only an orderly is attached to the centre. In the case of the primary health care centre in Avbiosi, the facilities are very bad and obsolete and only an orderly and a security man form the stock of personnel. Ikao II on the other hand lack both personnel and facilities for adequate patronage.

The problem of facilities and personnel affects most of the primary health care centres particularly the local government owned primary health care centres. Investigation into the reasons for the inadequacies showed that the local government is not paying much attention to financing primary health care in the study area. With adequate financing, better facilities could be provided and many qualified persons can be employed.

IMPLICATIONS OF PERSONNEL AND MEDICAL FACILITY INADEQUACIES

Personnel and medical equipment inadequacies have affects on health care in the study area. One of such effect is the resort to the use of local or spiritual treatment to ailments or the use of roadside chemist for the treatment of sicknesses by patients. The field survey revealed that in the prevailing circumstance, most patients use other means for their primary health care. Table 5 shows the percentages of patients that use the different means of treatment in the study area.

As shown in Table 5, out of the 400 people interviewed, 44 percent use the hospital and the primary healthcare centres more often. 30.7 percent use only the health centres more often while 15.3 percent rely on local and spiritual means for treating their ailments.10 percent patronize roadside chemist. About 64.2 percent of patients who rely on traditional means and 57 percent of those that use the chemist more often do so because of lack of primary health care centres, distance, lack of personnel and equipment. The remaining percentages are due to attitudes and beliefs. The number that uses traditional means and roadside chemist is 101 or 25.5 percent. This figure is large enough not to be ignored. It is actually a threat to the spread of several diseases and a foreseen increase in the number of people suffering from several incurable diseases.

Another effect is the frequent accidents that patients often suffer as they travel to other places to obtain their healthcare needs. It must be emphasized that most roads linking the study settlements are earth roads, which are characterized by numerous potholes, eroded adges and gullies caused by heavy rainfall that occur in most part of the year. This makes the roads difficult to use all year round. Many people including patients have at one time or the other been involved in accidents that are attributable to these roads. Table 6 shows the number of accidents that have occurred due to the use of earth roads by patients in the study area.

Table 6 shows that 79 or 19.8 percent of the total respondents have been involve in one or

Table 5: Percentages of patients using various means for health care

Local government Area	*Health Centres Only*	*Hospital and health centres*	*Herbal and spiritual means*	*Roadside chemist*
Owan east	17.0	23.5	5.3	4.5
Owan west	13.7	20.5	10.0	5.5
Total	30.7	44.0	15.3	10.0

Source: Field Surveys, 2004

multiple accident between 1998-2004. The number of victims is more in Owan east, which accounted for 10.3 percent while Owan west accounted for 9.3 percent. This relatively high percentage of 19.8 is an indication that the roads are not safe for any form of movement in the study area.

Table 6: Number of patients involved in motor accidents between 1998-2004

Local Government area	*Accident victim*	*Percentage*
Owan West	38	9.5
Owan East	41	10.3
Total	79	19.8

Source: Field Surveys, 2004.

Investigation showed that 178 or 44.5 percent of the patients often travel outside their locality to obtain primary health care despite the fact that they have these facilities in their locality. This high figure is mainly as a result of inadequate facilities and personnel as indicated by 73 percent of the respondents. Though there were other reasons such as personal which accounted for 11.2 percent and preference to other facilities, which accounted for 15.8 percent. Since a large percentage of the population travel very often, many people will continue to feel the impact of the poor condition of roads except urgent measures are taken by the appropriate authorities.

Primary health care centres were designed to provide medical, antenatal and preventive health services to the people in and around their immediate localities. According to Onokerhioraye (1982) primary health care centres are designed to provide and coordinate preventive, promotive and curative services at home, villages or community level. The inability of the centres in the study area to meet with these functions is largely due to personnel and medical facilities inadequacies. Most pathetic is the antenatal function. The increase cases of still births, maternal mortality and infant mortality in the area is partly due to the ineffectiveness of the health centres that are charged with such responsibilities particularly in the rural areas.

It must be emphasized that where health facilities located in a place are not functional, the number of the sick is likely to increase. Owan east and west local government area is now besieged with increasing number of the sick, who are suffering from all kinds of ailments. The record of ailments from the primary health centres show that the following common sicknesses often affect the people. These are malaria fever, typhoid, diabetes, tetanus, measles, filariasis, menigitis, pneumonia and diabetes. Table 7 shows the number of cases of these ailments between 1998-2004.

The Table 7 clearly shows that cases of common sicknesses are actually increasing. With a total report of 2619 cases in 1998, this has rose to over 5600 in 2004. More cases could have been reported only if the primary health centres were well equipped. Also in Table 11 is number of deaths recorded in the centres between 1998 and 2004. These deaths were as a result of child bearing and sicknesses such as typhoid and malaria fever. The records were obtained only in the local government primary health centres as the federal centres had not recorded any death since they started operation in 2003. The lack of personnel and equipment could also be largely attributed to these deaths in the health centres.

Table 7: PHC records of common diseases and deaths between 1998-2004

Year	*Number of cases*	*Number of deaths*
1998	2619	6
1999	2432	4
2000	3256	4
2001	4311	6
2002	4743	2
2003	5341	3
2004	5660	5

Source: Primary Health care Centres in the Study Area, 2004

CONCLUSION

The following recommendations may be suitable for effective primary health care in Nigeria and in particular the study area. The first recommendation is that the federal government should take full responsibility of primary health care delivery in Nigeria. Since primary health centre is closest and the cheapest means of obtaining health care especially among the vast majority of the nation's population it is important that the federal government takes charge to keep the population alive. The success of the two federal health centres in the study area is an attestation to this recommendation.

The second recommendation is that for the local government to remain as the operators of primary healthcare, the federal government must increase financing to the local government. This can put better equipment and facilities in place

while more personnel could be employed. The annual average of 12% allocated to the health sector in the local government budgets in the area is grossly inadequate to provide effective primary healthcare. Henceforth between 25-30% of their annual budget should be allocated to the health sector.

Thirdly, there should be more commitment by the authorities of the local government in providing good, adequate and affordable primary health care to the people of the study area. Investigation revealed that some health centres were abandoned soon after commissioning. In some local governments employment of staff has not taken place in the last 10 years. Local government financing is more on recurrent cost and on projects that has no immediate benefits on healthcare.

Fourthly, since the federal and the local governments are the key players in providing primary healthcare in the area, they should exercise a partnership effort towards achieving the same goal. This effort should be in the area of staff training, information and public enlightenment. It is believed that if these recommendations are acceptable to public policy makers and implemented, it is capable of revamping primary healthcare in Nigeria.

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