



Original Article:

The Quality of Healthcare Service Delivery in Nigeria: An Assessment of the Availability of Some Basic Medical Devices/Equipment in the Primary Health Care Centres in Delta State

Author

Gideon E D Omuta, Professor, Chairman, Board of Trustees, Centre for Population and Environmental Development (CPED), Benin City.

Address for Correspondence

Gideon E.D. Omuta,

Centre for Population and Environmental Development (CPED),

BS-1 and SM-2 Ugbowo Shopping Complex,

Ugbowo Housing Estate,

P.O. Box 10085, Ugbowo Post Office,

Benin City, Nigeria.

E-mail: gedomuta@yahoo.com

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Abstract: Background: Ordinarily, accessibility implies locational proximity. However, this study limits its use to the quality of what is accessed. There is, therefore, service-delivery inaccessibility, when health care seekers can only access poor quality service, because of the poor quality of the equipment at the disposal of primary health care centres. Service-delivery equipment are, therefore, surrogate indicators of the quality of the health care services that are geographically accessible. Methodology: Both qualitative and quantitative approaches of investigation were deployed, using structured questionnaires and focus group discussions/key informant interviews, respectively. It covered nine local government areas, three each from the senatorial districts. The paper discusses three basic medical devices/equipment that determine the quality of services delivered by PHCs, namely available and functioning general purpose equipment; most commonly used methods of sterilization; and availability of different types of laboratory tests. The quantitative data were cleaned up, processed and analysed, using the SPSS 10.0. Results: There were variations in the availability of devices and equipment. Syringes/needles and stethoscopes were available in more than three-quarters of the centres, while less than ten (10) per cent had microscopes. About 15 per cent of the centres either had no methods of sterilization at all or used 'inappropriate' ones. In spite of the prevalence of malaria, only 28.89 per cent centres could test for the parasite. Conclusion: The quality of services were perceived as poor because the basic medical devices and equipment were either lacking or inadequate. Policy implication is that government should increase resource allocation to the PHC subsector to procure the basic facilities for efficient service delivery.

Key Words: Basic medical devices and equipment; primary health care; increased resource allocation

Introduction:

At the International Conference on Primary Health Care, convened in Alma Ata, Kazakhstan in September, 1978, the resultant *Alma Ata Declaration* recommended the *Primary Health Care (PHC)* system as the driver of the objective of the 'health for all' programme, because it acts as the first point of consultation for all patients. Furthermore, it provides the initial and majority of the health care services of the community.(1) The PHC programme stands on five principles, namely: *accessibility*; *health promotion*; *appropriate technology*; *inter-sectoral collaboration* and *community participation*. They were designed to work together and be implemented simultaneously to bring about better outcomes for the entire population. However, each principle could stand alone and isolated for the purpose of assessing the effectiveness of specific aspects of primary health care centres.

It is in this context, that the accent of this paper is on infrastructure. Infrastructure may be categorised into the *physical* (such as pipe-borne water, beds, electricity, among others); *technological* (the equipment that facilitate the efficient and effective delivery of health care such as syringes and needles, microscopes, stethoscopes, blood pressure machines, and so on); and *human* (the health professionals, including doctors, nurses, pharmacists, midwives, community health workers), among other resources available to render expected services by a given system, to a given set of people and at a given point in time.(2)

Our emphasis is on *technological infrastructure*, viewed from the perspective of the principle of accessibility.

Accessibility emphasises that health care services must be equally shared by all the people of the community irrespective of their race, creed or economic status. Services are, therefore, expected to be directly and permanently accessible with no undue barriers of cost, language, culture, or geography (location). With respect to PHCs, health services are to be *close to the people, with a routine point of entry to the service network at primary care level* (not at the specialist or hospital level). Services may be provided in the home, the community, the workplace, or health facilities as appropriate.(3) Inaccessibility is, therefore, a disadvantage.

While, generally and ordinarily, accessibility implies locational proximity, in this study, its application is limited to the point of view of the quality of what is being accessed; namely health care. Thus, there could be *service-delivery inaccessibility*, when health care seekers can only access poor quality service, particularly because of the poor quality of the technological equipment at the disposal of the PHC centres. Therefore, the service-delivery equipment of a health centre are surrogate indicators of the quality of the health care services that can be geographically accessed.

Logically, therefore, good and adequate equipment create the platform for high performance systems, while poor and inadequate equipment impede the systems' capacity for growth, development and service delivery. The logical implication is that lack of, or inadequate investment in health care service-delivery equipment affects 'production' and 'consumption' directly and will result in poor or less than optimal outcomes.

Conceptual Briefs

In this paper, technological infrastructure include medical devices and equipment. The World Health Organisation (WHO) defines a *medical device* as "an article, instrument, apparatus or machine that is used for the prevention, diagnosis or treatment of illness or disease, or for detecting, measuring, restoring, correcting or modifying the structure of the body for some health purposes". On the other hand, *equipment* specifically refers to a medical device that requires calibration, maintenance, repairs, user training and decommissioning.(4)

It is against this background that it has been observed that the challenge of medical device and equipment is in deed a major and perennial concern among health practitioners and various stakeholders in the health care delivery system.(5) This concern is even more serious in developing, resource-deficient countries, including Nigeria. Indeed, the availability and provision of medical devices and equipment have been found to be directly associated with, and are good predictors of the effectiveness and responsiveness of the health care service delivery.(5: 187) By implication, inadequate or non availability of facilities, equipment and supplies could result in substandard health care services and ultimately, the poor perception and under utilisation and under patronage of health care centres.

Similarly, because health seekers are presumed to be already vulnerable to disease-causing conditions, care must be taken to ensure that all items used in administering treatment to them (or manage their conditions) do not present a high and further risk of infection, due to contamination with microorganism, including bacteria spores, fungi, and viruses.(6) It is, thus, critical that all objects which enter sterile tissue or the vascular system be sterile. Even objects which come in contact with mucous membranes or skin that is not intact must be free from all microorganisms.(7) This category of equipment includes surgical instruments and needles.

The supply of, and access to, essential drugs (EDs) is also very fundamental to the satisfactory performance of the primary health care system, in general, and each centre, in particular.(8) For instance, drugs and medical supplies impact

very significantly on the quality of patient care, because they account for a high proportion of health care costs.(9) Consequently, patients usually judge the quality of a primary health care facility by the availability of the drugs needed for the treatment of common diseases.(1) For this purpose, the drugs available should be those that are relevant and meet the priority health care needs of the population.

In Nigeria, it has been concluded that most of the medical devices and equipment are either obsolete, or are not procured according to needs and technical specifications, or both.(10) The objective of the paper is to confirm the veracity or otherwise of this conclusion, using the primary health care centres of Delta State as our case study.

Methodology

The study is a component of a larger ongoing research project titled: "*Strengthening the health care system in Nigeria through improved equitable access to Primary Health Care (PHC) : The case of Delta State, Niger Delta region*". The project is jointly funded by the *International Development Research Centre (IDRC)* and the *West African Health Organization (WAHO)*.

The project used both quantitative and qualitative instruments to elicit primary data. The quantitative component adopted a multi-stage sampling procedure: nine local government areas were selected; three each from the three senatorial districts in the state. The larger study interrogated the different dimensions of the challenges of accessibility in health care delivery system. The selection of local government areas was purposive and designed to capture rural, isolated and wetland communities that are characteristically inaccessible, often underserved and marginalised. Furthermore, more than 90 per cent of the region is rural, with a vast majority (94 per cent) of the 13,329 settlements having less than 5,000 population.(11) The study sought to establish the type and status of the medical devices and equipment available in the target primary health care centres and their effects on the perception of the quality of service by health care seekers/users. To facilitate the acceptance of the findings of the study for informing and determining policy, the study was designed to be participatory and inclusive, by factoring all the major stakeholders into its execution from its onset. This is to make the research results the joint product of researchers, decision makers and host communities.

The platform adopted in the study for integrating research and policy was to set up two strategic committees, namely: the *State Steering Committee (SSC)*: constituted of the key policymakers statutorily linked with policies and the implementation of projects designed to pursue and address issues of primary health care service delivery. These are: the supervising Permanent Secretary in charge of the Ministry of Health (MoH), other Permanent Secretaries and all the Directors (of Departments) in the ministry. On the other hand, the Project Management Committee (PMC) was composed of representatives of researchers; representatives of policymakers; representatives of care providers; representatives of health care seekers/users; advocacy experts; activists; and accredited representatives of such vulnerable groups as the poor, the youths and the women. The SSC and PMC provided the framework for knowledge transfer from, and knowledge brokerage by, the core research team to other stakeholders.(12)

The instrument used to elicit the relevant primary data was the *primary health care level – health facilities and equipment*. The issues interrogated in the instrument were the distribution of the following: management guidelines for key ailments, available and functioning general purpose equipment, main types of needles and syringes for general health care services, most commonly used methods of sterilization for general health care services, availability of different types of drugs and supplies in primary health care

centres and availability of different types of laboratory tests. After mass mobilization, research assistants were recruited from among eligible members of the host communities. They were trained on the administration of the survey instrument. A pilot test was then conducted. The questionnaires were then further fine-tuned for final production. Supervisors were also recruited and trained separately to monitor the research assistants and resolve all challenges that the latter might encounter in the field. The field data were cleaned up and exported to SPSS for analysis and are presented in percentages.

As indicated earlier, in addition to the quantitative data, there was also the qualitative component. This component was implemented through focus group discussions (FGDs) and key informant interviews (KIIs). The population of the qualitative survey comprised PHC staff, and randomly selected key stakeholders in the localities, such as community leaders, users of primary health services, women and youths. The focus group discussions and key informant interviews were conducted in all the nine (9) local government areas. The objective of the qualitative survey was to provide autonomous information for determining the integrity and veracity of the quantitative data, particularly from the perspective of primary health care users and communities of the facilities and equipment surveyed.

Designed to be entirely participatory and inclusive, the involvement of local communities and key stakeholders went beyond the giving of information to researchers. Rather, the research findings were presented to the representatives of the local communities for their evaluation, review and feedback. Their perception of the major findings was canvassed. In addition, their opinion was sought on what they considered to be the solutions to the perceived problems. In order for them to represent the opinion of all stakeholders, these assessments, reviews and feedbacks were further discussed with the Project Management Committee and the State Steering Committee, for their perspectives on the findings and their suggestions for going forward. The final results are, therefore, the systematic bottom-up integration of the inputs of all stakeholders. This is to ensure that the results were policy-ready and implementable.

Key Findings

The accent of this paper is premised on the fact that in order for a primary health care centre to provide quality service, it must have an irreducible minimum of certain devices and equipment. Moreover, not only must the equipment be available, they should be functional in order to guarantee the quality of service rendered and to ensure the protection of the health of care seekers. Where and/or when these critical requirements are not met, the manifestations could either be that certain services cannot be rendered at all or that the quality of the services delivered would be low. This paper discusses three (3) of the basic medical devices/equipment that determine the quality of services delivered by primary health care centres. These are: available and functioning general purpose equipment; most commonly used methods of sterilization; and availability of different types of laboratory tests.

Percentage Distribution of Available and Functioning General Purpose Equipment in PHC Centres

General purpose equipment are those designed or suitable for more than one use or application. They are equipment that require calibration and user training. They include those for measuring blood pressure, weighing of patients, administering injectable, preserving of sensitive drugs and protecting both health care seekers and workers from mutual infections. Those considered in the survey were: blood pressure machine, stethoscopes, microscopes, weighing scales for adults and under-fives, hand gloves, syringes and needles and refrigerators. Their percentage distribution

among the target primary health care centres in the target local government areas is summarised in Table 1.

LGAs	Blood Pressure Machine	Stethoscopes	Microscopes	Weighing Scales for Adults	Weighing Equipment for Under-Fives	Hand Gloves	Syringes and Needles	Refrigerators
Aniocha North	79	96	17	83	83	96	96	50
Bomadi	33	78	11	89	56	56	33	11
Ika South	70	87	13	52	65	91	96	22
Isoko North	37	74	5	53	47	84	95	32
Ndokwa East	24	38	0	45	55	14	28	3
Okpe	41	53	0	71	82	77	77	12
Udu	57	81	29	71	62	91	95	62
Ughelli South	62	86	7	66	41	90	90	41
Warri North	100	100	0	88	100	63	88	25
Total	55.89	77	9.11	68.67	65.67	73.56	77.56	28.67

Source: Filed Work, 2014

The Table shows that, in terms of the availability, the most common general purpose equipment were syringes and needles, found in 77.56 per cent of the primary health care centres surveyed. Followed by stethoscopes (77 per cent), hand gloves (73.56 per cent), weighing scales for adults (68.67 per cent), weighing equipment for under-fives (65.67 per cent), blood pressure machines (55.89 per cent), refrigerators (28.67 per cent) and microscopes (9.11 per cent).

The details revealed variations among the LGAs. For instance, compared to the overall average of 77.56 per cent, the survey showed that 96 per cent of the PHC centres in each of Aniocha North and Isoko North had syringes and needles, while only 28 per cent of those in Ndokwa East had. The Table also shows that, in comparison with the average of 77 per cent, all (100 per cent of) the centres in Warri North had stethoscopes, while only 38 per cent of those in Ndokwa East had. Furthermore, the survey revealed that 90 per cent or more of the PHCs in four (4) LGAs had hand gloves as follows: Aniocha North: 96 per cent; Ika South: 91 per cent; Udu: 91 per cent; and Warri North: 90 per cent. At the other extreme, only 14 per cent of the centres in Ndokwa East had. The percentage distribution of weighing scales for adults varied from above 80 per cent in Bomadi (89), Warri North (88) and Aniocha North (83), to below 50 per cent in Ndokwa East (45 per cent). While all (100 per cent of) the centres in Warri North had weighing equipment for under-fives, only 41 per cent of those in Ughelli South had. Blood pressure machines were available in all (100 per cent of) the facilities in Warri North, compared to 24 per cent of those in Ndokwa East, and an average of 55.89 per cent. Compared with the average of 28.67 per cent of the primary health care centres that had refrigerators, 50 per cent or more of those in two (2) LGAs had, as follows: Udu: 62 per cent and Aniocha North: 50 per cent. At the other extreme only three (3) per cent of the PHC centres in Ndokwa East had refrigerators. It is worthy of note that none (0.0 per cent) of the facilities in Ndokwa East, Okpe and Warri North had microscopes, compared to 29 per cent of the facilities in Udu that had. Particularly remarkable was the observation that Ndokwa East had below average in all the general purpose equipment

surveyed. It is, therefore, the most disadvantaged local government area in this regard.

Percentage Distribution of the Most Commonly Used Methods of Sterilisation for General Health Services in PHC Centres

Certain devices/equipment present a high risk of infection, and, therefore, pose an even greater risk to the health of care seekers, if they are contaminated with microorganisms, including bacteria spores. They also include objects which come in contact with mucous membranes or skin that is not intact. (13) In order to render safe and effective services, such devices and equipment must be properly sterilised before use. All microorganisms and other pathogens must be totally destroyed and removed from all objects and surfaces used for rendering health care services. Sterilization is necessary for the complete destruction or removal of all such microorganism as spore-forming and non-spore-forming bacteria, viruses, fungi and protozoa. This can be done by treating the equipment with chemicals or subjecting them to high heat or radiation. This survey considered the autoclave, sterilizers, boiling pots and 'others'. Their percentage distribution among the primary health care centres in the target local government areas is shown in Table 2. It must be specially noted that 6.67 per cent of the facilities surveyed had no methods of equipment sterilization, whatsoever.

The Table reveals that the commonest method of sterilization used in the primary health care centres surveyed was the boiling pot, which accounted for about half (49.11 per cent) of all methods. This was followed by sterilizers (24.33 per cent), autoclave (7.44 per cent) and pressure pots (4.11 per cent). Unspecified methods grouped together as 'others' accounted for 8.33 per cent.

LGAs	None	Autoclave	Steriliser	Pressure Pots	Boiling Pots	'Other'	Total
Aniocha North	0	12	0	0	88	0	100
Bomadi	22	0	22	11	34	11	100
Ika South	13	9	9	13	30	26	100
Isoko North	0	0	16	0	68	16	100
Ndokwa East	0	0	83	4	10	3	100
Okpe	0	6	29	6	59	0	100
Udu	0	24	19	0	52	5	100
Ughelli South	14	3	28	3	38	14	100
Warri North	11	13	13	0	63	0	100
Average	6.67	7.44	24.33	4.11	49.11	8.33	100

Source: Filed Work, 2014

The survey showed that within each method, there were obvious variations among the local government areas. For instance, compared with the average of 49.11 per cent of the centres that used boiling pots, five (5) LGAs used them in more than 50 per cent of their centres, as follows: Aniocha North: 88 per cent; Isoko North: 68 per cent; Warri North: 63 per cent; Okpe: 59 per cent and Udu: 52 per cent. However, only ten (10) per cent of those in Ndokwa East used them. With regards to sterilizers, the survey showed that while none (0.0 per cent) of the facilities in Aniocha North used them, they were available in 81 per cent of the PHC centres in Ndokwa East. The survey also showed that while autoclaves were not used (0.0 per cent) in any of the centres in Bomadi, Isoko North and Ndokwa East, they were used in 24 per cent of those in Udu. Noteworthy is the observation that none (0.0

per cent) of the methods of sterilization considered in the study was available in the facilities in four (4) LGAs as follows: Bomadi (22 per cent); Ughelli South (14 per cent); Ika South (13 per cent) and Warri North (11 per cent).

Perhaps the most noteworthy revelation of the survey was the frequency of occurrence of two categories of 'methods' that reflect the degree of exposure of medical equipment and devices used in primary health care centres to the risk of contamination, namely; 'none' (6.67 per cent) and 'others' (8.33 per cent). The inclusion of 'others' is premised on the presumption that this category covers unspecified, unconventional and evidently relatively ineffective methods. The implication is that 15 per cent (made up of 'none' (6.67 per cent) and 'others' (8.33 per cent)) of all the centres surveyed were exposed to the risk of equipment contamination. Again the combination varied remarkably from local government area to local government area. Thus, based on this combination, while the equipment in Aniocha North and Udu had zero (0.0 per cent) exposure to these possible sources of equipment contamination, the figures were above 20 per cent in three (3) LGAs as follows: Ughelli South: 28 per cent (made up of 14 per cent for each of 'none' and 'others'); followed by Bomadi: 33 per cent (made of 'none' (22 per cent) and 'others' (11 per cent)); and finally, Ika South: 39 per cent (made up of 'none' (13 per cent) and 'others' (26 per cent)). Ika South is, therefore, the local government area where over one-third of the medical devices and equipment are exposed to the greatest risk of contamination.

Percentage Distribution of the Availability of Different Types of Laboratory Test in PHC Centers

Health care seekers present different challenges and conditions that can be best managed after appropriate clinical laboratory tests and investigations. Such tests are also often part of routine surveillance and check-ups to detect changes in a patient's health status. However, if laboratory services are to support health care effectively, they need to provide reliable, valid and timely results so as to help health care workers correctly diagnose medical conditions, plan or evaluate treatments, and monitor diseases. Functioning, good-quality equipment and uninterrupted supplies of test kits, reagents, and other consumables are, therefore, mandatory.(14) For instance, sugar test is used to identify blood glucose level, and to screen for, diagnose, and monitor diabetes, pre-diabetes, and hypoglycaemia. Similarly, if anaemia is implicated, the packed cell volume (PCV) test would be required to measure the amount of cells in the blood. This means, therefore, that depending on the medical condition presented, a variety of laboratory tests may be needed. For the purpose of the survey, the availability of the following, commonly required tests, was investigated in the PHC centres in Delta State, namely: urinary test, pregnancy test, ova parasite test, occult test, blood count, malaria parasite, PCV and sugar test. Their distributional pattern is summarized in Table 3.

The survey showed that the commonest type of clinical investigation carried out in the sampled primary health care centres was pregnancy test, which was available in 76.33 per cent of the facilities. The second commonest was urinary test (35.22 per cent), followed by malaria test (28.89 per cent), sugar test (16.67 per cent), PCV (16.44 per cent), blood count (10.33 per cent), ova parasite test (7.22 per cent) and occult test (5.78 per cent). As with the other items investigated, there were clear variations within each type. For instance, compared with the average (76.33 per cent), while pregnancy test was available in 90 per cent of the centres in Ndokwa East, only 65 per cent of those in Ika South had. Regarding urinary test, the survey showed that the percentage of facilities where it was available ranged from 52 per cent in Udu to seven (7) per cent in Ndokwa East. Malaria test was

available in 58 per cent the primary health centres in Isoko North, but only in three (3) per cent of those in Ndokwa East. The survey also revealed that compared with the average of 16.67 per cent, the centres in which sugar test was available varied from 33 per cent in Aniocha North to only three (3) per cent in Ndokwa East. With regard to PCV, Table 3 shows that while the test was not available in any (0.0 per cent) of the primary health care centres in Ndokwa East, it was available in 33 per cent of those in Aniocha North. While blood count test was available in 24 per cent of the centres in Udu, it was not available in any (0.0 per cent) of those in Ndokwa East and Okpe LGAs.

Table 3: Percentage Distribution of the Availability of Different Types of Laboratory Test in PHC Centers

LGAs	Unitary Text	Pregnancy Test	Ova Parasite Test	Occult Test	Blood Count	Malaria Parasite	PCV	Sugar Test
Aniocha North	42	88	21	8	13	54	33	33
Bomadi	33	67	0	0	11	22	22	11
Ika South	44	65	4	4	4	13	4	9
Isoko North	42	79	16	11	21	58	21	16
Ndokwa East	7	90	0	0	0	3	0	3
Okpe	35	71	0	6	0	18	12	12
Udu	52	76	24	19	24	38	29	29
Ughelli South	24	76	0	3	7	41	14	24
Warri North	38	75	0	0	13	13	13	13
Average	35.22	76.33	7.22	5.67	10.33	28.89	16.44	16.67

Source: Field Work, 2014

The survey also showed that, while the primary health care centres in five (5) local government areas were not equipped to run ova parasite tests, namely: Bomadi, Ndokwa East, Okpe, Ughelli South and Warri North, 24 per cent of those in Udu performed the test. Occult test was not done in any (0.0 per cent) of the centres in Bomadi, Ndokwa East and Warri North, while it was available in 19 per cent of those in Udu. The survey also showed that the PHC centres in four (4) LGAs were equipped in varying degrees to run all the eight (8) tests investigated, namely: Aniocha North, Ika South, Isoko North and Udu. On the other hand between one and four of the tests were not available in the remaining five LGAs. Indeed, Ndokwa East was not equipped to run half (4) of the eight (8) laboratory tests considered; namely: ova parasite test, occult test, blood count and PCV.

Policy Implication

During the focus group discussions and key informant interviews it was the unanimous conclusion of the participants that the perceived poor quality of service delivery by the target PHC centres was because of the fact that appropriate equipment were either completely lacking or inadequate. For instance, considering their significance in scientific investigations and clinical laboratory tests, participants found it unacceptable that less than 10 per cent of the facilities surveyed had microscopes. Also, considering their importance of the need to preserve the potency of certain drugs and vaccines, the availability of refrigerators in only 28.67 per cent of the centres, was viewed as unacceptable. Participants also expressed great concern that 15 per cent of the target primary health care centres either could not sterilize their medical devices and equipment at all, or they used unspecified, unconventional and presumably ineffective methods. Particularly disturbing to the participants was the observation that, considering the

prevalent and endemic nature of malaria in the rural communities of the Niger Delta region, generally, and Delta State, in particular, only 28.89 per cent of the surveyed primary health care centres were equipped to test for malaria parasites.

The inability of the PHC centres to provide the needed medical devices and equipment and to keep those available in optimal working condition was blamed on two factors, namely; the inadequate fiscal allocation by government, on the one hand, and the communities being too poor to supplement government allocation, on the other. For instance, on the side of government, compared to the 15 per cent of the national budget that ought to be dedicated to the sector, in accordance with the Abuja Declaration of 2001 (15), the total health expenditure in Nigeria was 3.88 per cent in 2013. Its highest value over the past 20 years was 4.47 per cent in 2007, while its lowest value was 2.43 per cent in 2002.(16)

The major and logical policy implication that emerged from the major findings of the study, therefore, is the urgent need for increased funding of the primary health care system in Nigeria, in general and Delta State, in particular. All things being equal, it is envisaged that with increased funding by government, it would be possible to provide the necessary equipment and to maintain those that both health workers and care seekers perceive will enhance the quality of service delivery. Most essential of those that are completely lacking that stakeholders demanded are a standard laboratory and x-ray equipment. Increased funding will also facilitate the timely replacement and/or repair of equipment that become obsolete and/or non-functional, from time to time.

However, increased funding in itself would not guarantee better quality service delivery by the primary health care centres, unless and until official corruption, at all levels, is transparently and courageously tackled. The impunity with which public resources are known to have been embezzled and misappropriated must be effectively checked; and culprits duly and appropriately sanctioned. Properly managed funds are needed to procure, replace and/or maintain the clinical laboratory equipment that are either lacking or inadequate, but are needed to enhance the quality of service deliver by primary health care centres.

Conclusion

The level of utilization of utilization of primary health centres is greatly influenced by the perception of the quality of the services they render. If the outcomes of the cases brought to the PHC centres are unsuccessful, the likelihood of subsequent visit would be very low. Furthermore, the likelihood of recommending their services to potential health care seekers would also be low. The expectation of care seekers is that the equipment used in the facilities are enough, clean and safe; that they are functioning for accurate diagnosis; and that the general basic devices and equipment for the administration of treatment and surveillance are available. For instance, potential care seekers expect to find enough functioning blood pressure machines, stethoscopes, microscopes, weighing machines for different ages, hand gloves, needles and syringes. Similarly, they want to be assured that there are various modern methods of sterilizing medical equipment. Finally, they expect that the primary health care centre they visit is quipped to do all major clinical laboratory tests, particularly for common disease conditions. Where these are either absent or inadequate, they would prefer to go to other facilities, even if they will be required to pay.

However, the survey of the primary health care centres in Delta State of Nigeria showed that these medical devices and equipment were deficient in various combinations from one centre to another. Consequently stakeholders were generally not satisfied with the quality of their service delivery. This

has affected the utilization and patronage of the facilities. Stakeholders were unanimous in concluding that the deficiency in equipment was due to insufficient allocation of resource to the health sector, in general, and the primary health care subsector, in particular. The logical policy implication, therefore, is that government should, as a matter of urgency, increase the resources allocated to the health sector. However, it was also concluded that in order for the envisaged increased allocation to be translated into improved quality of service delivery and outcomes, official corruption and impunity in the misappropriation of public resources must be tackled.

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