Assessment of sanitation level in six Primary Health Care centers in Niger-State, Nigeria

[1]Kombo S. A.

[1]College of Health technology, Minna, Niger State- Nigeria.
Kombo SA., College of Health technology, Minna, Niger State- Nigeria.E-mail: abooqawwama2013@gmail.com

Abstract

Introduction: Sanitation encompasses effective clearing of surfaces using appropriate products, decontamination of medical equipment and devices use in patient care procedures. Primary Health Care Centers (PHCs) requires proper waste management and sanitation because its improper handling could be very detrimental to many patients, health workers, visitors to the PHC and the health of the host community. This study assessed the practice and processes of sanitation in Primary Health Care Centers located at Rafi Local Government of Niger State, Nigeria. This by identifying and accessing the sources and methods of managing hospital waste as variables that can hinder or promote sanitation services.

Method/Result: Six PHCs sanitation practices were assessed with help of questionnaires. Data collected were analyzed using frequency tables, percentage ratio and pictorial representations. The results show that most of the primary health centers have good sources of waste collection but poor mechanism of waste management.

Conclusion: The study identified specific variables that can hinder or promote PHCs' sanitation practice and processes in the study area. It recommended the right promotion of these sanitation related variables to enhance the quality of health care provision.

Keywords: Sanitation; Primary Health Care (PHC); Rafi.

Introduction

The Primary Health Care (PHC) system is the bedrock of providing basic health care services in the National Health System.[1] Such approach to health services provision at this first entry point cut across promotion, prevention, restoration and rehabilitation. However, despite several efforts to ensure PHC achieve it aim by placing all its services under one roof,[2] it is still plagued by several challenges.[1] These include lack of infrastructure, poor manpower, scattered services, low accessibility, inefficient referral and low coverage of effective practices like sanitation that should prevent spread of infectious diseases from the healthcare facilities into the communities.

Sanitation in healthcare facilities like the PHCs can be said to be traceable to the research of Simmelweis who pioneered infection control in hospital environment.[3] Hence, sanitation can be deduced as hygiene promoting acts that reduce the spread of hospital's infection and help in maintaining

the well-being of people. Such acts include the practice of sterilization of hospital equipment/personnel and proper disposal of hospital's wastes. These will ensure that microbes or germs do not get into contact with humans, animals, food or water, causing infections and sometimes fatal disease. In other words, sanitation is essential for sustaining health through the prevention of infection and consequently improving and maintaining mental and social well-being.[4] Furthermore, sanitation in healthcare facilities shapes patients' health seeking behavior and also contributes to patients' satisfaction with health care provided to them. To the knowledge of the researcher, no prior study in Nigeria has accessed the practice of PHCs' sanitation with respect to sources and processes that contribute to spread of nosocomial infections.

Aim and Objectives of the Study

The study assessed the practice and processes of sanitation among selected primary health care center in Rafi local Government Area of Niger State, Nigeria. Specifically, the study identified and access the sources of water supply, types of toilet facilities, level of infrastructural decay (i.e. types and condition of ceiling, walls, floor and bed), methods of refuse disposal and sanitation processes as measures that can promote or hinder sanitation practices.

Methodology

The sample population for this study consisted of six (6) Primary Health Care Centres (i.e. Basic Health Centre, Tegina; Town Dispensary, Gimi; Maraba Health Centre, Tegina; Ecwa Clinic, Tegina; Basic Health Centre, Kwana; The People's Clinic and Maternity Home, Tegina) that are located at Rafi Local Government Area of Niger State. All the 64 health care providers working at these PHCs were approached to participate in the study. Fifty out of the 64 consented to the study.

Data Collection and Analysis

Data were collected through a structured questionnaire complemented with an interview schedule. The data collected were related to the specific objectives of the study. Data collection lasted for four (4) weeks between March to April, 2018. The data were analyzed using statistical method of frequency table and percentage, bar-chart and pie-chart. In addition to the data were pictorial representation of the state of primary health care infrastructural facility.

Results

Representative pictorial illustrations of the infrastructural decays at all the primary health care centres of the study

Picture 1: Frontage of a dilapidated primary health care structure in the study area. This is a common observation in some of the PHC facility where the study took place.

Picture 2: Un-sanitized well in one of the primary health care facility. A common feature of some of the PHC sources of water.

Picture 3: Typical patient bed in some of the PHCs where the mats served as the mattresses.

Picture 4: Sanitary level of typical VIP latrines in some of the Primary Health Care centres

Picture 5: Ceiling condition of some of the primary health care facility in the study area.

Picture 6: Indiscriminate dumping of medical solid waste in some of the primary health care facility.

Gender distribution of the respondents

Base on the gender of the total respondents, 54% of them were females while the remaining 46% were males. This shows that there was more female gender among the respondents.

Sources of water supply and availability

Table 1 shows that majority of the respondents identified the PHC facilities source of water as public water works' pipes (48&) and boreholes (46%). Only 6% said unprotected well water was the main source of water supply. None of the respondents identified protected well water, rain water and fetching from neighboring wells/stream/tapes as the source of water in the PHC facilities.

Table 1 – Sources of water supply in the area of study (N=50)

Sources of water	Frequency	Percentage (100%)
Public pipes	24	48
Boreholes	23	46
Unprotected wells	3	6

Table 2 - Availability of water in hours per day (N=50)

Duration in hours	Frequency	Percentage (100%)
2	11	22
4	8	16
5-24	31	64

Table 2 shows that majority of the respondents (64%) received water supply for most time of the day while the reminder received less than 5 hours of water supply on daily basis.

Table 3 – Alternatives source of water (N=50)

Source	Frequency	Percentage (100%)
Public pipes	2	4
Boreholes	35	70
Unprotected wells	4	8
Drums/tanks	9	18

Table 3 reported that 70% of the respondent fall back on boreholes as the major source of alternative water supply in most of the PHCs in which the study took place. However, 8% still falls back on unsafe alternative sources of water supply.

Table 4 – Types of toilet facility available for patients (N=50)

Types of toilets	Frequency	Percentage (100%)
Water closet	11	22
Nearby bush	6	12
VIP latrine	18	36
Pit latrine	15	30

In table 4, it is shown that about two-third of the respondents reported that the types of toilets available for patients' use is either pit latrine (30%) or ventilated improved pit (VIP) latrine (36%).

Table 5 **–** Types of toilet facility available for staff (N=50)

Types of toilets	Frequency	Percentage (100%)
Water closet	29	58
Nearby bush	2	4
VIP latrine	7	14
Pit latrine	12	24

Table 5 above shows that more than half of the staff have access to water closet toilets. This is followed by pit latrine (24% of the respondents) and the least utilized is the nearby bush method (4%).

Table 6 - Type of ceiling available in the facilities (N=50)

Type of ceiling	Frequency	Percentage (100%)
POP	5	10
Smooth	20	40
Coffered	25	50

Table 6 reported on types of ceiling available at the PHCs. The predominant types available in the PHCs are coffered (50%) and smooth ceilings (40%).

Table 7 – Hospital bed availability in the PHCs' facilities (N=50)

Responses	Frequency	Percentage (100%)
Yes	45	90
No	5	10

Table 7 shows that the most of the PHCs (90%) have beds.

Table 8 – Use of mats in the PHCs facilities (N=50)

Responses	Frequency	Percentage (100%)
Yes	5	10
No	45	90

Table 8 reported 10% of the respondents agreeing that some of the patients use mats while on admission in the PHCs.

Table 9 – Types of floors available in the PHCs (N=50)

Types	Frequency	Percentage (100%)
Tiles	3	6
Carpets	2	4
Cement	45	90

Table 9 shows that 90% of the PHCs had cement floor.

Table 10 – Types of wall (N=50)

Type of walls	Frequency	Percentage (100%)
Brick	2	4
Concrete	15	30
Smooth	33	66

Table 10 shows that 4% of the PHCs have brick wall, 30% concrete wall, and 66% smooth wall.

Table 11 – Usage of proper waste disposal mechanism (N=50)

Responses	Frequency	Percentage (100%)
Yes	41	82
No	9	18

Table 11 shows that more than two-third (82%) of respondents reported the PHCs as using proper waste disposal mechanism.

Table 12 – Availability of black-bin for contaminated wastes' disposal (N=50)

Responses	Frequency	Percentage (100%)
Yes	12	24
No	38	76

Table 12 reported most of the respondents as agreeing the PHCs don't have black-bin for wastes' disposal.

Table 13 - Availability of yellow and red-bins for contaminated medical waste (N-50)

Responses	Frequency	Percentage (100%)
Yes	15	30
No	35	70

Table 13 shows that less than one-third of the respondents (30%) reported that the PHCs lack yellow and red-bins for contaminated medical wastes.

Table 14 - Availability of safety box (N=50)

Responses	Frequency	Percentage (100%)
Yes	44	88
No	6	12

Table 14 shows that 88% of the respondents agreed that the PHCs have safety boxes for medical sharp objects disposal.

Table 15 – Availability of wastes' disposal pit (N=50)

Responses	Frequency	Percentage (100%)
Yes	20	44
No	30	60

Table 15 reported 40% of the respondents noting the presence of wastes' disposal pit in the PHCs.

Table 16 – Method of disposal of medical wastes other than sharp objects (n=50)

Final disposal method	Frequency	Percentage (100%)
Incinerator	11	22
Open burning	31	62
Open dumping without burning	5	10
Stored in other environment	3	6

Table 16 shows that the most and least common methods of medical wastes disposal at the PHCs are respectively open burning and storage in other environment.

Discussion

The level of sanitation practices in PHCs and the associated processes is a good indicator of the quality of health care provision. In this study, the sources of good sanitation practices in this study like safe water units, available toilet facilities, present infrastructures, number of beddings and safety boxes were relatively on the high side. This speculatively should result in early health care seeking behavior at the PHCs, improve wellbeing outcomes and increase staff morale.[5]

The processes of sanitation in this study particularly with waste management is not encouraging as there were inadequate materials for contaminated medical wastes and waste disposal methods. This suggested that the spread of nosocomial infections within and beyond the PHCs is more likely. Thus enabling the elongation of hospital stay period, low recovery within the PHCs, increasing mortality and possible hospital to community spread of infections. Such linkage might reinforce local belief of, "hospital's bad image as house of death." Hence, the likely push for early health care seeking behavior attributable to sources of sanitation seemed to have been negated by the morbidity/mortality related processes of sanitation in this study.

Limitations of the study included the non-recruitment of patients and patients' relation to participate in the study, possible bias from use of non-validated questionnaires and intimidations from local government overseeing agency. Despite the limitations, the study provided specific sanitation variables for governments to focus upon in improving the quality of healthcare provision and redressing "hospitals as death houses" myths giving negative images to the PHCs and most government owned health facilities.

Conclusion

The researcher identified the possible roles the sources and processes of sanitation might be playing in health seeking behavior as well as in the spread of hospital infections within

and/or beyond the PHCs' facilities. The study identified specific sanitation variables that will help in improving quality of health care services being provided at the PHCs' level.

References

1. Uzochukwu B. S. C. Primary health care systems (PRIMASYS): case study from Nigeria. World Health Organization, Geneva, 2017.
2. Integrating primary health care governance in Nigeria: PHC Under One Roof. Abuja: Federal Government of Nigeria, National Primary Health Care Development Agency; 2013
3. **Semmelweis I. P**. The cause, concept and prophylaxis of childbed fever1861.
4. WHO. Guidelines on sanitation and health. World Health Organization, Geneva, 2018.
5. Bouzid M., Cumming O. and Hunter P. R. What is the impact of water sanitation and hygiene in healthcare facilities on care seeking behaviour and patient satisfaction? A systematic review of the evidence from low-income and middleincome countries. BMJ Global Health, 2018.

Conflict of interest: Nil