

PREVELANCE OF TUBERCULOSIS IN WARRI SOUTH WEST FROM 2008-2017

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ABSTRACT

Background: This research project was to assess the prevalence of tuberculosis in Warri South-West, Delta State, from January, 2008 to December, 2017. **Method:** A retrospective study was carried out consisting of all documented cases of pulmonary tuberculosis in Warri South-West Primary Health Centre DOTs units from January 2008 to December 2017. Analysis was done using SPSS Version 20.0. **Result:** Findings indicated that out of 280 patients tested, a total of 150 cases of tuberculosis were recorded within the period of the study with a prevalence rate of 53.6%. The prevalence for each year during this study were as follows: 2008 (6%), 2009 (1.2%), 2010 (4.7%), 2011 (1.3%), 2012 (11.3%), 2013 (12.7%), 2014 (13.3%), 2015 (8.0%), 2016 (16.7%), 2017 (24.7%). The most affected gender was female (77, 51%). The age group mostly affected was between the ages of 41 – 50 years (36%) while the least was 61 and above (2%). The percentage of the infected population that utilized the services rendered in Warri South-West Primary Health Centre DOTs units was 100. **Conclusion:** The prevalence of pulmonary tuberculosis in Warri South-West LGA within the years under study is on the increase and thus requires prompt measures in combating the situation. It is therefore recommended that Health workers should sensitize the public on how to prevent and control pulmonary tuberculosis. The government should improve the standard of living, Health policies, Human resource and service delivery in the rural areas. There should be a wide coverage of DOTS in all the Local Government Areas to treat identified cases.

KEYWORDS: DOT Center, Tuberculosis, Warri South-West.

INTRODUCTION

Tuberculosis constitute major public health problem in Warri South West Local Government Area. The social stigma associated with the disease further compound the problem. In view of combating these challenges National Tuberculosis Leprosy Control Programme (NTBLCP) provide access and ensuring social-reintegration of those affected by these diseases into the community. As part of the strategic plan. services are provided in nearly all the health centre using Directly Observe Treatment Short Course (DOTs) in the Local Government Health Centre, with the involvement of all the public, private and community health providers.^[1] The NTBLCP created demand for service by encouraging the community to participate and ensure the awareness creation through provision of information on the cause, transmission, diagnosis and treatment.^[2] At the end of 2018, there were up to fifteen (15) DOTS centers opened in Warri South West Local Government in other to increase case finding and early detection of tuberculosis, and hence reduce the high tuberculosis burden in Warri South West.^[1] Today tuberculosis remains a global public health problem of enormous dimension.^[14] It is estimated that there are I

billion infected patients worldwide, with 10 million new cases and over 3 million deaths per year. Tuberculosis is responsible for more deaths than any other infectious disease.^[3,17] In Warri South-West Tuberculosis is one of the most serious public health problem. The socio-economic status of the community and low educational background and their life style contribute immensely to the development of TB in spite of Increased number of DOTS facilities.^[1] Despite the support of Donor organizations such as the German Leprosy Relief Association and the introduction of DOTS, tuberculosis cases seem to be on the increase in most communities in Nigeria.^[3] The area of study was Warri South West DOTS Health Centre in Delta State. It has boundaries with Warri South Local Government Area, Burutu Local Government Area, Ondo State and Bayelsa State. Warri South West DOTS Health Centre is a Government owned Health Centre with Primary Health coordinator as Head of Department, Director of Nursing who is in charge of nursing services and other specialized staffs. Though the Health Centres are 20 but only 15 are used for DOTS.

MATERIALS AND METHODS

The aim of the retrospective study was to determine the prevalence of tuberculosis in Warri South West Local Government Area of Delta State from 2008-2017. All pulmonary tuberculosis patients registered and treated in Warri South-West Dot Health Centers from 2008-2017 were recruited for the study. An updated Pulmonary Tuberculosis Central Register from January 2008 to December 2017 provided the information for the period under review. Researchers designed a proforma to collect demographic data and information on the treatment outcome from the Pulmonary Tuberculosis Central Register. After obtaining ethical approval from The Research Ethics Committee of Bayelsa State College of Health Technology and Warri South West LGA, Primary Health Centre clearance was obtained to access the Pulmonary Tuberculosis DOTS register. Researchers visited the Health Centre to examine the Pulmonary Tuberculosis Central register using the self-developed proforma and relevant data were extracted. The procedure took about 2 weeks to be completed due to the fact that it involved large data (10 Years Retrospective study). Data was collected, tallied and analyzed with the

aid of statistical package of Social Science (SPSS version 20.0). The results were presented in tables as percentage, means and standard deviations.

RESULT

The objective of the retrospective study was to identify prevalence of tuberculosis in Warri South West from 2008 – 2018, identify the gender mostly affected by Pulmonary TB from 2008 – 2018, the age group mostly affected and the percentage of the infected population that utilizes the services rendered in the Dot center in Warri South West from 2008 – 2017. The results of the findings are presented in Tables, Percentages, mean and standard deviation.

Prevalence of Tuberculosis in Warri South-West from 2008 – 2017

Altogether, 150 cases of tuberculosis presented within the time period of 2008 to 2017. The highest number of cases of tuberculosis presented in the year 2017: 37(24.7%); closely followed by 2016: 25(16.7%), 2014: 20(13.3%) and 2013: 19(12.7%). This is shown on Table.1.

Table 1: Prevalence of Tuberculosis in Warri South-West from 2008 – 2017.

Year	Frequency (n=150)	Percentage (%)
2008	9	6.0
2009	2	1.3
2010	7	4.7
2011	2	1.3
2012	17	11.3
2013	19	12.7
2014	20	13.3
2015	12	8.0
2016	25	16.7
2017	37	24.7

4.1c Gender most affected by Tuberculosis from 2008 – 2017.

Assessment of the gender most affected by tuberculosis from 2008 to 2017, showed that as the years went by, male genders were more affected in the years 2011,

2012, 2014 and 2016. Female genders were more affected in the years 2008 to 2010, 2013, 2015 and in 2017. This finding was however not statistically significant (p-value > 0.05). This is shown on Table 2.

Table 2: Gender most affected by Tuberculosis from 2008 – 2017.

Year	Male (n=73)	Female (n=77)	p-value
	Frequency (Percentage)	Frequency (Percentage)	
2008	2 (2.7)	7 (9.1)	0.741
2009	0 (0.0)	2 (2.6)	
2010	3 (4.1)	4 (5.2)	
2011	2 (2.7)	0 (0.0)	
2012	11 (15.1)	6 (7.8)	
2013	9 (12.3)	10 (13.0)	
2014	12 (16.4)	8 (10.4)	
2015	6 (8.2)	6 (7.8)	
2016	13 (17.8)	12 (15.6)	
2017	15 (20.5)	22 (28.6)	

Age group most affected by Tuberculosis from 2008-2017

Upon assessment of the age group most affected by tuberculosis from 2008 to 2017, it was found that as the

years went by, cases whose ages ranged between 31 – 40 years as well as 41 – 50 years were most affected by tuberculosis. This finding was however not statistically significant. This is shown on Table 3.

Table 3: Age group most affected by Tuberculosis from 2008-2017.

Year	Age groups (years)						p-value
	11-20	21-30	31-40	41-50	51-60	≥61	
2008	0	0	0	3	5	0	0.880
2009	0	1	0	0	1	0	
2010	0	0	0	1	4	1	
2011	0	2	0	0	0	0	
2012	4	4	8	3	0	0	
2013	0	4	7	6	0	0	
2014	1	3	6	7	2	1	
2015	0	4	4	7	0	0	
2016	1	1	8	13	2	1	
2017	1	2	16	14	3	0	

Percentage utilization of DOT center services in Warri South West

Assessment of the case detection rate of the DOT center services by individuals living with HIV provided a guide used in assessing the percentage utilization of the services being provided. The least percentage utilization was gotten in the year 2009 as well as 2011. The highest percentage utilization was gotten in the years 2016 and 2017. This is shown on Table 4:

Table 4: Percentage utilization of DOT center services in Warri South West.

Year	Percentage (%)
2008	13.0
2009	3.0
2010	10.0
2011	3.0
2012	24.0
2013	27.0
2014	29.0
2015	17.0
2016	36.0
2017	53.0

DISCUSSION

The data analyzed indicated that Warri South West Primary Health Centre had a prevalence of 150 Pulmonary Tuberculosis cases between January, 2008 and December, 2017. The registered case was higher in 2017 (24.7%) and the lowest number registered were in 2009 (1.3) and 2011 (1.3). The implication is that the prevalence of Pulmonary Tuberculosis was on the increase in Warri South-West. This confirms the report of World Health Organization that the incidence of Tuberculosis case is on the increase. The report indicated that “In 2018, the 30 high TB burden countries accounted for 87% of new TB cases. Eight countries account for two thirds of the total, with India leading the count, followed by, China, Indonesia, the Philippines,

Pakistan, Nigeria, Bangladesh and South Africa.”^[10] The lowest number of registered cases of Pulmonary Tuberculosis in Warri South West could also mean that the case detection rate was poor in 2009 but detection improved in 2017.

Another findings in the study indicated that the prevalence was higher in females (77) than in males (73). This confirms the finding of a study conducted in a Zambian community where the females were found to be more vulnerable to Pulmonary Tuberculosis infection because they were always expose to patients inform of caring for infected patients, living in overcrowding house with poor ventilation, no knowledge of aseptic technique and poor knowledge of the disease.^[4,19] However, a study on Sex Differences in Tuberculosis Burden and Notifications in Low- and Middle-Income Countries indicated that TB prevalence is significantly higher among men than women in low- and middle-income countries, with strong evidence that men are disadvantaged in seeking and/or accessing TB care in many settings.^[11]

The study also indicated that the age group mostly affected is 41-50 years. This confirms the findings of a study conducted in Kano where age 41-50 pulmonary Tuberculosis was prevalence among age 41-50. The researchers opined that this age group is the vibrant productive group of the economy.^[5] Another study indicated In the United States, more than 60% of TB cases occur in persons aged 25-64 years; however, the age-specific risk is highest in persons older than 65 years.^[12] The implication is that when this age group is no longer productive due to Pulmonary Tuberculosis infection the economy of the society will be affected negatively which may lead to poverty and hunger.^[6] Tuberculosis is associated with poverty hence; people refer to it as the disease of the poor.^[7]

Finally, the findings also indicated that the percentage of utilization of DOT center services in Warri South West in 2017 was on the average (53%). It also means that all detected Pulmonary Tuberculosis patients registered in Warri South West Primary Health Centre did utilize the facility for treatment. This calls for a high level of follow up of cases registered in the health facility to ensure adequate treatment else they become sources of infection to others in the society.^[8,16] Any treatment in which a cure was not established (sputum conversion) among tuberculosis cases impose a danger for the community. Hence, prevention of such occurrence is necessary to maximize the efficiency of tuberculosis control activities.^[12,13,15,20]

CONCLUSION

The prevalence of Pulmonary Tuberculosis is high in Warri South-West Local Government Area, more in female than in males, the frequency is high among age group 41-50 and only 53% of detected cases utilize the DOT center service. Therefore, it is recommended that the private health practitioners should be integrated into tuberculosis control activities to improve case finding, that is proper diagnosis and treatment of index cases to ensure cured and discharged. TB/HIV collaboration should be encouraged and enhanced. HIV testing should be extended to all TB patients while all HIV patients should be screened for TB. The government should be encouraged to improve infrastructures, health policies, human resources development, and services delivery at all health centers and DOTs clinics. This is very important at the rural area. Trained Nurses, Doctors, and Community Health Practitioners should be encouraged to work in rural areas. More health workers should be trained on how to give health education to the public on the prevention and control of pulmonary tuberculosis. Emphasis should be on proper reporting of data by DOTS facilities. Proper reporting with trained staff will help in getting quality results. In this study, the treatment success rate (TSR) was just 80.2% and this was far below the WHO target. Trained work force should be encouraged to do proper step down training to other staff so that issues of staff attrition can be handled well by the DOTS centers. Proper monitoring and evaluation of treatment outcome is needed. Finally, proper observation and follow-up of patients during treatment is needed. Observation can be done by regular home visits of TB patients, formation of TB support groups, and usage of a family member as a treatment supporter.^[18] All these help to monitor and report issues of defaulters to health care workers. These also help in making sure that treatment protocol is followed perfectly leading to favourable treatment outcome

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