

A STUDY ON TB DETECTION AND TREATMENT PROBLEMS IN MPIGI DISTRICT HEALTH SYSTEM.

Abstract: A cross sectional study was conducted to establish the TB case detection and treatment problems in the Mpigi health system. The overall objective of the study was to establish factors influencing early detection and treatment of TB cases with a view of identifying gaps, and making recommendations that spike off a reaction to develop strategies to address the identified problems. The study took place in 3 public health facilities of Gombe hospital, Maddu and Mpigi Health Centre IVs as well as one Non-for Profit health care facility named Nkozi Hospital. The selection criterion was because they are involved in the treatment of TB cases. A cross sectional study was conducted, the study unit was the patient receiving TB treatment care and support, the sampling frame for TB patients was generated using TB registers at the TB clinics and in patients' records, a structured questionnaire was administered by trained research assistants and the researcher, Socio-demographic characteristics were estimated using descriptive statistics and cross tabulations. Risk factors for delay in early TB case detection and treatment were estimated by bivariate analysis using chi-square for association between the dependent and independent variables. The level of significance was set at $p=0.05$ and 95% confidence interval was used in the interpretation of statistical results. At multivariate analysis the dependent variable was analyzed for association with a number of independent variables using all variables whose p-values that were less than 0.05 at bivariate analysis. Of the 214 TB patients interviewed, only 64/214 (30%) were detected with TB before four weeks after the onset of symptoms of TB (95%CI=24.2-36.6) while the majority, 150/214 (70%) of the patients came to the hospital/health centre after four weeks of the onset TB symptoms (95/% CI=63.4-75.8). TB patients who said time spent waiting to see a health worker in the hospital/health centre was about thirty minutes or less were 1.76 times more likely to have an early TB detection than patients who claimed time spent waiting to see a health worker was more than thirty minutes, (OR= 1.76, 95%CI= 0.96-3.23, P= 0.033).

Background to the study: Worldwide, (TB) remains a major cause of death and ill health, disproportionately affecting the poorest and most vulnerable groups such as those with a compromised immune system, for example patients suffering from AIDS. By definition, TB is a communicable disease caused by mycobacterium tuberculosis TB is still one of the leading causes of death from an infectious disease. (CDC, 2011ⁱ). All countries are affected, but 85% of cases occur in Africa. There were around 1.3 million deaths from TB among HIV-negative people and around 0.4 million deaths from TB among HIV-positive people in 2010 alone (WHO/TB/2010.7ⁱⁱ). Uganda occupies 16th position among 22 high-burden tuberculosis (TB) countries in the world. In 2007, it had 102,000 new TB cases, with an estimated incidence rate of 330 cases per 100,000 populations. According to Uganda Aids Indicator Survey (UAIS,2011ⁱⁱⁱ) the prevalence of HIV/AIDS in Uganda is at 7.3 percent, and this

could further exacerbate the problem of TB control. According to WHO, around 38.7 percent of new TB patients in Uganda are HIV positive. Uganda has a low case detection rate of 51% which is 19% below the WHO set target of 70% (WHO, 2009). Mpigi district has a TB case detection rate of 41% translating into a 29% shortfall of the global target and a 10% below the National case detection rate of 51% both of which are below the WHO set target for an effective TB control program. While Uganda started implementing the DOTS Programme with 87% successes in terms of cure rate, there's no evidence to suggest why Mpigi District ranks low in early TB detection. This research was conducted to establish the factors that accounted for the low early detection rate of TB in the said district.

The overall objective of the study was to establish factors influencing early detection and treatment of TB cases in the Mpigi Health system with a view of identifying gaps, and show casing the reasons to take action about the TB problem in the area and the country as a whole.

Methods: A cross sectional study was conducted in the health care facilities that were conveniently selected for their role in diagnosing and treating TB cases. The study unit was the patient receiving TB treatment care and support in the selected health care facilities. The sampling frame for TB patients was generated using TB registers at the TB clinics and in patients' records. TB patients were stratified by outpatient and in-patients and from the two strata, proportionate stratification was used to select the sample of patients to be interviewed using a structured questionnaire. The questionnaire was administered by trained research assistants and the researcher. An interview guide was used to collect data from key informants -health care workers that handle TB patients.

Results: A total of 228 TB patients were interviewed between the period March to May 2012. Of the 228 respondents, 14 patient data were not considered for analysis because of incompleteness of the data collected. The mean age of the 214 TB patients was 33.38 years; median age was 33 years and standard deviation of 12.02. Nearly half, 109/214 (50.9%) of TB patients were aged more than 33 years and of these 81/109 (74.3%) had a late detection TB. The majority, 130/214 (60.75%) of the patients were males and most 85/130 (65.4) of them had late detection of TB. Almost half 100/214 (47.6%) of the patients were married and of these 70/100 (70%) were identified to be TB cases at a later stage of disease.

Discussions

Early detection and treatment of tuberculosis is critical to controlling the disease, (WHO, 2003 and Kawai, 2006). However, 70% (n= 149) of the patients in this study waited until their symptoms had persisted for more than 1 month before they sought medical care. This delay in health -seeking behavior is likely to have increased their risk of anticipation of morbidity, mortality, and tuberculosis transmission to contacts

Understanding delayed test-seeking behavior is important for designing tuberculosis case-finding and health promotion activities to improve community health. In this study 30% of patients sought early medical help for early TB diagnosis. This is lower than what Ministry of Health of Uganda has reported that stood at 61% in 2010 (WHO,2010), but below the recommended 70% which is the WHO set target (WHO, 2009) and the findings in a study by (Rajeswari et al, 2002). The case detection rate of 30% found in this study is less than the MOH report of 61% (WHO,2010^{iv}) probably because this study relied on patient reports only while MOH findings been population based .

Conclusions

In conclusion, the proportion of patients who sought for early diagnoses of TB in this study was low.

The proportion of patients who had an early TB detection was 30% at health care facility while 70% had a late TB case detection.

Being a single female, widowed, with informal education level and unemployed was significantly associated with late detection of TB cases.

Recommendations

This study provides baseline information about delays in the diagnosis of tuberculosis. The long total delay of 1 month in the diagnosis of tuberculosis observed in this study can be reduced by: 1) Strengthening educational campaigns designed to provide information regarding the symptoms of TB, especially those that target non married females, those with no formal education as well as the employed. The policy makers need to consider work policy that embraces all diseases .Government should develop a policy that encourages employers to carry out regular medical checkups for infectious diseases like TB among its employees.

2) Trends in patient and health system delays should be monitored in order to measure the impact of TB treatment over time, and to identify opportunities to further reduce delays in TB diagnosis.

The implementation of such measures could reduce the delay in establishing a diagnosis of TB.

3) Qualitative studies should be conducted in order to clarify the reasons for the delay in diagnosis in regard to being a single female, being widowed as well as employment status.

4) Programmers need to integrate gender and social empowerment packages to ensure that the vulnerable groups in society reduce on their vulnerability.

i Centers for Disease Control and Prevention, 2009, 'MMW *Morbidity and Mortality Weekly Report* / March 19, 2010 / Vol. 59 / No. 10

ii WHO (2010) *Prevent and treat tuberculosis among people living with HIV* Printed in Switzerland

iii UAIS, 2011, According to Uganda Aids Indicator Survey

iv WHO, 2010,