

**OCCURRENCE OF CHOLERA IN SOME PARTS OF THE ABLEKUMA SUB-METRO  
DISTRICT OF ACCRA, GHANA, AND ITS SOCIO-ECONOMIC IMPACT ON THE PEOPLE  
OF THE COMMUNITY**

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**ABSTRACT**

Cholera is endemic in Accra and frequently breaks out in epidemics along the coastal areas of the Accra Plains. According to the World Health Organisation (WHO), cholera epidemics are a marker for poverty and lack of basic sanitation. Lack of access to basic water and sanitation is often associated with poverty and the poor often pay more for an inaccessible supply of small volumes of water of doubtful quality.

Transmitted through ingestion of the bacteria *Vibrio cholerae* from the faeces of an infected person, the disease is spread generally through inadequate human waste disposal and sanitation, contamination of water sources and/or poor personal hygiene and the contamination of food stuffs. The disease is characterised by severe diarrhoea and often accompanied by vomiting that may lead to collapse and death if not treated. In addition to human suffering, death and serious public health problems, cholera can have severe social and economic impact.

In Ghana (in Accra), cholera (*Vibrio cholerae*, biotype *El Tor*) was first reported in September 1970, and has since been reported across the country with Ablekuma Sub-metro area bearing the brunt in epidemic outbreaks. The disease is still endemic and highly prevalent at the Ablekuma Sub-metro area. Extensive resources are directed at combating cholera yet it remains a significant problem.

The rapid rise in the population of the Ablekuma Sub-metro area has led to intolerable insanitary and housing conditions. These conditions enhance the proliferation of the *Vibrio* bacteria which cause the cholera disease. Limited resources could better be directed to prevent outbreaks if it were possible to assess the risk of an outbreak.

This study was conducted at the Ablekuma Sub-metro area which is a low socio-economic sub-urban area of Accra in Ghana. The study was to gain sufficient knowledge of the natural characteristics and distribution of cholera and to evaluate factors on risk of exposure. If the preconditions for cholera are met, the subsequent spread of cholera depends mainly on socio-economic factors such as human behaviour and access to safe water supply and sanitation. Therefore the study also set out to evaluate the socio-economic impact of the disease on the people of the community. The methods used in the study included:

- a. i. Clinical and laboratory diagnose of cholera
- ii. The use of TCBS *Vibrio* selective agar to test for the presence of the *Vibrio* sp. in the different water samples from designated sites from Ablekuma Sub-metro area.

- b. Structured interview and administered questionnaires to find from selected cholera patients their socio-economic characteristics, health practices and to seek their opinions on cholera disease transmission, control and prevention.

Though many cases were reported, laboratory diagnostic tests on some selected patients showed that not all of them actually had the causative bacteria of cholera; an indication that some cases of diarrhoea are mistaken to be cholera especially during crisis periods. The pH measurements of some selected water samples fluctuated, ranging from 6.17-8.90. Though the *Vibrio* sp. thrives best in alkaline medium the varying pH values in relation to the presence of *Vibrio* counts were not statistically significant. Similarly, the monthly rainfall, temperature, sunshine and relative humidity data collated over a four-year period, but concentrating on the ten-month period of this study showed that these factors individually, do not necessary affect the level of *Vibrio* counts. It is thus assumed that other factors could come into play such as health status of the individual, attitude of the people and the sanitary conditions. Similarly, the difference in prevalence rates between male and female individuals and the infection of the cholera disease is not statistically significant, implying that the prevalence of cholera in the Ablekuma Sub-metro district is not associated with gender. Therefore the observed difference in the male and female prevalence rates may be due to chance.

It was established, from the 250 respondents used in this study, that individuals who were mostly affected by the disease belonged to a very low social class and were from high illiteracy (64.4%) and unemployment (15.2%) groups as well as were associated with overcrowding and high level of insanitary conditions.

Data on the incidence of cholera as provided by the health sector, Ablekuma Sub-metro area, indicated that the disease can spread throughout the year with the balance of high infection tilting slightly towards the periods of October to December and between May and June.

Cholera has a debilitating effect on the affected people who may spend between three (3) days to one (1) week out of work, thus having far-reaching economic consequences on the people and their dependants. Apart from hospital equipment used and the labour of the health workers which cannot immediately be quantified, it costs the Government between ₵242.6million and ₵333.8million in just ten (10) months for treatment of patients during cholera outbreak at the Ablekuma Sub-metro area, based on the cost of cholera treatment drugs per patient and the health status of the diseased individuals. This could affect other sectors of governance in budgetary allocations.

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