Prevalence Rate of Hepatitis-B Virus Infection in the Niger Delta Region of Nigeria using a Graph-Diffusion Heuristic Model

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Abstract

It is known that vaccination against the hepatitis-B virus (HBV) and its infection in Nigeria, is lower than many sub-Saharan African countries. In Nigeria, HBV is reported to be the most common causative of liver disease. Many studies have ensued in this regard, to ascertain the extent of HBV exposure amongst Nigerians – as the average risk is unknown. We aim to predict an estimated HBV prevalence rate in Niger Delta, and prevalence within the sub-groups. We use 30,000 HBV-cases as predicted using the supervised models below. Result shows HBV infection is quite hyper endemic in Nigeria, and trends as the highest cause of chronic liver disease in Sub-Saharan Africa. Study suggests that large numbers of pregnant women and children were exposed to HBV; and increased efforts geared towards preventing new HBV infections are urgently needed in Nigeria.

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**Index Terms**

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**Keywords**

Hepatitis, classification, Nigeria.