A mathematical model for the control of cholera in Nigeria

ABSTRACT

In this research, we present and analyze a mathematical model for the control of cholera in Nigeria with modifications as compared to previous cholera models. Our model incorporates treatment, water hygiene and environmental sanitation in curtailing the disease. A system of ordinary differential equations is used. The model studied shows that with proper combination of control measures the spread of cholera could be reduced. Numerical simulation of the full model using maple shows clearly that improvement in treatment, water hygiene and the environmental sanitation offered to about fifty percent is effective to eradicate cholera epidemic.