

Abstract

Background: Influenza A and B viruses cause annual epidemics of respiratory illness. The Influenza surveillance network in Kenya through its sentinel surveillance sites located throughout the country has established that Influenza is a major cause of respiratory illness in Kenya. **Objectives:** The objective of the study was to determine the seasonal trend and circulation dynamics of Influenza viruses in Kenya from January to October, 2013. **Methods:** Nasopharyngeal swab specimens were collected from consenting patients meeting the ILI case definition and transported to the laboratory in liquid nitrogen dry shippers. RNA was extracted from the specimen using the QIAamp Viral RNA Mini Kit. Specimens were tested for influenza A and B viruses by using the Ag Path-ID One Step Real Time Reverse Transcription PCR (RT-PCR) Kit with CDC Human Influenza Virus RT-PCR Detection Panels (CDC, Atlanta, GA). **Results:** Of 945 specimens tested between January and October, 152 (16.1%) were positive for Influenza viruses. 38.8% tested positive for Influenza A/H3N2, 34.9% were positive for Influenza B while 26.3% were positive for the pdmH1N1 virus. Circulation of Influenza during this period was marked by three distinct peaks. The first peak was seen in the month of February at 22.7% followed by a steady decline to 5% in May. A second peak of 17.9% was seen in June and the highest circulation observed in August with a peak of 28.6%. PdmH1N1 and Influenza A/H3N2 viruses co-circulated from January to April and then sharply declined in May. There were low levels of Influenza B in January which gradually increased peaking in June together with pdmH1N1. Influenza B and A/H3N2 co-circulated between July and September with peaks in August and low levels of pdmH1N1 during this period. **Conclusion:** Influenza viruses co-circulate throughout the year. Continuing surveillance will assist in determining their clinical and virological impact