

## Abstract

**Background:** Human parainfluenza viruses (HPIVs) belong to the paramyxoviridae family. HPIV is the major cause of croup in which type 1 is most frequent cause, followed by type 3 and type 2 respectively. Surveillance has shown that Human Parainfluenza virus are a major cause of respiratory infections in Kenya. In January 2013 through an existing influenza surveillance network at the Kenyan National Influenza center, we screened for parainfluenza and other non-influenza respiratory viruses. This was done within the designated Influenza network made up of eight sentinel sites. **Objective:** The objective of this study was to monitor and document circulation of Human parainfluenza viruses in Kenya in the period January–September 2013. **Materials and Methods:** Specimens were collected from the nasopharynx using a flocculated swab from consenting patients meeting the WHO influenza-like-illness (ILI) case definition. Specimens were transported to the NIC while observing the cold chain and inoculated into LLCMK2 cell line. After incubation and observation for cytopathic effect, all samples were screened by direct immunofluorescence assay (IFA) using the Respiratory Panel I Viral Screening and Identification kit (Chemicon International, Inc). **Results and Discussion:** A total of 972 nasopharyngeal swab specimens were collected between January – September 2013. HPIVs were detected in 108 (11%) cases. Out of these, there were 36 co-infections of the parainfluenza viruses. In general, Their seasonality patterns shows two peaks; one severe one occurring in April with 40.6% and the second milder peak occurring in June with 23.1% of all the cases. There was co-circulation of HPIV sub-types throughout the year. The three subtypes circulated between January to May with a peak in April with type 1 dominating in the month of April. They formed a second peak in June with type three dominating and type three lagging behind and appearing a month later. From our analysis we found that the conditions that trigger their occurrence are the same since their peaks are synchronized. **Conclusion:** This study shows that parainfluenza viruses are the major contributor of influenza in Kenya