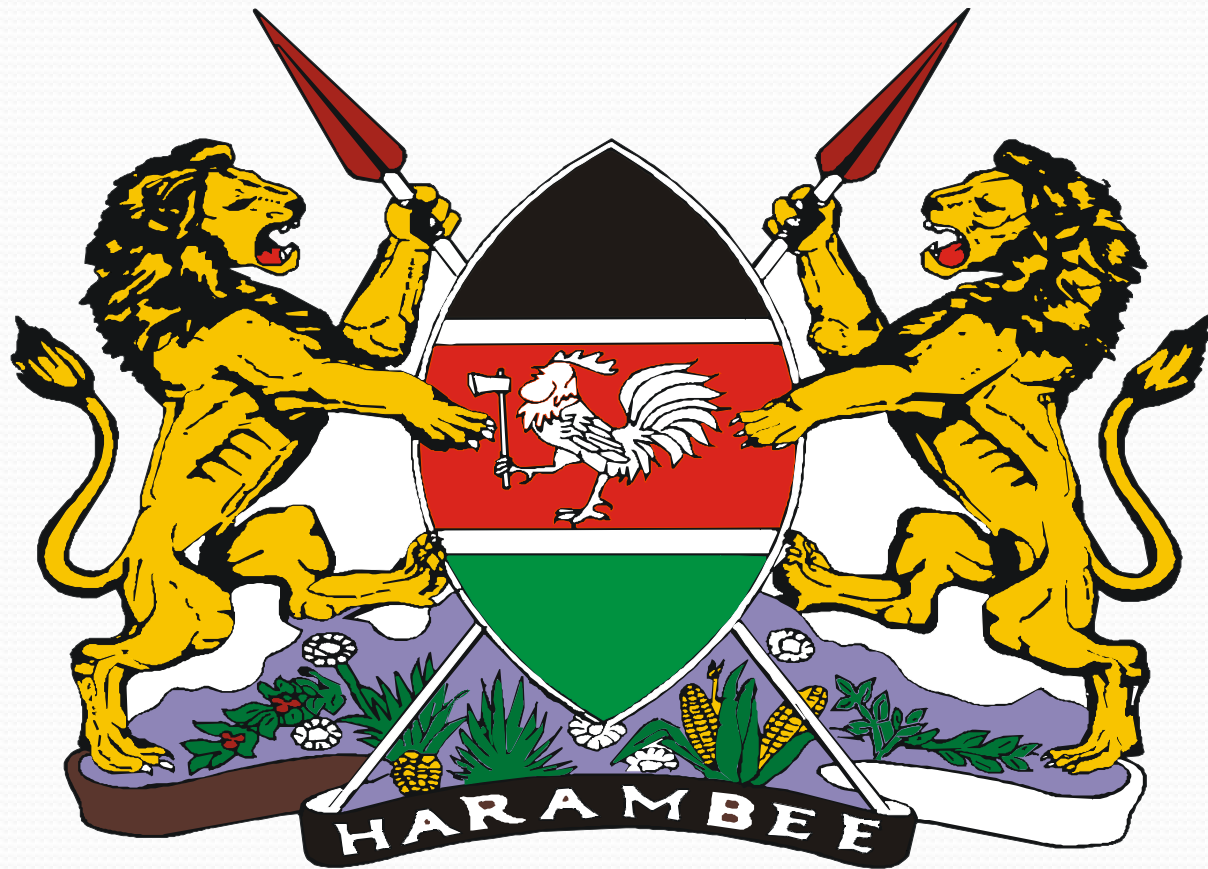


INFLUENZA EPIDEMIOLOGY IN KENYA



INFLUENZA EPIDEMIOLOGY IN KENYA

Epidemiology of influenza in Kenya

**3rd Annual African Network for Influenza
Surveillance and Epidemiology (ANISE)
meeting, February 1st 2012, Nairobi -Kenya**

Presented by ;

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INFLUENZA EPIDEMIOLOGY IN KENYA

Outline

- Background
- Influenza surveillance sentinel sites
- Circulating types and subtypes of influenza
- Influenza seasonality

INFLUENZA EPIDEMIOLOGY IN KENYA

Background

- Viral influenza is predominantly an infection of the human upper respiratory tract by a range of influenza viruses-A,B and C.
- It's found all over the world and causes an estimated one million annual deaths worldwide, (WHO, 2004).
- In the temperate countries it comes in epidemics during the winter seasons, while in tropical countries it has been observed to be present through-out with exacerbations' at some times of the year e.g. during the cold/dry seasons, (Palese et al, 2007).

INFLUENZA EPIDEMIOLOGY IN KENYA

Background...

- In sub-Saharan Africa, due to pressure from other severe morbidity problems, little data on influenza exist, and poor disease surveillance makes the region ill-prepared to detect a new influenza strain or clusters of human cases that could be associated with an influenza pandemic.
- To address these gaps, the Kenya Ministry of Public Health and Sanitation (MOPHS) came together with partners and developed a national influenza sentinel surveillance system.

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This system was started at a time when the WHO had sounded an alarm on the possibility of pandemic influenza. Hence this system was to capture,

- influenza-like illness (ILI),
- Severe Acute Respiratory Illness (SARI),
- Suspected Avian Influenza (AI)/NH1.

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Objectives of the influenza surveillance systems were;

- To understand the epidemiology of the disease in the country.
- To determine who gets the disease- especially severe forms of it
- To describe seasonal patterns) of the disease
- To determine the most common influenza subtypes and strains of the disease

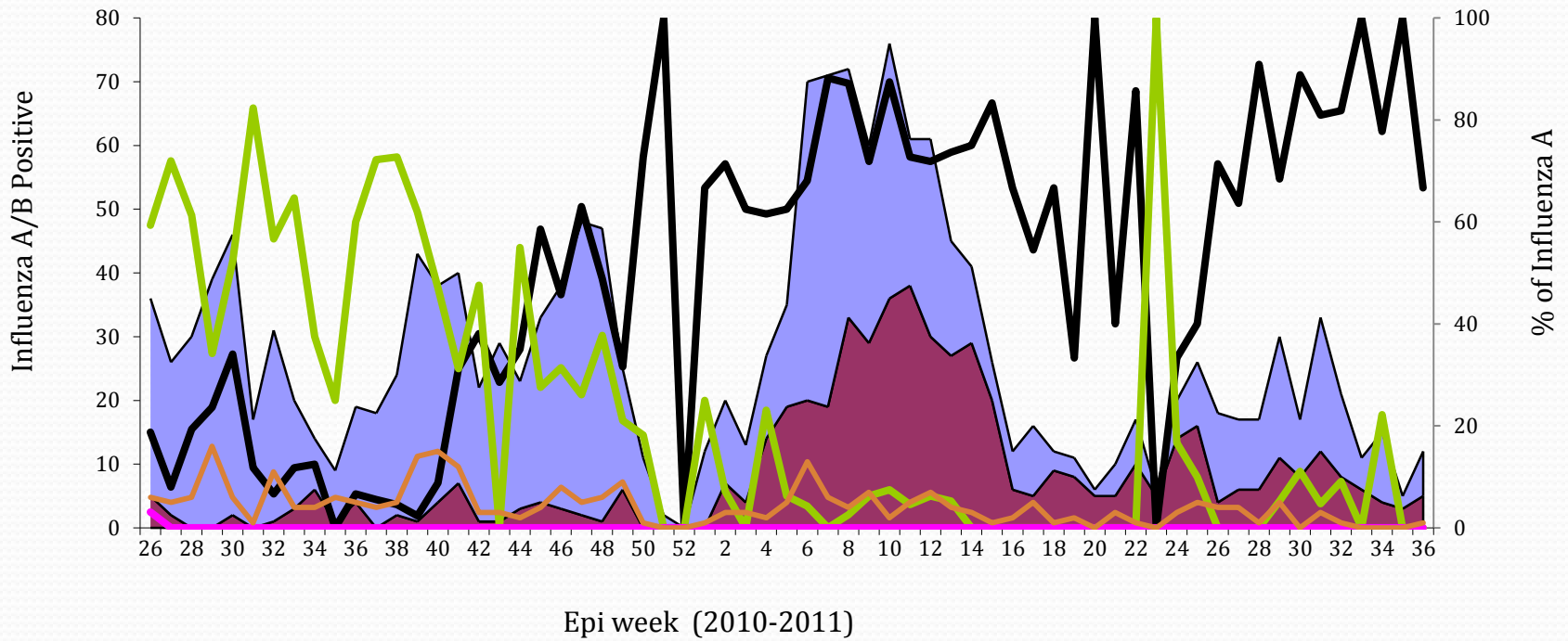
Sentinel and population-based surveillance sites in Kenya



1. Kakuma Refugee camp (under refugee program)
2. Kakamega Provincial hospital
3. Siaya District hospital
4. Tingwangi Health center
5. Nakuru Provincial hospital
6. Nyeri Provincial hospital
7. Kenyatta National Hospital
8. Embu Provincial hospital (closed)
9. Daadab refugee camp (under refugee program)
10. Garissa Provincial hospital (closed)
11. Coast Provincial hospital
12. Kakamega Provincial hospital
13. Siaya District hospital
14. Coast Provincial hospital

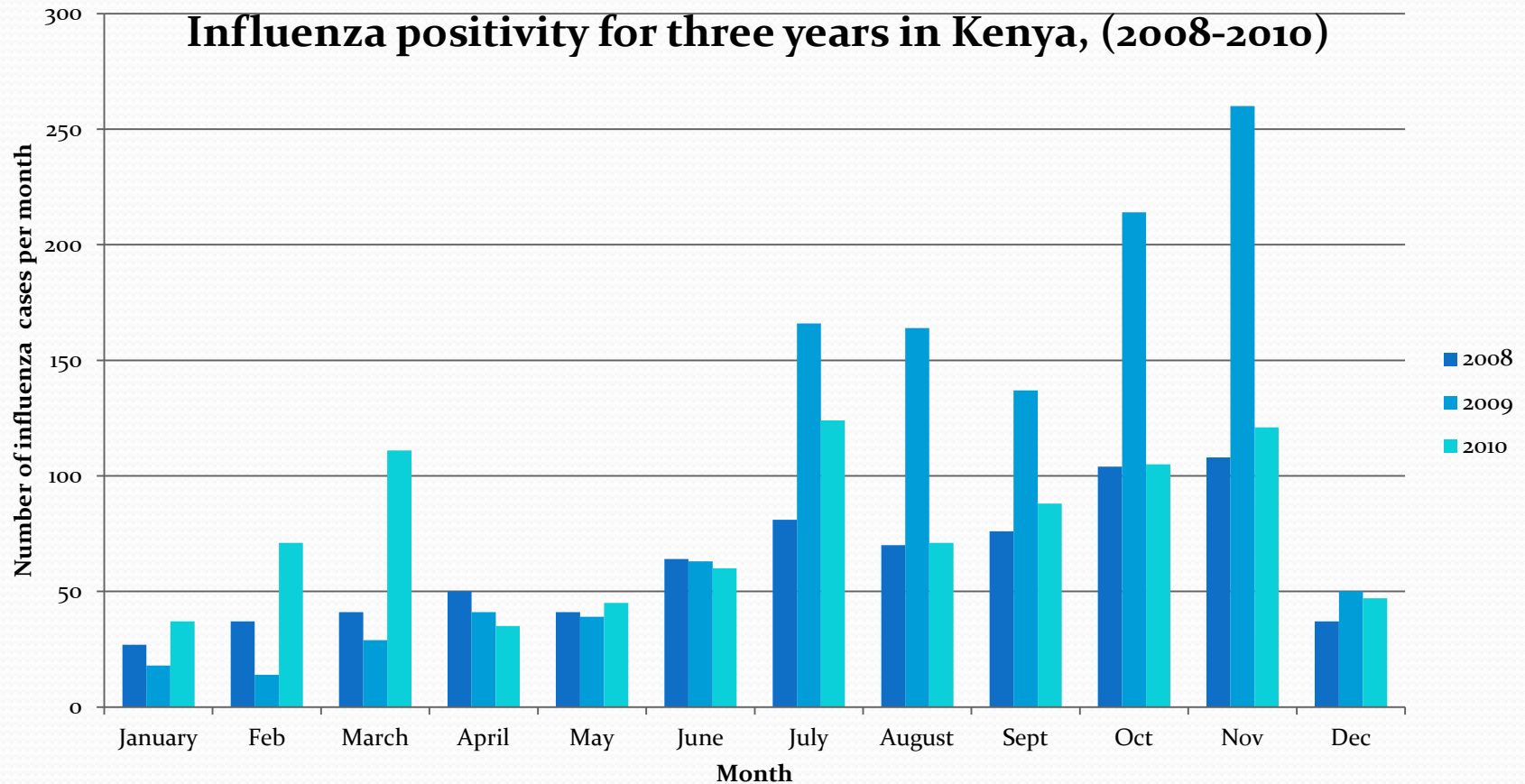
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Circulating Influenza Types and Subtypes in Kenya '10-'11



Influenza B
 Influenza A
 %pH1N1
 %H3N2
 %Seasonal H1N1
 %unsub/nonsub/subinconcl

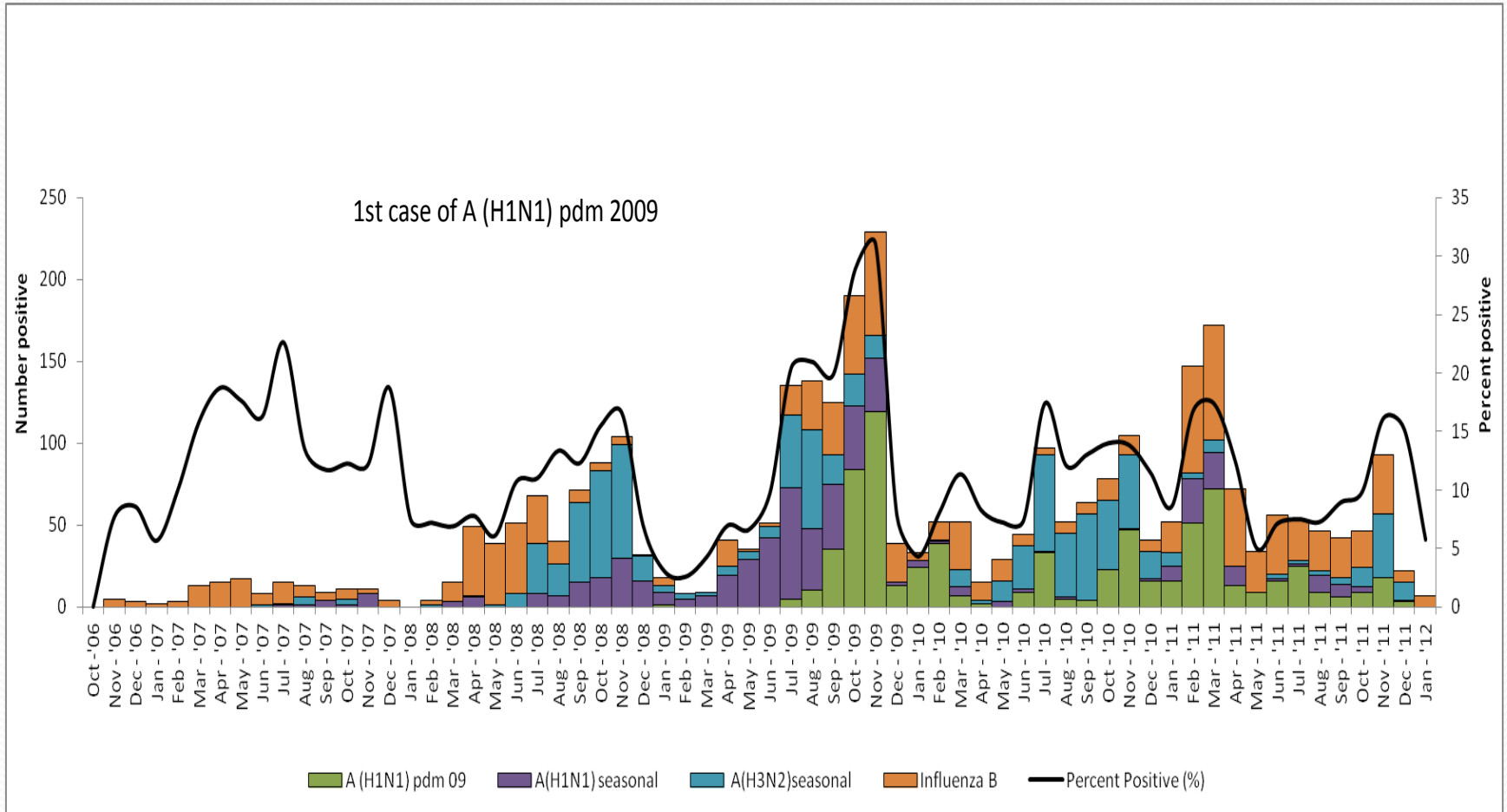
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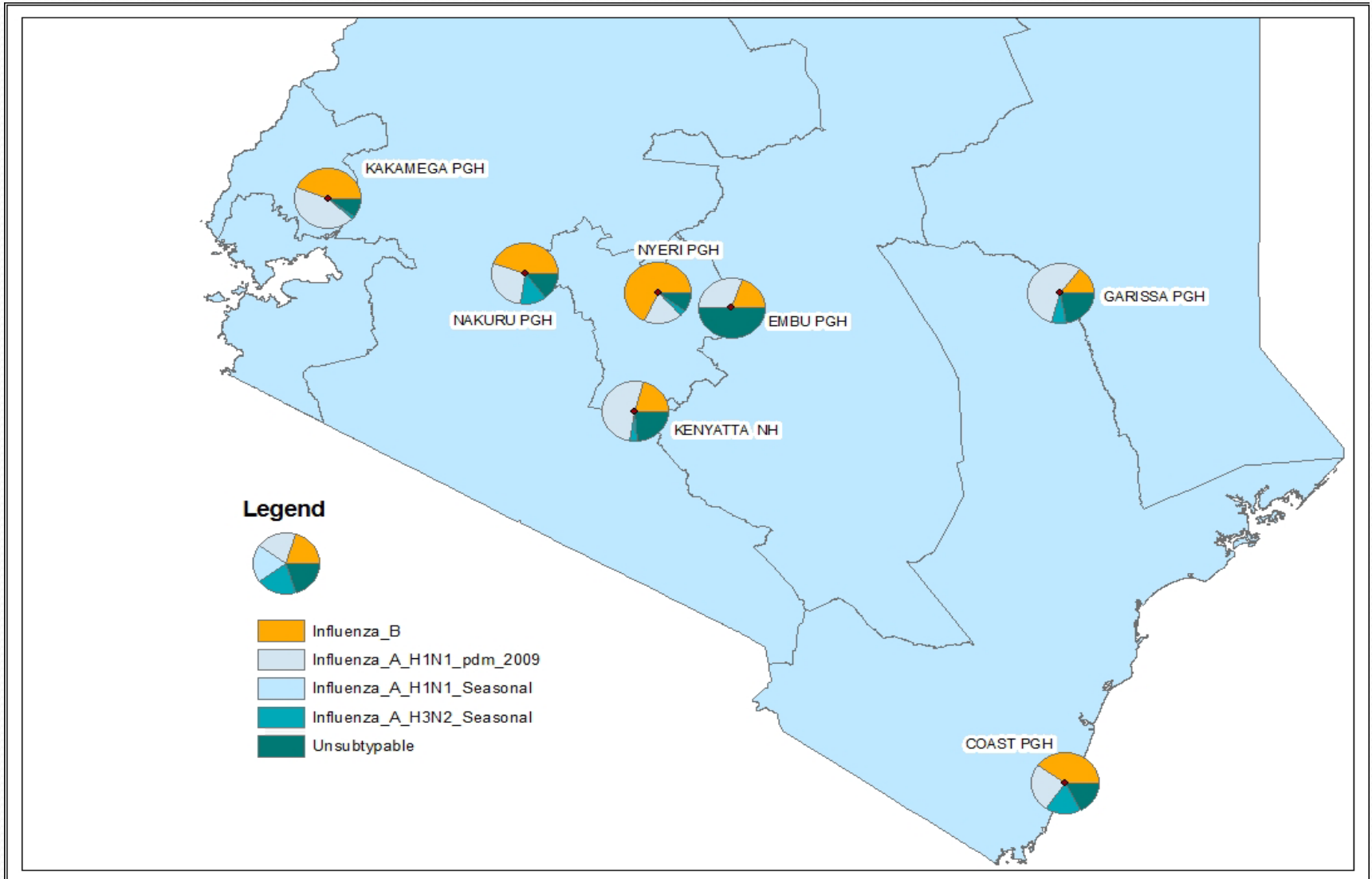
INFLUENZA EPIDEMIOLOGY IN KENYA

- As the chart on influenza positivity for three years shows, influenza circulates in Kenya the whole year
- We have increased influenza activity from around July up to November each year
- Both influenza A and B are circulating in Kenya
- The predominant subtypes of A are H1, pH1 and H3.

Circulating influenza viruses in Kenya: Number of sentinel specimens positive for influenza by type and subtype, and percent of sentinel specimens testing positive for influenza,



Distribution of types and sub-types of influenza by sentinel site, cumulative from 1st Jan 2011 to week 3/2012



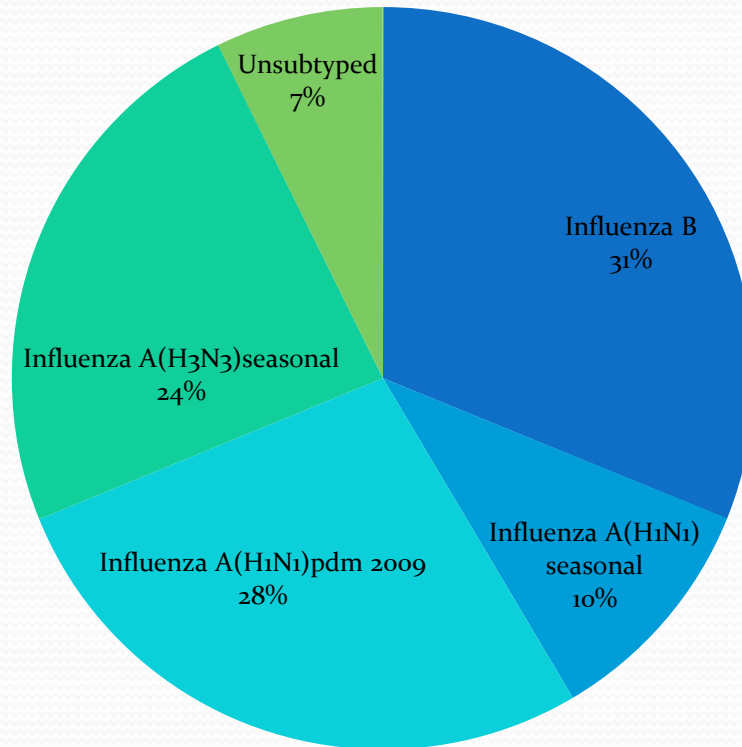
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The strains of influenza prevalent in Kenya include;

- H₃N₂-A/Brisbane/10/2007 like
- H₃N₂-A/Perth/16/2009-like
- H₃N₂-A/Wisconsin/67/2005-like
- H₁N₁- A/California/59/2007-like
- H₁N₁-A/Brisbane/10/2007-like
- H₁N₁-A/Solomon Islands/03/2006-like
- B/Brisbane/60/2008-like
- B/Florida/04/2006-like
- B/Ohio/01/2005-like

INFLUENZA EPIDEMIOLOGY IN KENYA

Percent type and sub-type, 5th Oct 2006 to 8th Nov 2011



Age distribution of Influenza cases

- Over 80% of influenza cases are found in children less than 5 years
- Proportion of influenza cases in older age groups diminishes with age

Age distribution of influenza cases isolated from patients meeting SARI and ILI case definitions at 11 sentinel sites (Oct 2006- Sept 2011)

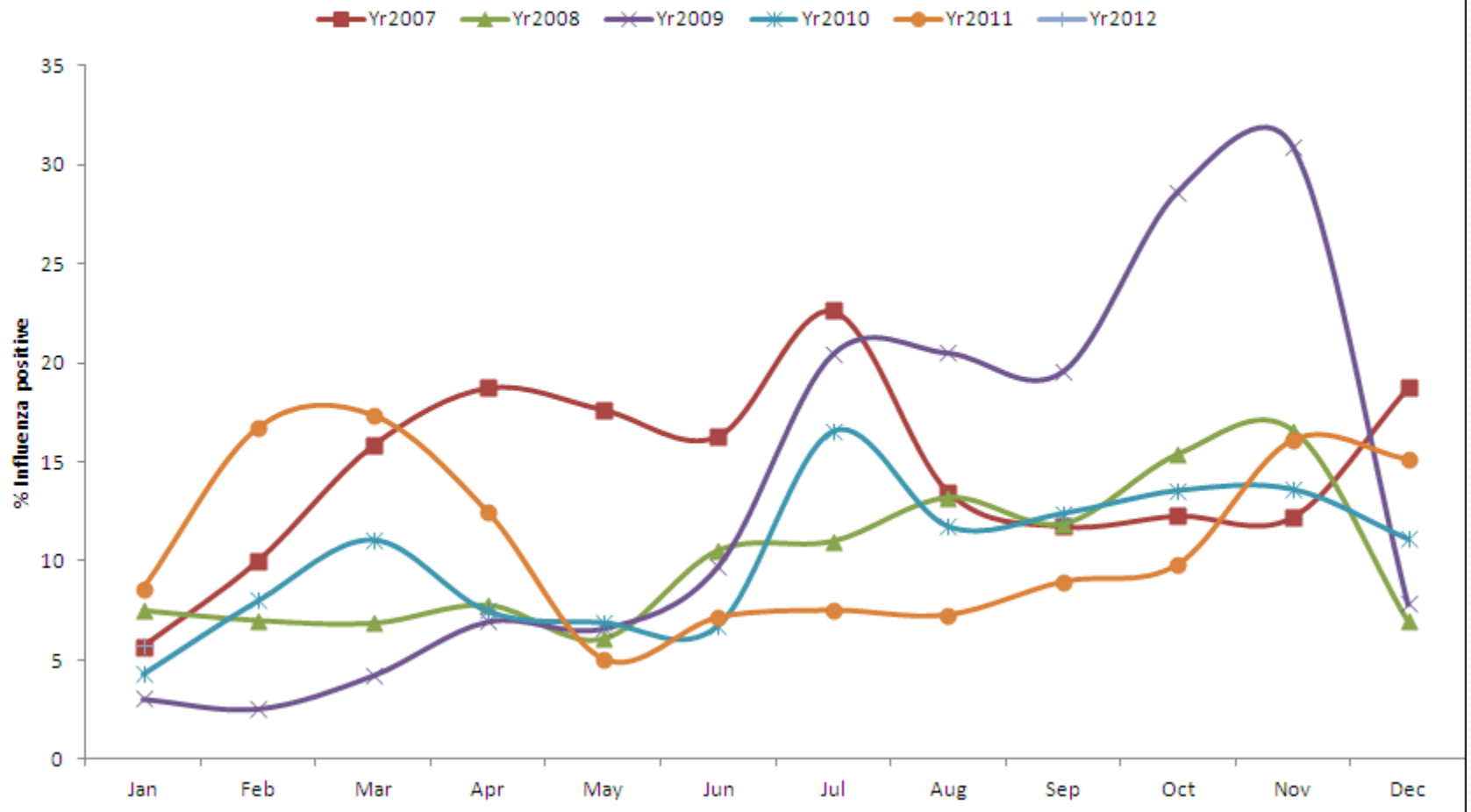


Seasonality

- Influenza circulates all year round
- Some peaks during wet months: March-April and Oct-Nov and cold month of July

Seasonal trends in the percent of sentinel specimens

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Current activities and future plans

- MOH soon to begin reporting to FluID through weekly assistance provided by CDC
- Describing influenza outcomes by strengthening SARI case follow-up in sentinel sites
- Describe influenza in the context of other co-morbidities
- Working to transition sentinel surveillance officers into MOH operations, and to integrate them with IDSR

INFLUENZA (FLU) IN KENYA

**ASANTENI SANA
NA KARIBU KENYA**

**ENJOY
YOURSELVES;
THANKS**