

Influenza

Definition

Acute respiratory illness due to infection with the **influenza virus**.

There are three serotypes - **A, B and C**. **Influenza A and B viruses** cause most clinical disease.

- A is the more frequent and the cause of major influenza outbreaks.
- B tends to circulate with A in yearly outbreaks and causes less severe illness.
- C tends to cause a mild or asymptomatic illness akin to the **common cold**.

Influenza A serotypes are further categorised by their surface antigens:

- H: haemagglutinin - facilitates entry of virus into host respiratory cell
- N: neuraminidase - facilitates release of virions from infected host cells

There are 15 H and 9 N subtypes of the A virus in aquatic birds, which together with pigs (often termed the "mixing vessel" for scrambling human and avian virus genetic material) are the natural reservoir of the virus.

The influenza virus undergoes minor mutations to one or both of its surface antigens - **antigenic drift**. This causes seasonal epidemics where people have only partial immunity from previous infection. In influenza A alone, major and sudden changes in the H and N antigens produce a new virus sub-type - **antigenic shift**. There is little population immunity to the new form and a major epidemic may ensue.

There is evidence emerging that humans can serve as the "mixing vessel" for at least some of the 15 avian subtypes circulating in bird populations.

With the onset of swine flu pandemic there has been a noticeable rise in misdiagnoses with a shift away from prescribing antibiotics for bacteriological infections sometimes with tragic results

Flu Screen® is a rapid point-of-care test that can detect influenza A and B in patients thereby enabling physicians and clinicians to make a more precise diagnosis.