



G4 Flu Virus

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Why in News

Recently, scientists have identified a “newly emerged” strain of influenza virus that is infecting Chinese pigs and that has the potential of triggering a **pandemic**.

- Named G4, scientists believe that it has descended from the **H1N1 strain** that was responsible for the 2009 swine flu pandemic.
- A Pandemic happens if a new strain emerges that can easily spread from person to person.

Key Points

- **G4 Strain:**
 - It was identified through surveillance of **influenza viruses in pigs** through a study carried out from 2011 to 2018 in ten provinces of China.
 - It can **grow and multiply in the cells** that line the human airways.
 - It has the capability of binding to human-type receptors (like, the **SARS-CoV-2 virus**).
 - Scientists found evidence of recent infection in people who worked in abattoirs and the swine industry in China.
However, it is not clear whether the new strain can transmit from one human to another.
- Current flu vaccines do not appear to protect against it, although they could be adapted to do so if needed.

- **Flu Pandemic:**
 - Pigs are **intermediate hosts** for the generation of pandemic influenza virus.
Intermediate host is an organism that **harbours a parasitic** which is being provided with nourishment and shelter by the organism.
 - The systemic surveillance of influenza viruses in pigs is a key measure for pre-warning the emergence of the next pandemic influenza.
There is an urgent need to control the prevailing **G4 virus** in pigs.
- **2009 Swine Flu Pandemic:**
 - The 2009 pandemic was caused by a strain of the **swine flu called the H1N1 virus**, which was transmitted from human to human.
 - **Swine flu** is a respiratory disease of pigs caused by type A influenza viruses i.e. H1N1. It is called swine flu because it was known in the past to occur in people who had been in the vicinity of pigs.
 - While humans typically do not get infected by such a virus that circulates among pigs, when they do, it is called "**variant influenza virus**".
 - The **World Health Organisation** (WHO) declared the outbreak of type A H1N1 influenza virus a pandemic in 2009 when there were around 30,000 cases globally.
 - **Transmission:** The virus is transmitted by short-distance airborne transmission, particularly in crowded enclosed spaces. Hand contamination and direct contact are other possible sources of transmission.
 - **Symptoms** of swine flu include fever, cough, sore throat, body aches, headaches, chills and fatigue.
 - The **treatment** includes antiviral therapy with medicines like Oseltamivir (Tamiflu), peramivir (Rapivab).

Source: IE