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First Human Case of H10N3 Bird Flu

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Why in News

Recently, **China** has reported the **first case of human infection with the H10N3 strain of bird flu** in Jiangsu province.

Key Points

- H10N3 is a **subtype of the Influenza A virus** which is **commonly known as the bird flu virus**.
- It is a **low pathogenic, or relatively less severe, strain of the virus in poultry** and the **risk of it spreading on a large scale is very low**.
Among animals, it can **spread through respiratory droplets**, similar to **flu and Covid-19**.
- The strain is **not a very common virus, only about 160 isolates of the virus have been reported in the past 40 years** (till 2018), that too, mostly in wild birds or waterfowl in Asia and some parts of North America.
None had been detected in **chickens as of now**.
- There are **many different strains of avian influenza in China and some sporadically infect people**, generally those working with poultry.
However, there have been **no significant numbers of human infections with bird flu since the H7N9 strain** killed around 300 people **during 2016-2017**.

Bird Flu

- **About:**
 - **Bird flu**, also known as **Avian influenza (AI)**, is a highly contagious viral disease affecting several species of **food-producing birds** (chickens, turkeys, quails, guinea fowl, etc.) as well as **pet birds and wild birds**.
 - Occasionally **mammals, including humans**, may contract avian influenza.

- **Types of Influenza Viruses:**
 - Influenza viruses are grouped into three types; **A, B, and C**.
 - **Only type A** is known to **infect animals** and is **zoonotic**, meaning it can also infect humans.
 - **Avian influenza virus subtypes** include A(H5N1), A(H7N9), A(H9N2) and A(H10N3).
 - Type **B and C** **mostly infect humans** and typically cause mild disease.
- **Classification:**
 - **Influenza viruses** are classified into subtypes based on **two surface proteins, Hemagglutinin (HA) and Neuraminidase (NA)**.
 - For example, a virus that has an HA 7 protein and NA 9 protein is designated as subtype H7N9.
 - **Highly Pathogenic Avian Influenza (HPAI) A(H5N1)** virus occurs mainly in birds and is highly contagious among them.
 - **HPAI Asian H5N1** is especially deadly for poultry.
- **Impact:**
 - Avian Influenza outbreaks can lead to devastating consequences for the country, particularly the poultry industry.
 - Farmers might experience a high level of mortality in their flocks, with rates often around 50%.
- **Prevention:**
 - Strict **biosecurity measures** and **good hygiene** are essential in protecting against disease outbreaks.
- **Eradication:**
 - If the infection is detected in animals, **a policy of culling infected and contact animals** is normally used in an effort to rapidly contain, control and eradicate the disease.
- **India's Status:**
 - **Fresh cases of bird flu** were reported in different states of India **between December 2020-January 2021** causing alarm across the country.
 - **Previously in 2019**, India was **declared free from Avian Influenza (H5N1)**, which had also been **notified to the World Organization for Animal Health (OIE)**.
 - The **OIE** is an intergovernmental organisation responsible for improving animal health worldwide. It is headquartered in Paris, France.

Source: TH