The Global Influenza Outbreak

What we are doing and what it means for pandemic influenza
• Currently influenza activity is elevated in northern hemisphere countries
• Influenza activity needs close monitoring in the coming weeks/months
Globally, Influenza Activity has returned to Pre-pandemic Levels

Percentage of respiratory specimens that tested positive for influenza
By influenza transmission zone
Map generated on 06 January 2023

Note: The available country data were joined in larger geographical areas with similar influenza transmission patterns to be able to give an overview (www.who.int/influenza/surveillance_monitoring/updates/Influenza_Transmission_Zones20180914.pdf). The displayed data reflect reports of the week from 12 December 2022 to 25 December 2022, or up to two weeks before if no sufficient data were available for that area.
Influenza virus circulation in the community is higher than the COVID-19 virus in some countries of the northern hemisphere.
Influenza epidemics have a serious impact

Global Annual Impact

291,000 – 646,000
(9,243 – 105,690 in <5 yo)

3M to 5M

1.0+ B

Direct Medical Costs (USD): 10.4 B per year
Indirect and Direct Costs (USD): $87.1 B per year
Types of Influenza

Three types of influenza are important in public health

- **Seasonal influenza**: caused by seasonal influenza viruses; causes annual epidemics in temperate climates, year-round activity in non-temperate climates
- **Zoonotic influenza**: occurs when an animal influenza virus infects a person
- **Pandemic influenza**: occurs when a new influenza virus spreads from person to person and people have no immunity
Influenza outbreaks in animals are rapidly increasing

Human Infections of Zoonotic Influenza

Monthly incidence of cases, 2018 to present

Onset of illness

Number of cases

World Health Organization

EPI•WiN

Epidemic Preparedness Partnership
Avian influenza outbreaks and pandemic influenza risk

- **Signals** of the threat of an influenza pandemic has persisted throughout the COVID-19 pandemic
  - China, **first** human infections with A(H3N8) and A(H10N3) subtypes
  - Russian Federation, **first** human infections with A(H5N8) subtype
  - UK and USA, human infections of A(H5N1) subtype reported for the **first-time**
  - Ecuador, the **first case** of human infection with A(H5N1) reported from South America.

- **Unprecedented** genetic diversities of avian influenza viruses
Global Response: Global Influenza Surveillance and Response System (GISRS)

- The key global network for influenza surveillance, preparedness and response
- Global public health model for 70 years
- Currently 158 institutions in 124 Member States
- Institutionalized & functioning capacity in countries
  - Laboratory & disease surveillance integrated
  - Response mechanisms exercised very season in epidemics
  - Enormous commitment from countries and international agencies and partners
Managing Influenza

Seasonal Influenza

- Managed year round through routine surveillance
- The process from specimen collection to production of public health goods like vaccines is critical for effective outbreak management
- Timely sharing of virus specimens and data is necessary to understand and effectively respond to global outbreaks

Zoonotic/pandemic influenza

- Collaborative surveillance: complementary and continuous operations of various surveillance systems and partners
Benefits of seasonal influenza vaccination

Influenza vaccination is a critical part of influenza prevention and control strategies, which also include therapeutics and non-pharmaceutical public health and social measures.

- **Deaths**
- **Hospitalizations**
- **Disease transmission**
- **Missed work days**

- **Cold chain facilities**
- **Trained staff**
- **Cost savings**
- **Integration**

- **Systems for delivery**
- **Regulatory pathways**
- **Operational capacity**
- **Vaccine awareness**

**Reduced burden of disease**

**Strong health system**

**Better prepared for pandemic**
Getting ready for next influenza pandemic

- **Pre-pandemic:** seasonal epidemics/zoonotic outbreaks
  - Strengthening surveillance nationally and globally
  - Products — including new vaccines: development, regulatory process and use
  - Update of preparedness plans/guidance and exercise
  - Rapid response capacity in countries

- **During pandemic of influenza:**
  - Various special studies
  - Pandemic vaccines, novel products
  - Whole of government/society engagement
  - Resilience needed for situations beyond anticipation

New technologies
Summary

• Globally, influenza activity has returned to pre-pandemic levels
• Rapid increase in outbreaks of animal influenza
• Signals of the threat of an influenza pandemic has persisted throughout the COVID-19 pandemic with reported human infection of avian influenza in several countries
• Global Influenza Surveillance and Response System (GISRS) plays a key role in influenza surveillance and response
• Sharing of viruses and data on influenza is important for an effective global response
• Seasonal influenza vaccination reduces the number of deaths, hospitalizations, and missed workdays.
More information

- WHO Global Influenza Programme
  [Influenza (seasonal) (who.int)]

- EPI-WIN Webinar
  [WHO EPI-WIN Webinar: The current global influenza outbreak: what we are doing and what it means for pandemic influenza]

- Science in 5 on Influenza

- Email: epi-win@who.int
Acknowledgement

- **Dr Wenqing Zhang**  
  Unit Head, WHO Global Influenza Programme (GIP)

- **Dr Joshua Mott**  
  Senior Advisor, Epidemic and Pandemic Preparedness, WHO

- **GISRS**  
  Global Influenza Surveillance and Response System
  - Vanessa Cozza
  - Aspen Hammond
  - Maja Lievre
  - Bikram Maharjan
  - Magdi Samaan
  - Kaat Vandemaele