Overview of Global Influenza Programme - focusing on seasonal influenza

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World Health Organization

Seasonal, pandemic, zoonotic influenza

Animal influenza
- Influenza viruses that **circulate in animals**; includes avian and swine influenza viruses; H5 and H7 avian influenza viruses can be high or low pathogenicity in birds

Zoonotic influenza
- An animal influenza virus that **crosses species to humans**

Pandemic influenza
- An animal influenza virus that begins to **spread among humans**, who have no or little natural immunity

Seasonal influenza
- An influenza virus that has **adapted to humans**, causing seasonal epidemics.

Need for:

- **Global approach** to monitor, prevent, and control seasonal influenza, detect and respond to novel and pandemic influenza
- **Continuous monitoring** the interface between humans and animals

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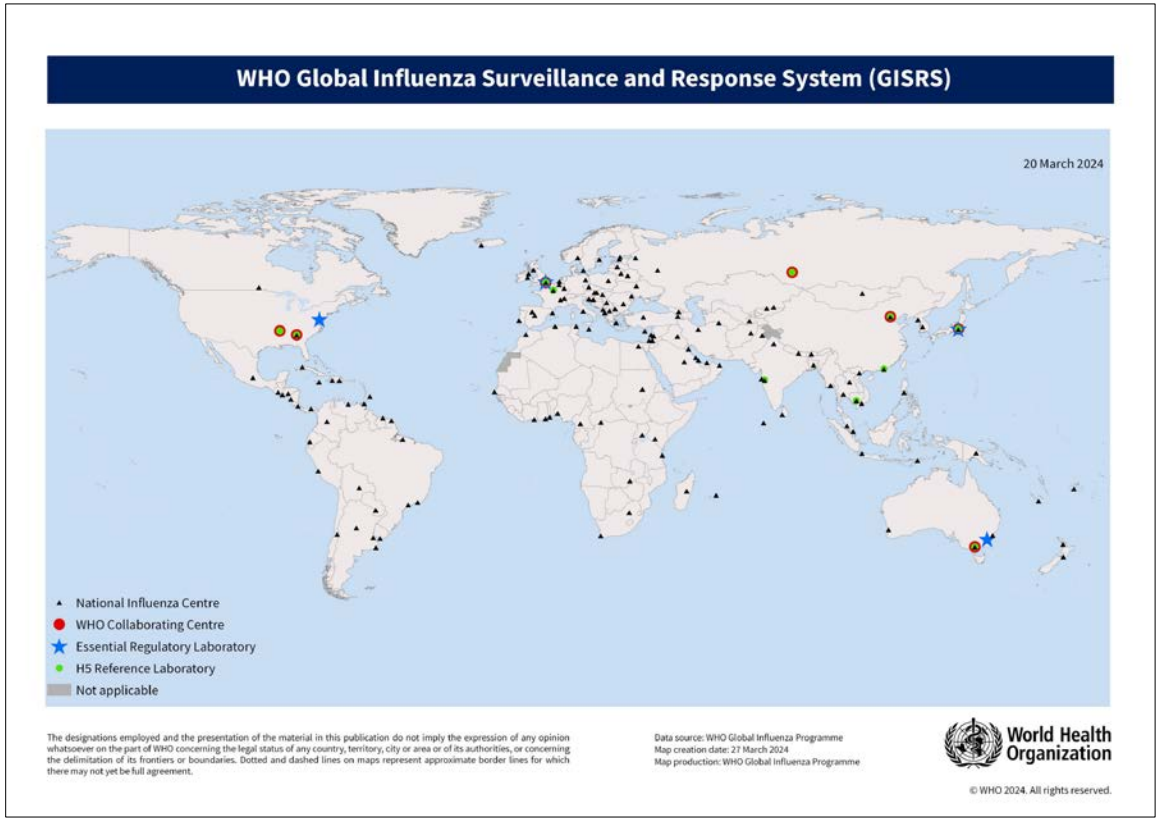
WHO approach to influenza since 1952 – GISRS

For over 70 years, the **Global Influenza Surveillance and Response System (GISRS)** has been the foundation for influenza surveillance, preparedness and response

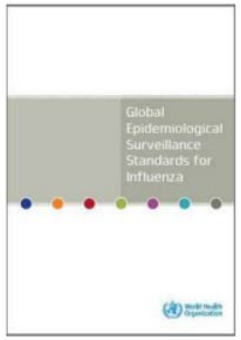


Enormous commitment from Member States
Enormous support from international agencies & partners

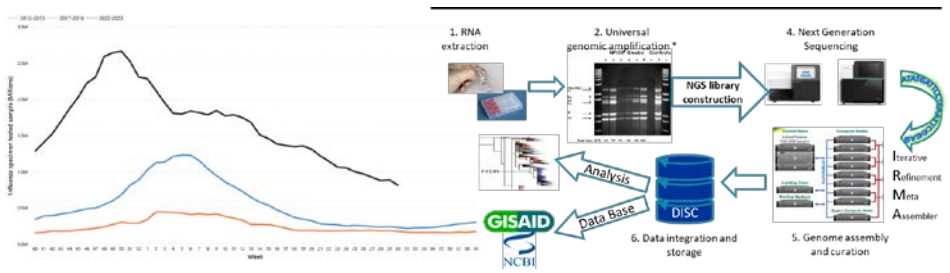
https://www.who.int/initiatives/global-influenza-surveillance-and-response-system

GISRS capacity and capability – functioning year round

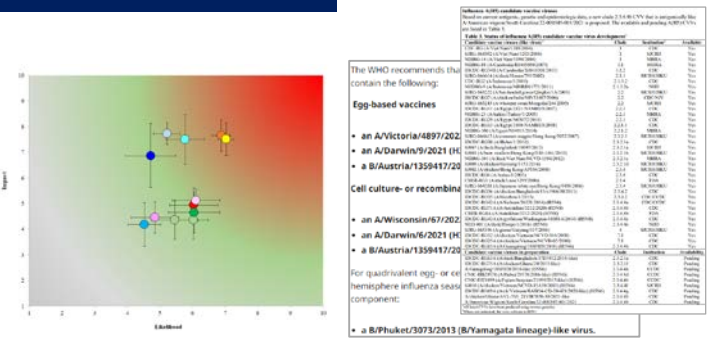
Global standardization & tools



New technology utilization



Outbreak investigation & risk assessment



Global scales & coverage

Data platforms, analysis & use

Vaccine compositions & antiviral susceptibility

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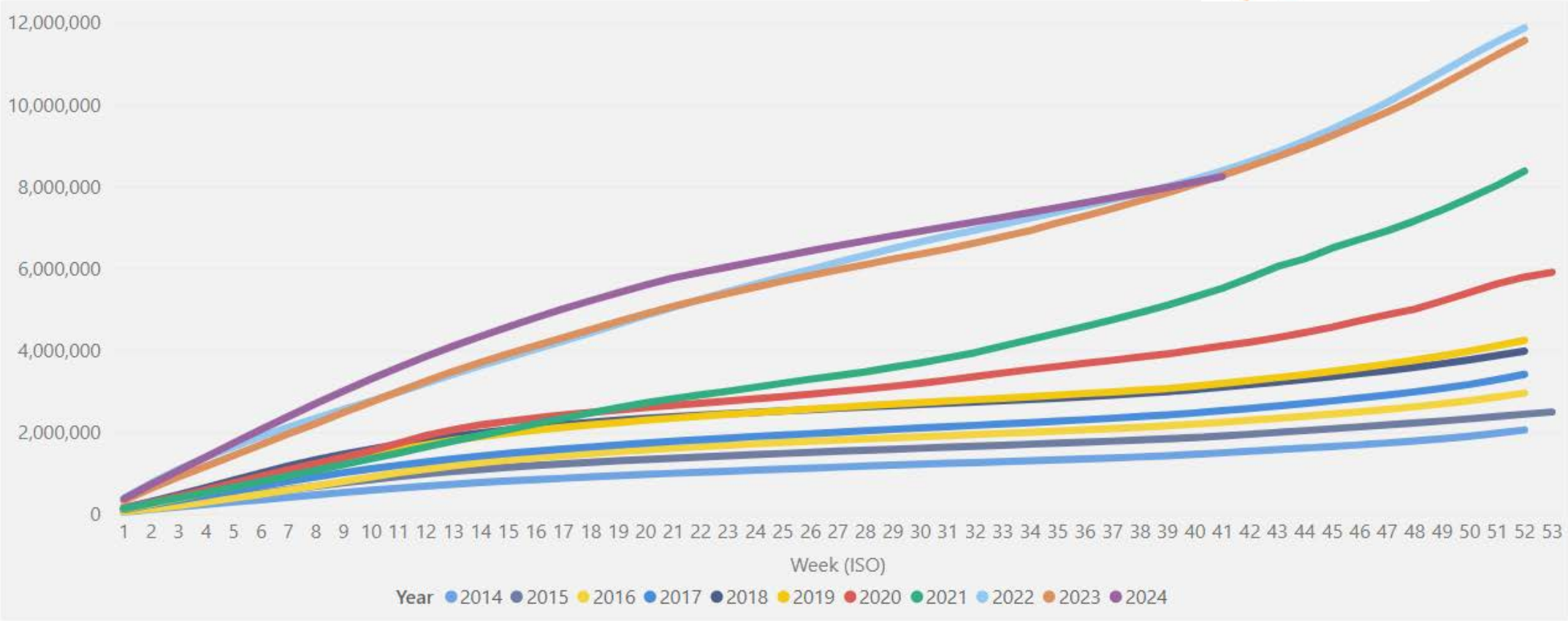
GISRS capacity and capability – functioning year round

Accumulated number of specimens tested by GISRS



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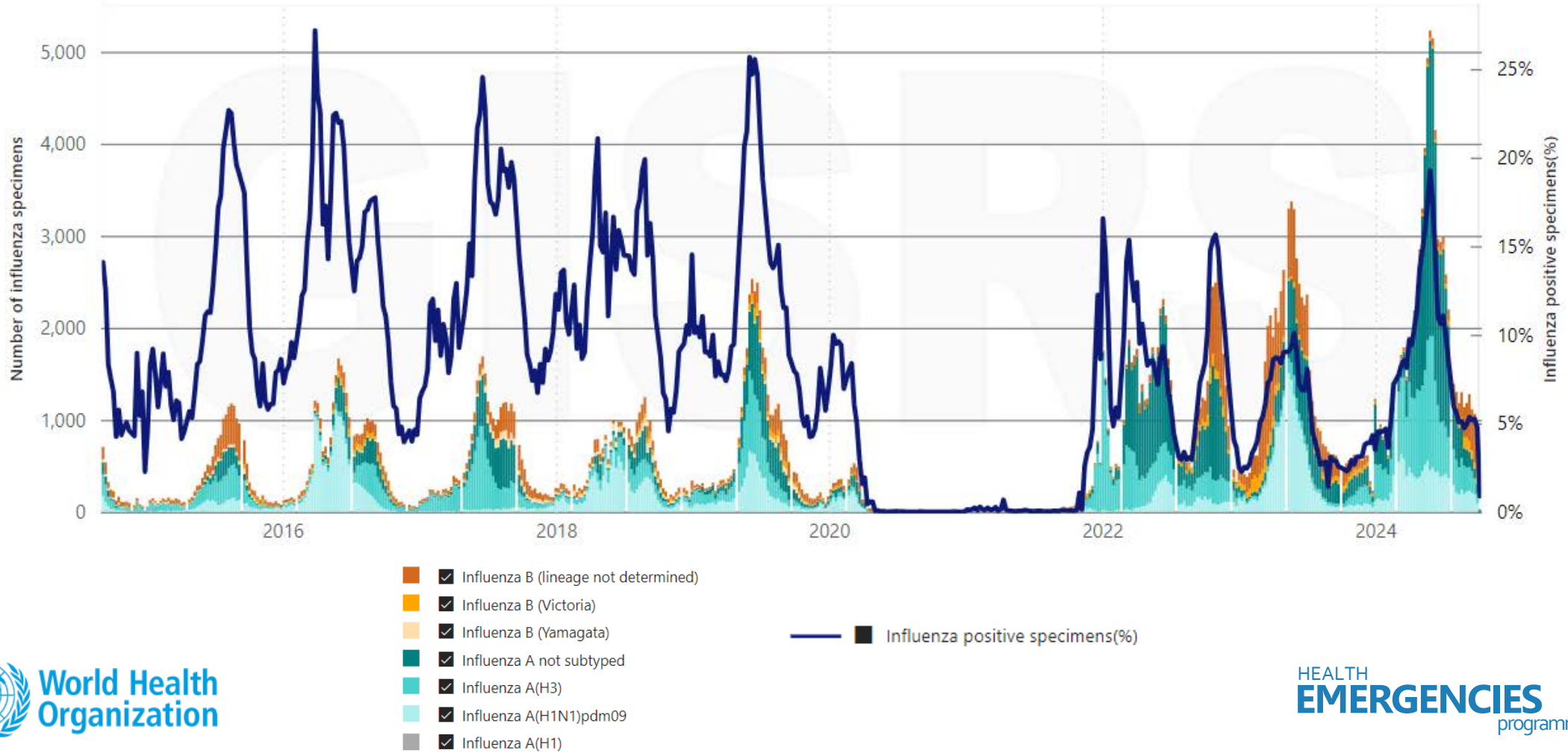
Influenza activity since 2014



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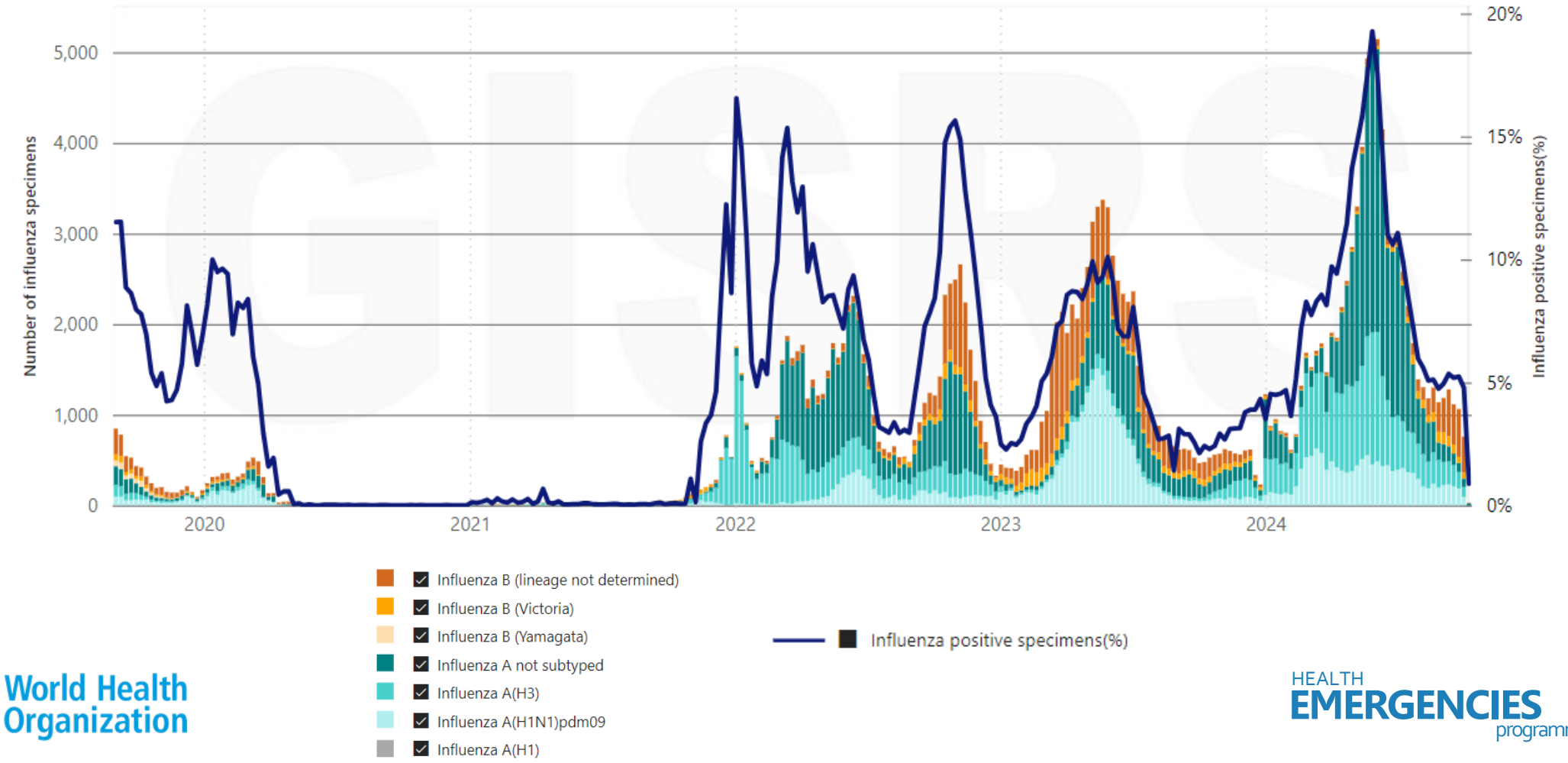
Influenza activity since 2020



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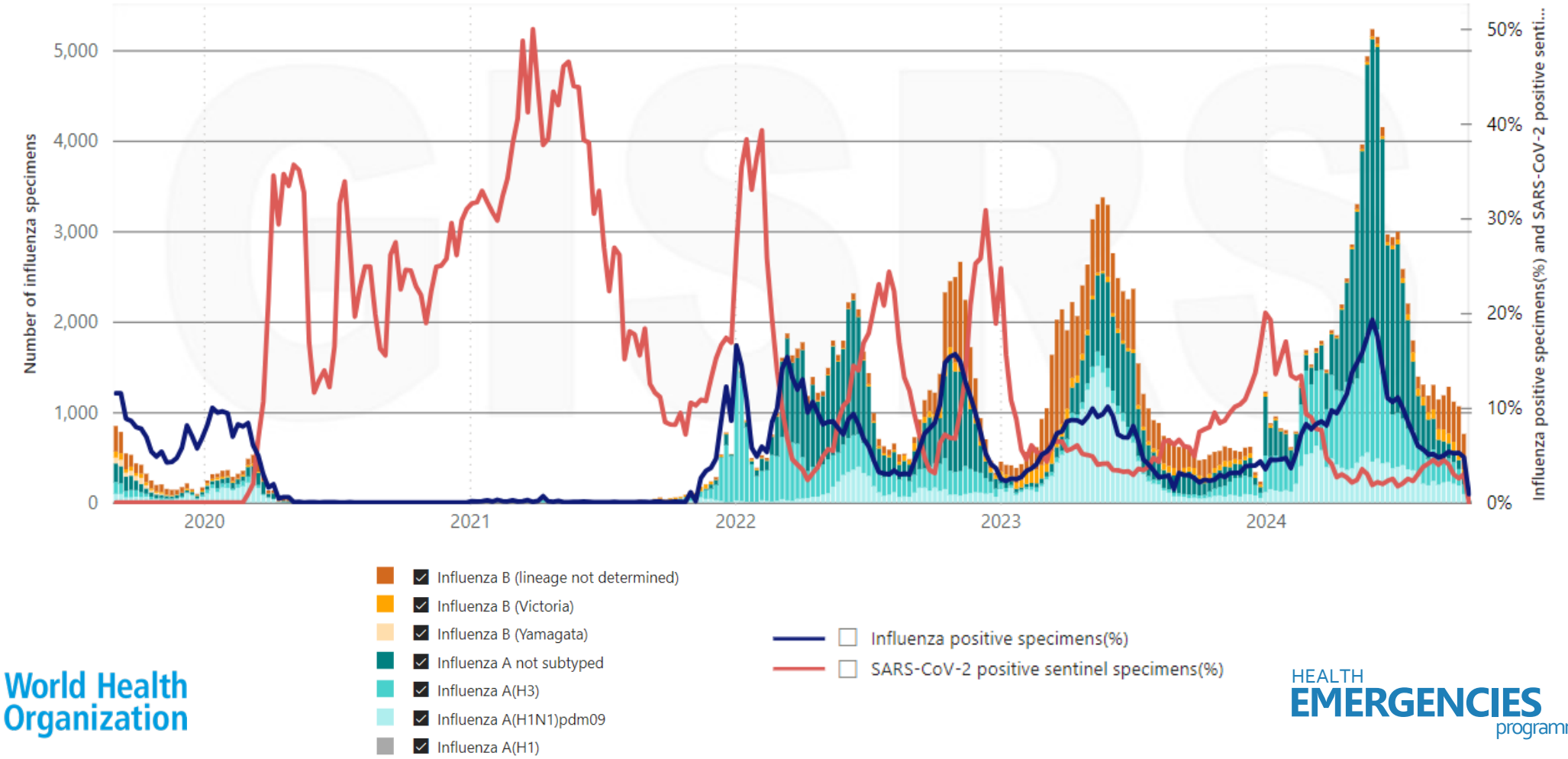
Influenza activity since 2020 + co-circulation of SARS-CoV-2



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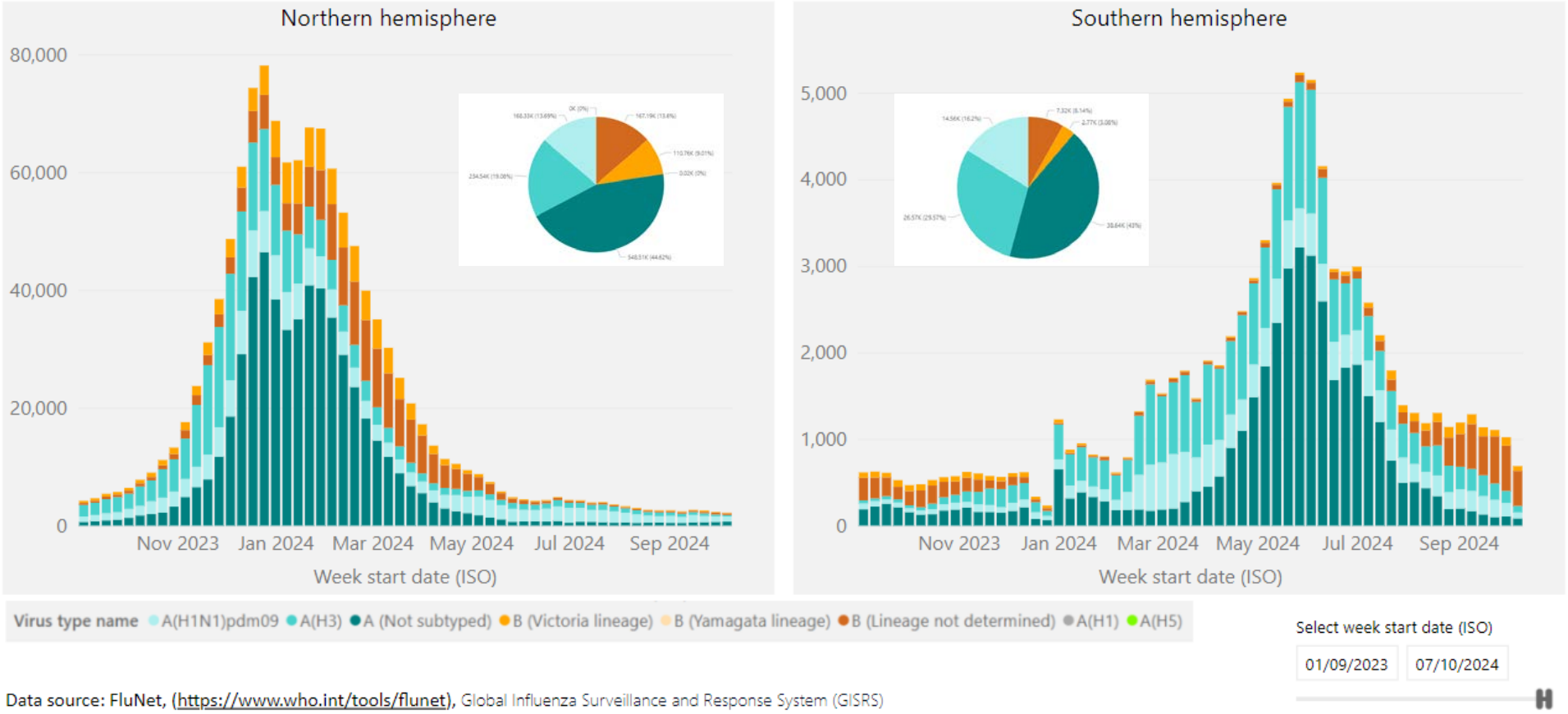
Influenza activity since Sept 2023



Data source: FluNet, (https://www.who.int/tools/flunet), Global Influenza Surveillance and Response System (GISRS)

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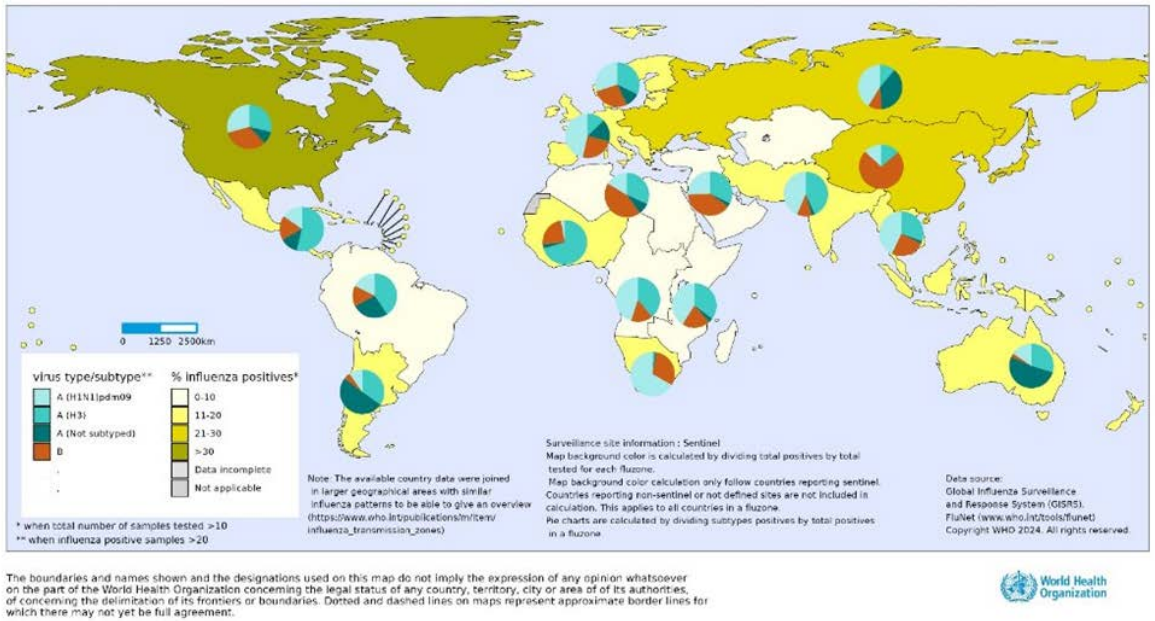
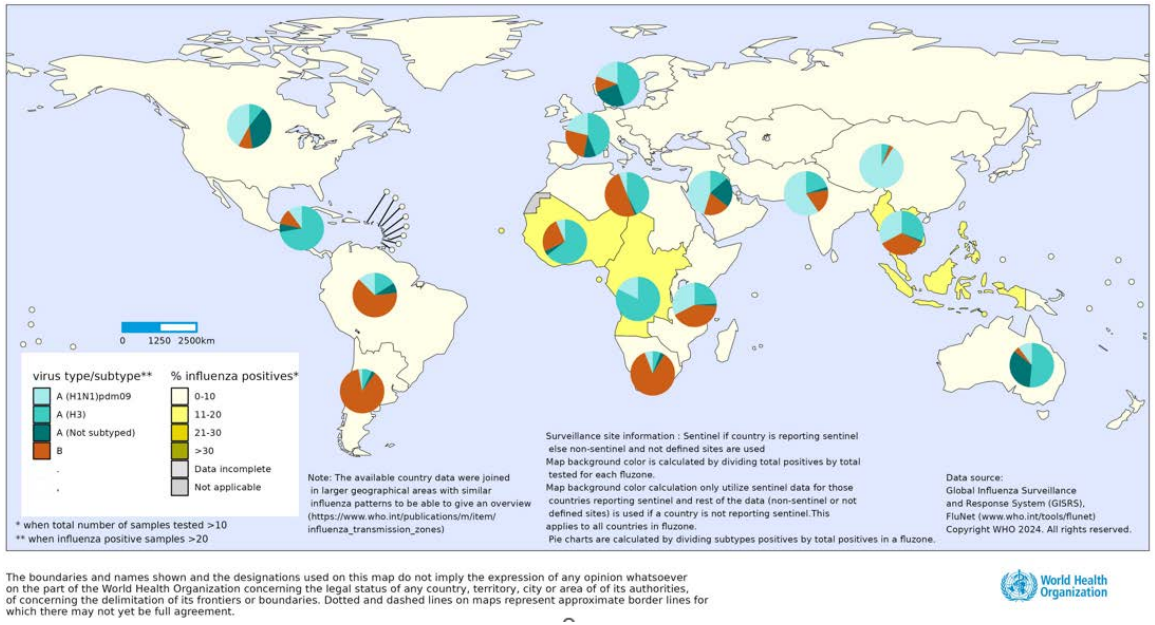
Influenza virus activity and distribution by transmission zones

1 Feb 2024 – 31 Aug 2024



1 Sept 2024 – 13 Oct 2024



https://www.who.int/teams/global-influenza-programme/surveillance-and-monitoring

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Seasonal influenza

- Causes **290 000 to 650 000** respiratory deaths annually.
- Infects **a billion** people annually, including **3–5 million** cases of severe illness

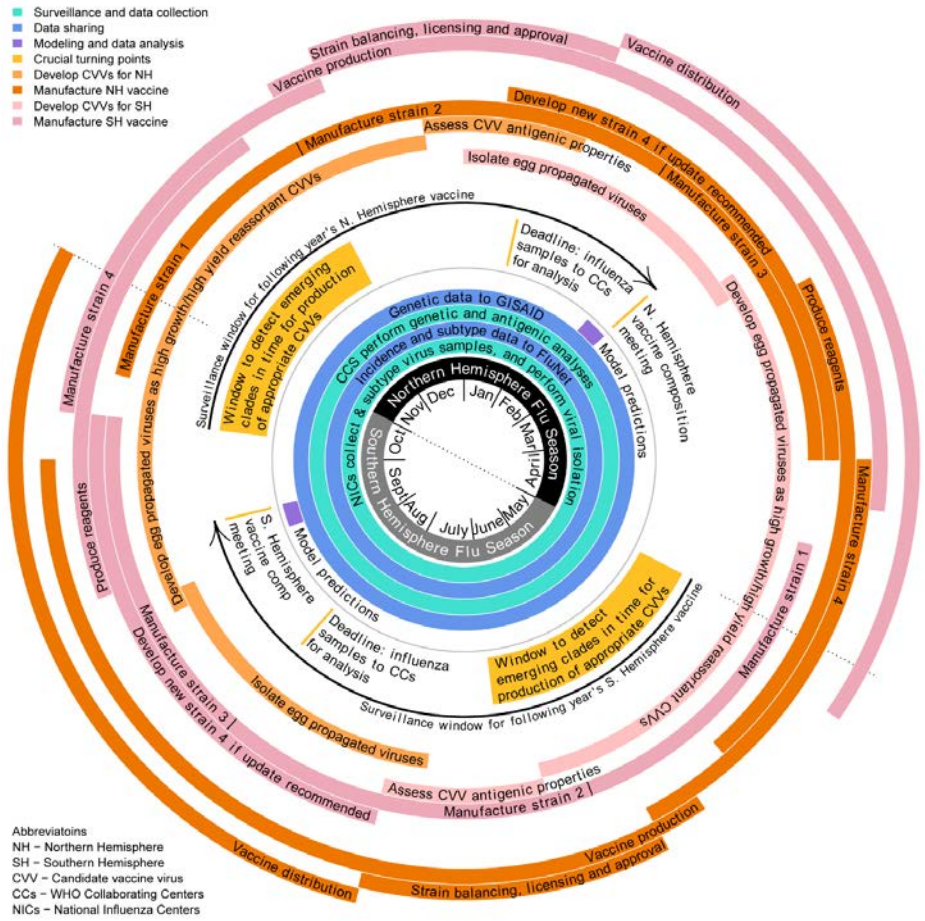
- **Influenza vaccines** – primary intervention to reduce morbidity and mortality
  - Risk groups (not in priority order) recommended by WHO SAGE 2022
    - Health workers
    - Individuals with comorbidities and underlaying conditions
    - Older adults
    - Pregnant women
    - Depending on national needs, countries may consider additional (sub)groups e.g., children

Strategic Advisory Group of Experts on Immunization (SAGE)

https://apps.who.int/iris/handle/10665/354264

Seasonal influenza vaccine cycle

An ongoing and continuous collaboration between public health, medical, scientific research workers and industry to respond to whatever emerges



Truly year-round!
Quite complicated!

Gostic, Morris & Pompeii *et al.* Trends in Microbiology, 2017

Slide adapted from Dr John McCauley's

Seasonal influenza vaccine composition for 2024-25 northern hemisphere influenza season

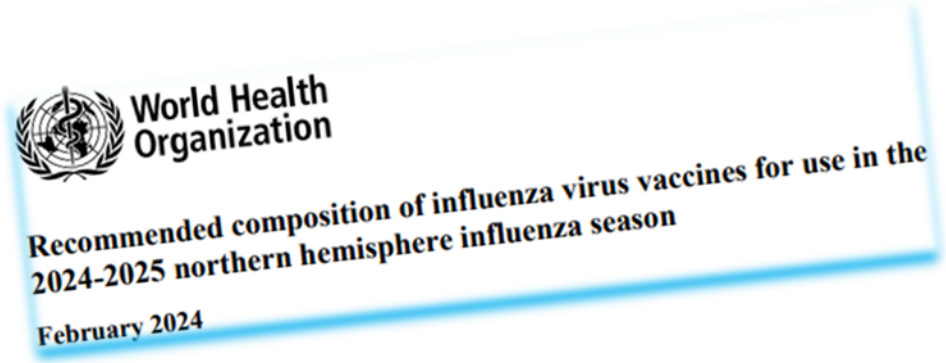
Trivalent vaccines

- **Egg-based vaccines**

- an A/Victoria/4897/2022 (H1N1)pdm09-like virus;
- an A/Thailand/8/2022 (H3N2)-like virus; and
- a B/Austria/1359417/2021 (B/Victoria lineage)-like virus.

- **Cell culture- or recombinant-based vaccines**

- an A/Wisconsin/67/2022 (H1N1)pdm09-like virus;
- an A/Massachusetts/18/2022 (H3N2)-like virus; and
- a B/Austria/1359417/2021 (B/Victoria lineage)-like virus.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Recommended composition of influenza virus vaccines for use in the 2024-2025 northern hemisphere influenza season

February 2024

Quadrivalent vaccines: the 4th component:

- a B/Phuket/3073/2013 (B/Yamagata lineage)-like virus.

https://www.who.int/publications/m/item/recommended-composition-of-influenza-virus-vaccines-for-use-in-the-2024-2025-northern-hemisphere-influenza-season

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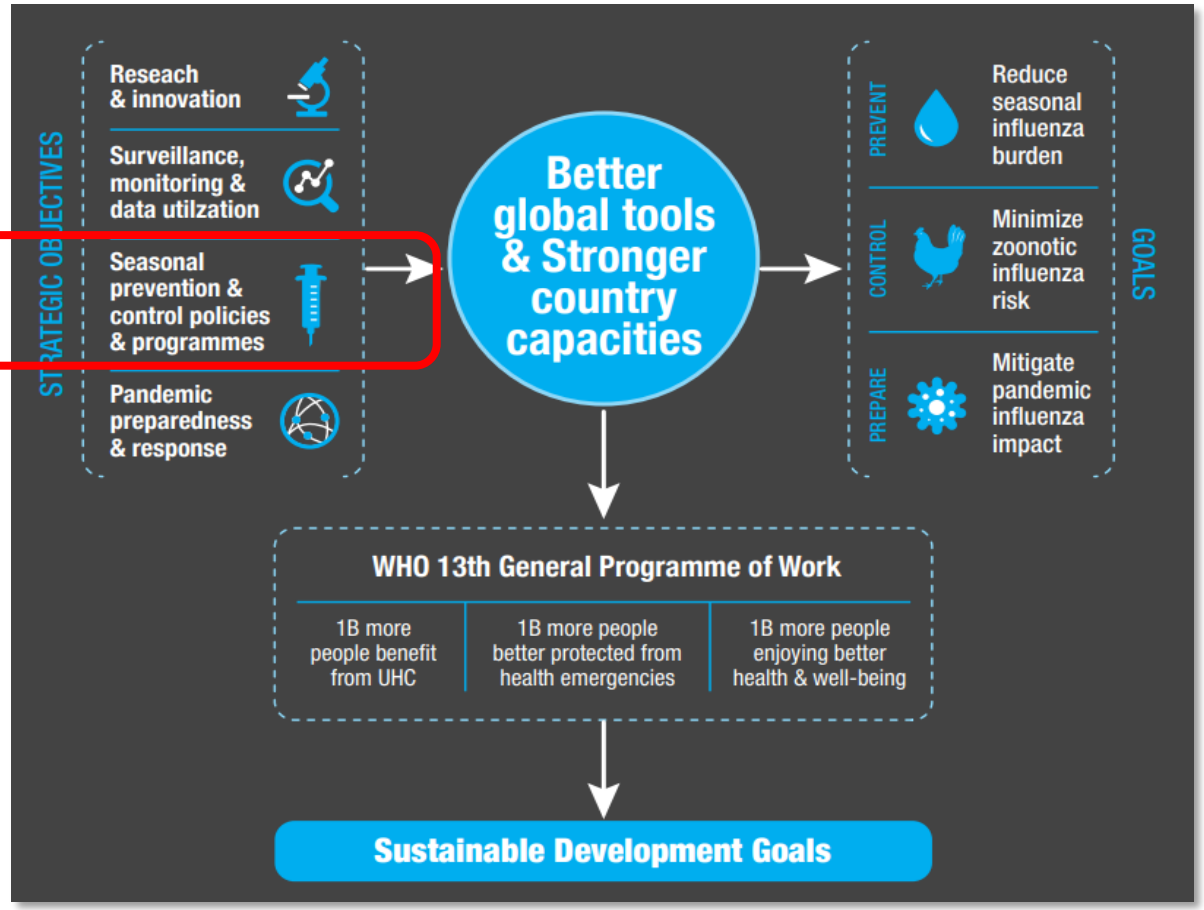
Global Influenza Strategy 2019-2030

Adopted in WHA 73 (May 2020)



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Resources from WHO

https://www.who.int/teams/global-influenza-programme

Technical content

- Surveillance and monitoring
- Laboratory
- Human-animal interface
- Vaccines
- Pandemic influenza preparedness
- Influenza - COVID-19 Interface
- Respiratory Syncytial Virus

Our initiatives

- Global Influenza Surveillance and Response System (GISRS)
- Pandemic Influenza Preparedness Framework (PIP)
- WHO public health research agenda for influenza

Latest updates

- Influenza monitoring
- Risk assessments
- GISRS integrated surveillance dashboard

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GISRS-WHOhq@who.int

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Thank you

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