WHO guidance for sharing seasonal influenza viruses

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- World Health Organization Global System for Influenza Surveillance and Response.
- Monitors the influenza virus evolution and provides recommendations in several areas such as laboratory diagnostics, vaccines compositions, antiviral susceptibility and risk assessment.
- Serves as a global alert mechanism for the emergence of influenza viruses with pandemic potential.
Terms of Reference for National Influenza Centers (NIC)

- Reference laboratory for influenza in their country;
- Meet quality requirements of national or international quality standards;
- Participate in WHO External Quality Assessment Programmes (EQAP);
- Maintain a high level of technical proficiency by participating in training provided by GISRS;
- Process influenza viruses either through an established network of health care centers/sentinel sites (syndromic case definition of ILI or SARI);
- Identify influenza viruses by molecular detection methods (Typing, subtyping, genotyping);

https://www.who.int/influenza/gisrs_laboratory/national_influenza_centres/en/
Terms of Reference for National Influenza Centers (NIC)

- Report unusual or novel influenza viruses to their national authority according to the domestic and international rules and regulations including the International Health Regulations (IHR);
- Timely report defined virological surveillance information to FluNet platform.
- Timely send representative seasonal influenza virus isolates and/or clinical specimens to a WHO-CC (CDC).
- Immediately report to their national authorities and to WHO any observation of unusual influenza activity in their country.
NIC Performance Evaluation

- Based on 4 pillars:
  - Report of EQAP results in the correct time
  - 100% of concordance of results (seasonal influenza and non-seasonal) in the EQAP
  - Number of weeks reported to FluNet
  - Number of sample shipments to a WHO Collaborating Center (CDC)
Sample and Information Flow

STATE LABORATORY

NATIONAL INFLUENZA CENTER
NATIONAL REFERENCE LABORATORY

WHO COLLABORATING CENTER

WHO
Objectives of virus-sharing with the WHO CCs of GISRS

- Monitor the evolution of influenza viruses to inform epidemic risk assessment associated with evolving strains;
- Make recommendations on the composition of influenza vaccines for use in the subsequent season;
- Assess and monitor antiviral drug susceptibility and adjust risk measures;
- Update diagnostic reagents and protocols for global virus detection; and
- Maintain and strengthen global virus surveillance and response capacity for emergencies, including pandemic response.

Timeliness is critical
Selecting viruses to ship to a WHO Collaborating Centre (CC)

Ideally, no more than **40 viruses** should be included per shipment. Four shipments per year would result in a maximum of **160 viruses being sent per year**.

**What are the criteria for selecting influenza viruses for shipment?**

- **Recent seasonal viruses**
  - Where possible, the viruses shipped should reflect the proportions of each type/subtype circulating recently
- **Influenza A viruses that cannot be sub-typed**
- **Viruses that are low-reacting in an HI or virus neutralisation test**
  - Where possible, include viruses from:
    - Different genders, age groups and locations
    - Different regions
    - SARI, ARI and atypical pneumonia cases
    - Unusual outbreaks
    - Clinically significant cases

**Ship representative isolates and/or clinical specimens to WHO CCs wherever possible**

**VIRUS ISOLATES**

- Help WHO CCs to further isolate the viruses that are received, enabling analysis in HI and NA inhibitor susceptibility assays and genome sequencing

**CLINICAL SPECIMENS**

- Help WHO CCs to generate vaccine seed viruses (in eggs and cell based candidate vaccine viruses in qualified cells) and genome sequencing
  - Where possible, ship specimens with a CT <30, and avoid multiple freeze-thaw cycles

Timely shipment of viruses to a WHO CC

**WHO now funds 4 shipments a year to WHO CCs**

To enable influenza viruses to be analysed in time for updated vaccine composition recommendations twice every year, shipments should be sent 4-8 weeks prior to the two WHO consultations, i.e. in:

- December and mid-January
- July to mid-August
- April-May for later northern hemisphere (NH) or early southern hemisphere (SH) season samples*
- September-October for later SH or early NH samples*

The most recent samples you have are the most relevant for developing vaccine composition recommendations.

*The timing of the last two shipments is flexible e.g. early or late in the influenza season or after unusual events

The WHO shipment process

**Complete and email the booking form**

**World Courier and WHO**

World Courier will contact the NIC to arrange collection of the shipment within one week, assist with documentation and will provide packaging, labelling and dry ice upon request.

**Contact WHO CC**

Complete the sample submission sheet (provided by WHO CC) and email the form to the CC to inform of the shipment

**Prepare the shipment**

Label sample tubes well, package them according to international regulations and include the sample submission form with the shipment.

**Where possible, provide 0.5–1.0 ml of clinical specimen and 1.0–2.0 ml of viral isolate**
• Operational Guidance on Sharing Seasonal Influenza viruses with WHO Collaborating Centres (CCs)
  under the Global Influenza Surveillance and Response System (GISRS):
  http://apps.who.int/iris/bitstream/10665/259400/1/WHO-WHE-IHM-GIP-2017.6-eng.pdf?ua=1

• Orientaciones operacionales para el envío de virus de la gripe estacional a los Centros Colaboradores de
  la OMS integrados en el Sistema Mundial de Vigilancia y Respuesta a la Gripe:
  https://apps.who.int/iris/bitstream/handle/10665/330235/WHO-WHE-IHM-GIP-2017.6-spa.pdf?ua=1

• Orientations pratiques pour le partage des virus de la grippe saisonnière avec les centres collaborateurs
  (CCs) de l'OMS participant au Système mondial de surveillance de la grippe et de riposte (GISRS*):
  https://apps.who.int/iris/bitstream/handle/10665/272823/WHO-WHE-IHM-GIP-2017.6-fre.pdf?ua=1

• Terms of Reference for National Influenza Centers of the Global Influenza Surveillance and Response
  System: https://www.who.int/influenza/gisrs_laboratory/national_influenza_centres/tor_nic.pdf?ua=1

• Implementación de la prueba rápida de detección de antígenos para COVID-19 – Estudio piloto:
  https://www.paho.org/es/documentos/implementacion-prueba-rapida-deteccion-antigenos-para-
  covid-19-estudio-piloto

• Mandat des Centres nationaux de la grippe dans le cadre du Système mondial de surveillance et de
  riposte de la grippe:
  https://www.who.int/influenza/gisrs_laboratory/national_influenza_centres/ToR_NIC_FR.pdf?ua=1
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PAHO FluID: http://ais.paho.org/phip/viz/flumart2015.as
Influenza Regional Reports: http://www.paho.org/influenzareport
Severe acute respiratory infections network – SARInet: http://www.sarinet.org

Gracias! Thank you! Merci! Obrigada!