

GIHSN 12TH GLOBAL ANNUAL MEETING 24-26 November 2024



Foundation for Influenza Epidemiology



Coordination

WELCOME TO THE GIHSN GLOBAL ANNUAL MEETING! DOMAINE DE CHÂTEAUNEUF, 24-26 NOVEMBER 2024









Network

Tuesday 26 November - AM

PLENARY SESSION

9:00: Opening by Wenqing Zhang, WHO/GIP - 20'

<u>9:20</u>: *Keynote* - Vision of Respiratory Surveillance in the Post-pandemic era - Maria Zambon, UKHSA - *Presentation followed by Q/A 30'+15'*

<u>10:05</u>: WHO integrated sentinel surveillance standards and guidance - Melissa Rolfes, WHO/GIP - 15'

10:20: COFFEE BREAK 20'

<u>10:40</u>: GIHSN Dashboard - Introduction & Live presentation + Discussion - Laurence Torcel-Pagnon & Camille Hunsinger - <u>15'+ 5'</u>



AGENDA



Global Influenza

Network

Hospital Surveillance

WORKSHOP 2: Improving data collection, quality and reporting timeliness

11:00: Introduction by Marta Nunes, CERP, Lyon - 10'

<u>11:10:</u> Breakout groups (split the attendance in 3 pre-defined groups - 45'), then sharing in Plenary (45')

Moderators of groups: Marta Nunes (CERP), Sandra Chaves (FIE), Melissa Rolfes (WHO/GIP, *tbc*), Laurence Torcel-Pagnon (FIE), Catherine Commaille-Chapus (Impact Healthcare)

- Screening and sampling frame strategy
- Data flow and quality
- Timeliness of reporting
- Core set of variables to be reported weekly

11:55: Sharing in Plenary - 45'

PLENARY SESSION

12:40: Closing of the Meeting & Next Steps - Cedric Mahe & Wenqing Zhang - 5'

12:45: LUNCH BREAK





GIHSN 12TH ANNUAL MEETING, 25-26 NOVEMBER 2024 OPENING

Wenqing ZHANG, WHO - Global Influenza Program



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Getting Ready for the Next Influenza Pandemic

Wenqing Zhang Global Influenza Programme, WHO

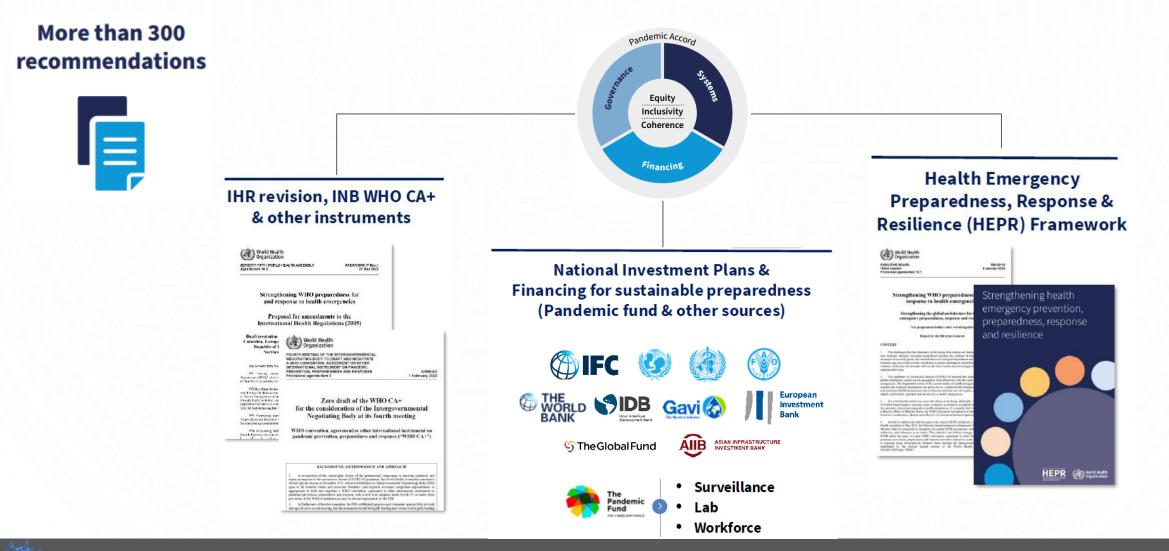


GIHSN Annual Meeting 2024 24 - 26 Nov 2024 • Nans-les-Pins, France





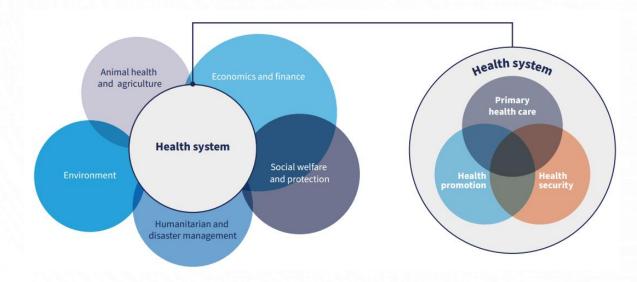
Member States driving a stronger future





Strengthening health emergency prevention, preparedness, response and resilience (HEPR)

Effective health emergency preparedness and response revolves around core capabilities at the intersection of health security, primary health care and health promotion, and their interface with other sectors

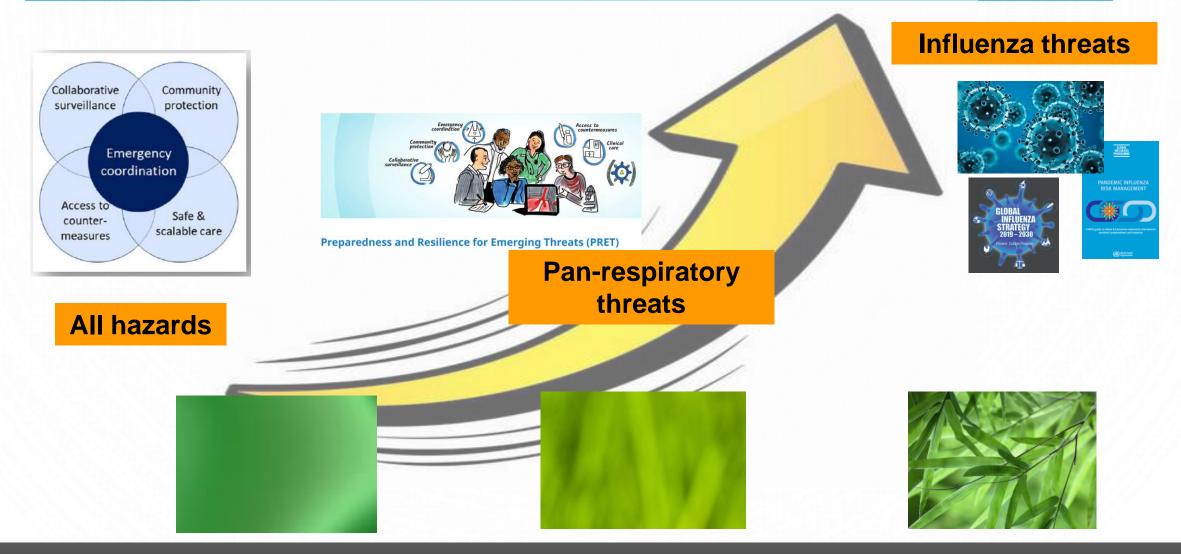


The **five Cs** of health emergency prevention, preparedeness, response and resilience





Influenza pandemic preparedness





Influenza pandemic preparedness - being exercised

via seasonal epidemics & zoonotic outbreaks of influenza

Detection of signals



- Event-based early warning surveillance
- Rumors, intelligence
- Occupational surveillance
- Clinical doctor's awareness
- Influenza sentinel surveillance systems
- Risk assessment
 - GISRS, OFFLU, WHO/FAO/OIE, experts, affected countries

Confirmation



Continuously demonstrating **complementary operations** of various surveillance systems and partners







Influenza pandemic response – uniqueness

INFLUENZA PREPAREDNESS & RESPONSE

A functioning global foundation: GISRS Global Influenza Surveillance and Response System





Influenza pandemic response – uniqueness

 Building on existing - acknowledging generations of scientists



as learnt and reflected from COVID-19 pandemic response & recent avian influenza outbreak

Surveillance

(new focuses aside from ongoing influenza preparedness efforts)

- Early warning, signal detection, laboratory confirmation, characterization, and risk assessment
 - Awareness and alert among clinicians
 - Rapid joint response & investigation new players
 e.g., cattle industry, food sector
 - Advancing "One Health" towards operation beyond concept
 - Rapid & coordinated research to bridge the gaps of science and understanding → risk assessment & response
 - Good example: current ongoing research re avian influenza in US
 - WHO influenza research agenda update, research networks formation





https://www.cdc.gov/media/releases/2024/s1009-human-case-bird-flu.html

https://www.safefood.net/Professional/Food-Safety/Food-safety-news-(1)/2023/Raw-Drinking-Milk-State-of-Play





Surveillance

(new focuses aside from ongoing influenza preparedness efforts)

Strategy of Surveillance during an Influenza Pandemic - updated, communicated and operationalized

- Types, scales (sizes) and associated purposes of surveillance along the progress of a pandemic
- "Unity Study" network protocols, capacity and agreements
- $_{\circ}$ \rightarrow Rapid data generation and collection:
 - Defined types of data, when, by whom, for what purposes; associated data reporting agreements, data systems
- $_{\circ}$ \rightarrow Rapid and efficient data analysis:
 - Built-in analytical tools; AI (?)
 - Engagement of academia e.g., modelling groups
- $_{\circ} \rightarrow$ to guide response decisions



WHO guidance for surveillance during an influenza pandemic

> World Health Organization

2017 guidance is under update



Laboratory preparedness & response

(new focuses aside from ongoing influenza preparedness efforts)

Optimal use of not-unlimited amount of laboratory capacity (after surge)

- GISRS ≠ a testing machine; More ≠ better
- GISRS pandemic influenza response plan finalized, communicated, exercised coupled with WHO Pandemic Influenza Surveillance Guidance

Diagnostics preparedness

- Laboratory supply contingency plans preparation with diagnostic industry
- Support & guiding the use of rapid diagnostic tests (RDTs)

Genetic sequencing & bioinformatics capacity globally

Strategically maintaining and developing

Virus shipping contingency plans

 Defining essential shipping activities when courier services suspended/disrupted (within country and between country and WHO CCs)



https://www.dreamstime.com/laboratory-future-large-room-glowing-facilities-image280570413



Vaccine preparedness & response

(new focuses aside from ongoing influenza preparedness efforts)

Support new vaccine producers into influenza vaccine operation now and during a pandemic

- 1st WHO recommendation for nucleic acid-based seasonal influenza vaccines in Sept 2024 for Southern Hemisphere 2025 season
- Regulatory preparedness addressing needs arising from new products

Operationalization of PIVR-OP

- Implementation details upon the adoption of Amendment of IHR (2005) in WHA May 2025
- Research needs
 - Evidence to support current feasible strategies, e.g., use of H5 vaccines
- Vaccine effectiveness (VE) monitored systematically
 - Building VE capacity on GISRS standardized national SARI surveillance systems

World Health Organization



Home / Publications / Overview / Recommended composition of influenza virus vaccines for use in the 2025 southern hemisphe

Recommended composition of influenza virus vaccines for use in the 2025 southern hemisphere influenza season

27 September 2024 | Technical document

For trivalent vaccines for use in the 2025 southern hemisphere influenza season, the WHO recommends the following:

Egg-based vaccines

- an A/Victoria/4897/2022 (H1N1)pdm09-like virus;
- an A/Croatia/10136RV/2023 (H3N2)-like virus; and
- a B/Austria/1359417/2021 (B/Victoria lineage)-like virus.

Cell culture-, recombinant protein- r nucleic acid-based vaccines

- an A/Wisconsin/67/2022 (H1N1)pdm09-like virus;
- an A/District of Columbia/27/2023 (H3N2)-like virus; and
- a B/Austria/1359417/2021 (B/Victoria lineage)-like virus.

The recommendation for the B/Yamagata lineage component of quadrivalent influenza vaccines remains unchanged from previous recommendations:

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



Clinical management and antiviral drugs

(new focuses aside from ongoing influenza preparedness efforts)

Influenza specific clinical expertise network

 A functioning mechanism sourcing existing clinical networks, expertise during a pandemic → rapid updates of guidance along new information/data generated during a pandemic

Better understanding of antiviral drug supply & R&D for influenza

 Better connecting existing and emerging manufacturers, joint planning for an influenza emergency/ pandemic

Clinical trial platforms of WHO R&D Blueprint

Support new drug R&D during an influenza pandemic



Clinical practice guidelines for influenza

https://iris.who.int/bitstream/handle/10665/378872/9789240097759-eng.pdf

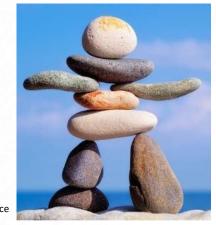
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Policies and other areas of preparedness

(new focuses aside from ongoing influenza preparedness efforts)

- Reflection on the Amendment of IHR (2005) on influenza pandemic response
 - A public health emergency of international concern
 - A "pandemic emergency"
 - WHAT... preparedness for the next influenza pandemic IF...?
- Promote public health goal saving people's lives
 - Global coordination with other sectors
 - Shared responsibility





One take away message: call-for action!

! Functioning, trust, and strong networks and true collaboration!

- Built through exercise now via seasonal epidemics:
 - to get ready for the next influenza pandemic
 - to generate baselines of varying characters of influenza epidemics → relative assessment during the next influenza pandemic



Acknowledgement

- WHO GISRS (Global Influenza Surveillance and Response System)
- GISRS associated national/sub-national surveillance systems
- Countries hosting GISRS institutions
- GISRS partners

WHO Global Influenza Programme HQ, WHO Regional Offices







GIHSN 12TH ANNUAL MEETING, 25-26 NOVEMBER 2024

KEYNOTE - VISION OF RESPIRATORY SURVEILLANCE IN THE POST-PANDEMIC ERA

Maria ZAMBON, UK HSA



Foundation for Influenza Epidemiology







GIHSN 12TH ANNUAL MEETING, 25-26 NOVEMBER 2024

WHO INTEGRATED SENTINEL SURVEILLANCE STANDARDS AND GUIDANCE

Melissa ROLFES, WHO - Global Influenza Program



Foundation for Influenza Epidemiology



Coordination

Integrated sentinel surveillance for respiratory viruses with epidemic and pandemic potential

WHO Global Influenza Programme



EPIDEMIC & PANDEMIC PREPAREDNESS & PREVENTION

Updated integrated surveillance guidance

integrated sentinel surveillance of influenza and other respiratory viruses of epidemic and pandemic potential by the Global Influenza Surveillance and Response System (GISRS)

Standards and operational guidance



World Health Organization This updated guidance stands in as the new guidance and standards, superseding prior guidance:



Objectives of integrated sentinel surveillance of respiratory viruses

- Primary objectives
 - Monitor epidemiologic and clinical characteristics of acute respiratory infections
 - Monitor virologic patterns and characteristics of circulating viruses causing acute respiratory infections
 - Generate evidence to guide public health action
 - Support early warning and event-based surveillance
- Secondary objectives
 - Monitor clinical severity and high-risk groups/settings
 - Provide platform for special studies or specialized investigations (e.g., vaccine/treatment effectiveness, antiviral susceptibility, disease outcomes, disease burden, etc.)

Achieved through year-round sentinel surveillance for acute respiratory illnesses with testing for influenza and SARS-CoV-2

(and RSV if the country chooses)



Case definition

Table 3. Case definitions for integrated surveillance

Syndrome	Case definition	Recommended ages for use
A. Recommended case definitions for integrated surveillance of influenza, SARS-CoV-2 and RSV		
WHO ILI	Acute respiratory infection with measured fever of 38°C or more, AND cough; with symptom onset within the past 10 days	Any age
WHO SARI	Acute respiratory infection with history of fever or measured fever of >38°C AND cough AND onset within the last 10 days AND requires hospitalization	Any age
B. Recommended case definitions where RSV is also a priority virus and/or disease burden estimation is a primary objective		
ARIª <i>(10)</i>	Sudden onset of symptoms AND at least one of the following respiratory symptoms: cough, sore throat, shortness of breath, coryza AND a clinician's judgement that the illness is due to an infection	Any age
WHO extended SARI	 Children aged < 2 years Symptom onset within past 10 days, AND cough or shortness of breath, AND hospitalization 	Children aged < 2 years
	 Infants aged < 6 months, also include Apnoea (temporary cessation of breathing from any cause), OR 	
	 Sepsis (fever/hypothermia^b and shock^c and seriously ill with no apparent cause) 	



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How many specimens to test

- Aim to test at least 50 specimens from ILI/ARI patients per week at national level
- Aim to test at least 50 specimens from SARI patients per week at national level

• At a minimum,

- Aim to test at least 50 specimens per week at national level. Specimens can be from a mix of ILI/ARI or SARI patients
- If prioritizing RSV testing, aim to test 20 specimens per week at national level for RSV year-round
 - Ideally from hospitalized children aged <2 years</p>
 - May be a sub-sample of 50 SARI specimens



Which patients to choose for testing

- It is often not feasible to test all patients with ILI/ARI or SARI
- Random sampling is ideal but impractical
- A pre-defined sampling scheme, for which patients are sampled for surveillance testing, can minimize bias
 - Key point: sampling scheme should be systematically applied to reduce bias
 - Sample every nth patient (e.g., every 10th, 20th, etc.)
 - Sample all patients on every other day
 - Sample the first n patients each day



How many sentinel sites?

- A few sentinel sites providing good quality data are better than larger systems with poor quality data
- Choose enough sites so that at least 1000 patients a week at national level are evaluated for the case definitions.
- > 1000 patients will likely enroll enough patients to meet testing goals and reach primary objectives
- When choosing sites, prioritize sites that are:
- Representative of the population
- Provide good quality and timely data
- Can sustainably perform surveillance



Data collection

• Public health surveillance involves systematic collection of data and analysis

From each sentinel site

- Number of patients evaluated for each case definition
- Number of patients with ILI/ARI/SARI
- Number of patients with specimens
- Number of specimens shipped to lab

From patients with specimen collected

- Number of patients with specimens
- Minimum data:
 - Sentinel site
 - Age, sex
 - Onset date
 - Case definition/symptoms
 - Hospitalized?
 - Specimen collection date
- Test results

From laboratory testing

- Number of specimens received
- Number of specimens tested
- Number of specimens positive
 - Influenza
 - SARS-CoV-2
 - RSV

Lab data links with the patient data



Data reporting to WHO

- Report to WHO (regional or global) by Thursday the week following the end of an epi-week
- Syndromic data should be reported in aggregate for each week, age group, and case definition
 - Number of patients evaluated in each age group for each ILI/ARI and SARI that week
 - Number of patients in each age group with ILI/ARI and SARI that week
- Virologic data should be reported in aggregate for each age group and case definition
 - Number of ILI/ARI patients in each age group that had specimens collected
 - Number tested for each virus in each age group
 - Number tested positive for each virus in each age group
 - Number of SARI patients in each age group that had specimens collected
 - Number tested for each virus in each age group
 - Number tested positive for each virus in each age group

Case-based reporting is also possible



Monitoring and Evaluation

- Continuous monitoring
 - Data quality and completeness
 - Timely data collection
 - Timely laboratory testing
 - Timely reporting to national, regional, global level
 - Consistency
- Periodic evaluation
 - Of part or all of the system
 - 1-2 years after implementation
 - When considering changes to system
 - After changes to system



Clinical specimens – type, collection, storage and transport

Dos and Don'ts

- **Do** collect upper respiratory tract specimens (for example, nasopharyngeal swabs, nasal swabs or oropharyngeal swabs) for detection of influenza, SARS-CoV-2 or RSV for routine surveillance.
- Do store and transport specimens in VTM or UTM. Store specimens at 4 °C for up to 72 hours. For longer storage, keep specimens at -70 °C.
- **Don't** collect saliva, oral fluids and sputum for routine surveillance.
- Don't store specimens at -20 °C.
- Don't subject specimens to freeze-thaw cycles.

Table 5. Recommended clinical specimens for the detection of influenza, SARS-CoV-2 and RSV

Upper respiratory tract

- Nasopharyngeal swab
- Combined nasopharyngeal and throat (oropharyngeal) swabs
- Acceptable alternative: combined nasal and throat (oropharyngeal) swabs
- Nasal swab
- Oropharyngeal swab
- Nasal washes
- Nasopharyngeal aspirates

Lower respiratory tract

- Endotracheal aspirates
- Bronchoalveolar lavage

For neonates

Nasal washes and aspirates are acceptable specimen types for RSV testing



E P I D E M I C & P A N D E M I C P R E P A R E D N E S S & P R E V E N T I O N

Laboratory testing algorithms

- The complexity of multi-pathogen tests requires different testing algorithms based on the type of systems and data read-out.
- Regardless of the algorithm employed: All sentinel influenza-positive specimens should undergo subtyping/lineage determination.
- Where RSV testing is implemented, RSV typing should be conducted on all RSVpositive specimens.
- **Contingency Plans:** Contingency plans should be made for testing (e.g., singleplex vs multiplex).
- If routine commercial kits cannot be procured through usual channels, validated alternative commercial kits should be used.



Genomic Sequencing

- Labs should assess the optimal PCR Ct value cut-off for their procedures (generally Ct value ≤28 yield good results)
- Sequencing should be conducted on as many influenza and SARS-CoV-2 PCR-positive sentinel specimens as resources allow to meet the objectives of genomic surveillance

Table 7. Number of influenza and SARS-CoV-2 positive specimens for sequencing

Weekly sequencing target

Aim to sequence at least 15 influenza-positive and 15 SARS-CoV-2-positive sentinel specimens per week in
order to meet above-described objectives.

Insufficient sentinel specimens

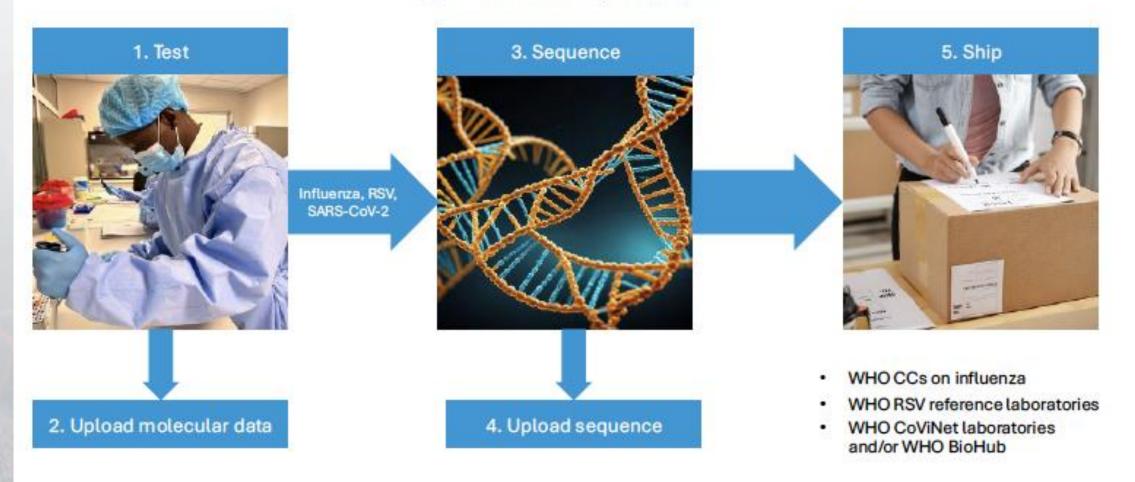
- For laboratories testing 50 specimens each week, there may be weeks when fewer than 15 specimens test positive for influenza or SARS-CoV-2. During such weeks, sequence all positive specimens detected in sentinel surveillance to maintain sequencing capacity.
- If there are not enough sentinel or targeted specimens, use a random selection of positive specimens from non-sentinel sources. Such non-sentinel specimens should ideally be selected from patients who meet the ILI/ARI or SARI case definitions.
- Strive for a balanced representation across different age groups, geographical regions and clinical spectrums.

Non-epidemic periods

 During periods of low virus circulation, sequence all detected influenza and SARS-CoV-2-positive specimens, regardless of their source (sentinel or non-sentinel). This is crucial for understanding virus diversity and detecting genetic variants or unique subgroups during the inter-epidemic period.



Fig. 5. Laboratory workflow





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Upcoming WHO EPI-WIN Webinar

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WHO EPI-WIN WEBINAR

SAVE THE DATES

Webinars for November to December 2024

Date & Time (CET)	Webinar topics	Registration
14 Nov 2024 13:00-14:30	Engaging communities in early detection and response action through community-based surveillance	
21 Nov 2024 14:00-15:00	Launch of MERS-tracker: An interactive dashboard to support evidence-based decision-making	
28 Nov 2024 13:00-14:00	One Health Intelligence: how WHO, FAO and WOAH work together for global early warning on emerging health threats	
05 Dec 2024 13:00-14:00	Integrated Sentinel Surveillance for Influenza and Other Respiratory Viruses – standards and implementation	
12 Dec 2024 13:00-14:00	Pathogen Genomics in Health Emergencies: spotlight cholera	0.44

Thursday 5 December 1300 CET



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Acknowledgements

- WHO GISRS (Global Influenza Surveillance and Response System)
- GISRS associated national/sub-national surveillance systems
- Countries hosting GISRS institutions
- WHO Emerging Diseases and Zoonoses Team
- WHO Regional and Country Offices colleague
- Epi and lab working groups for revisions to guidance
- Participants of the meeting in Abu Dhabi, 2023 on Advancing GISRS

- WHO GIP Team
 - Wenqing ZHANG
 - Siddhi HIRVE
 - Aspen HAMMOND
 - Dmitriy PEREYASLOV
 - Jean-Michel HERAUD
 - Melissa ROLFES
 - Stefano TEMPIA
 - Magdi SAMAAN
 - Sergejs NIKISINS
 - Obadia KENJI
 - Vanessa COZZA
 - Joshua MOTT











GIHSN 12TH ANNUAL MEETING, 25-26 NOVEMBER 2024

GIHSN DASHBOARD: INTRODUCTION & LIVE PRESENTATION

Laurence TORCEL-PAGNON, FIE & Camille HUNSINGER, Impact Healthcare



Foundation for Influenza Epidemiology





DASHBOARD: THE VISION

- Like other surveillance networks (WHO, CDC, ECDC), the GIHSN would value having an interactive dashboard to expose the GIHSN aggregate fully anonymized data and support GIHSN in increasing key indicators accessibility for the public and private scientific community at large
- For the last 2 seasons, the foundation produced an annual report presenting all the data collected through the GIHSN network over a season and some overview of historical data
- At the last annual meeting, the foundation presented a pilot dashboard with key indicators to present GIHSN data on its website

Today objective is to show the first version of this dashboard before making it publicly available on the GIHSN website



DASHBOARD VERSION 1

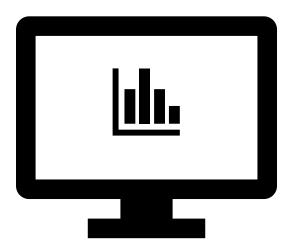
Key features:

- Annual update
- Starting with two last seasons 2021-22 and 2022-23 data -> 2023-24 will be added when finalized (February)
- Only aggregated data will be shown

> After the annual meeting, the dashboard will be made publicly available on the GIHSN website











GIHSN ANNUAL MEETING, 26 NOVEMBER 2024

WORKSHOP 2: IMPROVING DATA COLLECTION, QUALITY AND REPORTING TIMELINESS

PLENARY BRIEF, BY MARTA NUNES, CERP, LYON, FRANCE



Foundation for Influenza Epidemiology Sous l'égide de Fondation de France

WORKSHOP 2 – OBJECTIVES

Improving data collection, quality and reporting timeliness in GIHSN, 2024-25 season

- Screening and sampling frame strategy
- Data flow and quality
- Timeliness of reporting
- Core set of variables to be reported weekly
- \rightarrow Experience sharing between sites to identify barriers & group discussions to find solutions

Expected outcomes: Set up best practices and improve data flow during upcoming 2024-25 surveillance period



LESSONS LEARNT FROM 2023-24 SEASON: 18 SITES PARTICIPATING

As of 24 October 2024

Data collection

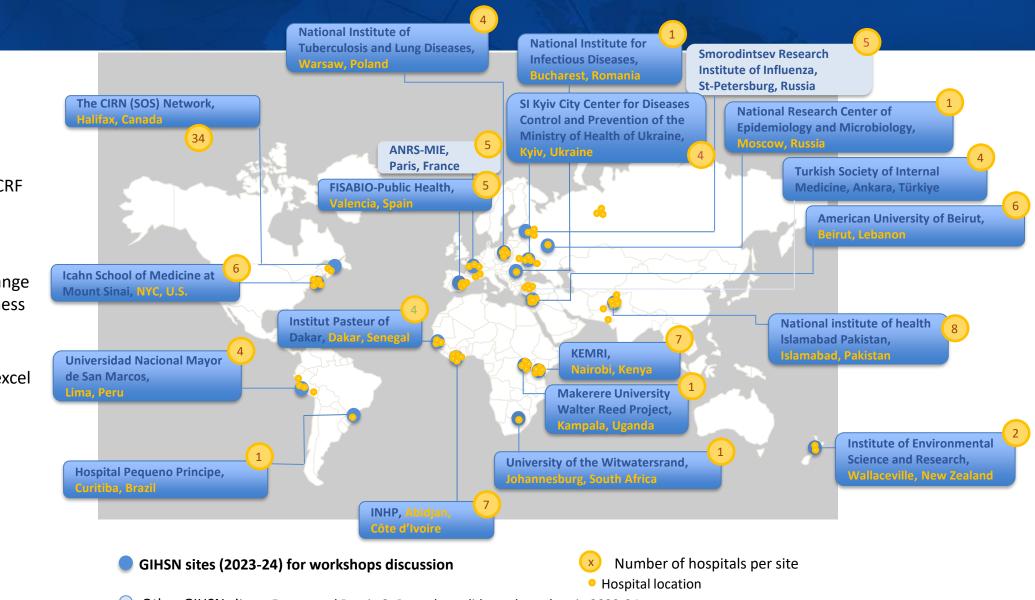
- 7 sites using web-based e-CRF
- 11 sites using excel

Data quality

- Improvement in data exchange
- Improvement in completeness

Data timeliness

 9/11 sites reporting with excel monthly



DATA FLOW, COMPLETENESS AND QUALITY

- Per our protocol, each site should identify patients that meet case definition for enrollment, collect information at hospital admission and then review patient's medical records if s/he is discharged or die during hospital stay
- Please discuss any challenges and barriers related to capturing data throughout the
 hospital experience for the patient. Are you able to capture everything through retrospective chart review? When and how many times you check on the patients to make sure outcomes are captured?
 - Summarize main points from the team
 - Describe challenges and recommendations to improve data quality and completeness

NOTE: Make copies of the questionnaire available for the group discussion



TIMELINESS OF DATA REPORTING

- In the grant agreement, the FIE request that sites submit data as real time as possible
- For those sites using the eCRF, initial data entry can be done once patient is enrolled and the <u>data can be updated</u> as more information becomes available (until discharge/death)
- For those sites using excel file transfer, monthly uploads have been requested. <u>Uploads</u> <u>can be updated</u> once more information on the patients becomes available
 Careful to keep track of patient's ID# to avoid duplicate submissions!



What can be done to improve timely of reporting? Summarize challenges and main recommendations

NOTE: Make copies of the questionnaire available for the group discussion



WOULD THERE BE A CORE SET OF VARIABLES THAT CAN BE REPORTED MORE PROMPTLY?

Explore what we could suggest to improve reporting timeliness

- What subset of variable can be updated weekly? How to support sites to achieve that? Any issue with data entry system? Should there be a partial data transmission with lab results and outcome updated separately?
- What system can be set up to do help the sites achieving reporting timeliness?
 - Summarize feedback from discussion and recommendations

NOTE: Make copies of the questionnaire available for the group discussion



MINIMUM VARIABLES FOR WEEKLY UPDATE

List of minimum variables in the GIHSN questionnaire:

Q2/ Date of admission

Q3/ Hospital ID – Site- Country

Q4/ Patient ID

Q5/Sex

Q6/ Age

Q7/ Symptoms

Q8/ Case definition

Q9/ Date of swabbing

Q10/ Flu lab results

Q11/ other lab results

Q31-32-33/ Severity at any time during admission

Global Influenza Hospital Surveillance Network

Weekly for lab results reporting/sharing

Implementing the integrated sentinel surveillance of influenza and other respiratory viruses of epidemic and pandemic potential by the Global Influenza Surveillance and Response System

Standards and operational guidance

Annex 9. Minimum data to be collected from patients who have provided a respiratory specimen

The following minimum data should be collected from all patients meeting the surveillance case definition who have provided a specimen to be tested for respiratory viruses.

- Person case identifier, age, sex, case definition met, history of fever, history of cough, and hospitalization status.
- Place clinic/hospital location, and whether clinic/hospital is in the sentinel system.
- **Time** of enrolment/interview, consultation or hospital admission, onset of symptoms, specimen collection, specimen transport dates, and specimen testing dates.
- Laboratory results from respiratory virus testing unique laboratory identifier, specimen types, date of testing, the viruses tested for, testing results including detection, typing and subtyping, PCR Ct values, whether a positive specimen was sequenced, which repository the sequence was submitted to, and the sequence accession identifier.

Depending on a country's objectives and resources, the following variables could also be collected.

- High-priority variables (where feasible) intensive care unit admission, oxygen support, mechanical ventilation, and death/other outcome.
- Medium-priority variables relevant vaccination history, antiviral treatments, and preexisting medical conditions.
- Low-priority variables occupational exposures, animal exposures, travel history, headache, sore throat, runny nose, body aches, conjunctivitis, difficulty breathing, wheezing, vomiting, diarrhea, and blood oxygen level.

WORKSHOP 2 – AGENDA

□ 11:05 to 11.10: Split the attendance in 3 predefined groups

Move from plenary room to groups' room

□ **11.10 to 11.50:** Groups discussions on pre-defined topics/questions

Only for in-person participants

One/two moderators to support discussion – template slides to report outputs

□ **11.50 to 12.35:** Sharing in Plenary

One rapporteur (site) per group to present outputs (8') and then plenary discussions/wrap-up



WORKSHOP 2 - GROUPS



All participants are invited to join the workshop splitting themselves into the 3 groups





CLOSING OF THE MEETING & NEXT STEPS



Foundation for Influenza Epidemiology Sous l'égide de

Fondation de France Coordination