

GISRS sentinel surveillance for COVID-19

Frequently Asked Questions (FAQ)

10 March 2022



1. What is the latest guidance on integrated surveillance?

- Revised interim guidance on the end-to-end integration of SARS-CoV-2 and influenza sentinel surveillance was published on 31 January 2022 here: https://www.who.int/publications/i/item/WHO-2019-nCoV-Integrated_sentinel_surveillance-2022.1
- This revised guidance addresses the integration of testing for SARS-CoV-2 into existing sentinel surveillance systems for influenza. Surveillance objectives and laboratory algorithms, including for genomic sequencing, are aligned to allow for the monitoring of the relative circulation of both respiratory viruses, covering the whole spectrum from case detection and specimen collection, virologic testing, sequencing and sharing of virologic and genetic sequence data on public accessible databases that can serve to inform public health decisions.

2. What is new in this guidance?

- The revised guidance includes amended algorithms and strategies to adapt sentinel systems to make them resilient and agile for addressing global and national surveillance needs for influenza and COVID-19. It highlights the link of sentinel surveillance with the evolving needs of policy and the national response to the COVID-19 pandemic and influenza epidemics.
- The guidance summarizes an updated systematic review of recent evidence on the clinical characteristics of COVID-19 and analysis of surveillance data. The review suggests that ILI and SARI surveillance combined with virologic confirmation are well positioned to detect influenza and COVID-19 cases.
- This guidance builds on experiences and lessons learned as countries adapted their influenza surveillance systems in the context of the COVID-19 pandemic and reviews new evidence to provide guidance on end-to-end surveillance. It incorporates inputs from Member States and international experts solicited before and during a virtual consultation in October 2021.
- This interim guidance is an update and replaces two previous documents: [Maintaining surveillance of influenza and monitoring of SARS-CoV-2](#) (published November 2020) and [Operational considerations to expedite genomic sequencing component of GISRS surveillance of influenza SARS-CoV-2](#) (published February 2021). It complements the [Guidance for surveillance of SARS-CoV-2 variants](#) (published August 2021) and the [Public health surveillance for COVID-19](#) (published December 2020).

3. How is this guidance important for Member States?

- At the national level, the guidance on end-to-end integration of SARS-CoV-2 and influenza sentinel surveillance can support Member States to:
 - build resilient, effective surveillance systems to prepare for influenza epidemics in the near future and beyond,
 - detect and monitor the co-circulation of SARS-CoV-2, influenza and other respiratory viruses,
 - strengthen the evidence base for national risk assessments, and contribute to regional and global risk assessments and public health measures, such as those done through the Global Influenza Surveillance and Response System (GISRS) and the International Health Regulations (IHR),
 - use data to inform response measures such as adjusting public health measures to mitigate the impact on health systems.
- This guidance is important because it remains essential that countries be vigilant for the emergence of seasonal and non-seasonal influenza viruses of pandemic potential. Other objectives of integrated sentinel surveillance are included in the guidance as well.

4. Who is this guidance for?

- This guidance is for public health professionals involved in disease and laboratory surveillance at the national and regional levels. It is also a guide for international health agencies involved in influenza and COVID-19 sentinel surveillance integration.

5. What is in the guidance and what are the main messages?

- The specific sections of the guidance include:
 - integrated surveillance objectives,
 - case definitions for integrated influenza and COVID-19 surveillance,
 - WHO severe acute respiratory infection (SARI)/influenza-like illness (ILI) case definitions should be used in integrated surveillance.
 - strategies to adapt sentinel surveillance systems in the context of the COVID-19 pandemic,
 - Surveillance should be conducted year-round wherever feasible.
 - **sampling strategies,**
 - At least 50, and ideally 150, specimens, should be tested per week by the National Influenza Center for influenza and SARS-CoV-2 with multiplex real-time reverse transcription-polymerase chain reaction (rRT-PCR) assays.
 - A shortfall of sentinel specimens can be bridged by sourcing from non-sentinel sites with adherence to ILI/ARI/ SARI case definition criteria and representativeness.
 - **laboratory protocols for molecular diagnostics,**
 - **reporting of surveillance data,**
 - Global and regional reporting platforms have been adapted to receive COVID-19 data in addition to influenza data. Countries are recommended to report weekly aggregated COVID-19 sentinel surveillance data in the same format, frequency and timing as they have been reporting influenza surveillance data.
 - Results should be reported separately according to sentinel or non-sentinel surveillance source wherever possible.
 - **considerations for sequencing including the sharing of genetic sequence data,**
 - Timely uploads of influenza and SARS-CoV-2 genetic sequence data to publicly accessible databases, such as GISAID, are recommended to ensure completeness of metadata.
 - translating surveillance intelligence into action and policy.
- Quality, representativeness, sustainability and country ownership are the guiding principles for end-to-end integration of SARS-CoV-2 and influenza sentinel surveillance.
- Integration of SARS-CoV-2 testing and sequencing should occur without compromising influenza surveillance in the country.

6. What is sentinel surveillance for COVID-19?

Sentinel surveillance is an efficient way to collect high-quality data in a timely manner systematically and routinely from representatives of the population under surveillance so that the information gathered can be applied to the population or among subpopulations at higher risk of developing severe disease.

Sentinel surveillance for COVID-19 using GISRS complements COVID-19 surveillance activities under the overall COVID-19 pandemic response and is intended to be efficient and cost-effective using the existing routine national and sub-national influenza surveillance systems.

Sentinel surveillance for COVID-19 helps reach some of the objectives of the overall COVID-19 surveillance, outlined in the [Surveillance strategies for COVID-19 human infection document](#), and complements the outbreak surveillance and investigations.

7. Will sentinel surveillance for COVID-19 detect all cases of COVID-19?

Sentinel ILI and SARI surveillance is not designed to detect every case of influenza or COVID-19 but to recognize and monitor trends of community transmission over time, describe patterns of risk, and estimate impact of influenza, COVID-19 or disease caused by other respiratory viruses. ILI and SARI sentinel surveillance can capture those cases that are symptomatic and seeking medical care at a sentinel site and presenting with symptoms that meet the ILI and SARI case definition. A symptomatic patient meeting the case definition may be sampled and tested depending on the sampling strategy of the sentinel site. Ideally, the strategy for sampling ILI and SARI cases for testing should be consistent over time to minimize biases.

To detect each and every COVID-19 case, countries should use other surveillance systems to quickly identify COVID-19 cases (active case finding) among various populations and risk groups; for more information on COVID-19 surveillance visit: <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance/surveillance-and-case-definitions>.

8. What is the added value of including sentinel surveillance of COVID-19 in the overall COVID-19 pandemic response?

Understanding the relative contribution of COVID-19 to the data captured in syndromic disease surveillance systems is critical to guide national responses and interpret the burden of disease caused by SARS-CoV-2 and influenza viruses. In addition, the data gathered can be used as a baseline for future evaluation of COVID-19 interventions such as vaccination, as has been undertaken already for influenza.

9. Why is the Global Influenza Surveillance and Response System (GISRS) well suited to implement sentinel surveillance of COVID-19?

GISRS has been the foundation of monitoring influenza viruses and diseases since 1952. It is a well-established network of more than 150 national public health laboratories in 125 countries. From year-round seasonal influenza surveillance, to sporadic zoonotic influenza outbreaks, to pandemic including the 2009 H1N1 Pandemic, GISRS and associated systems host expertise and experience at national, regional and global levels. Leveraging the GISRS system is an efficient and cost-effective approach to enhancing COVID-19 surveillance.

Same laboratory. Since the emergence of SARS-CoV-2, laboratories of the GISRS network have become COVID-19 testing centres in many countries. Notably, as of July 2020, approximately 85% of more than 220 national public health laboratories testing for COVID-19 globally were laboratories closely associated with GISRS.

Same sentinel sites. Well-functioning sentinel sites for sampling symptomatic patients exist in many countries. Because influenza and SARS-CoV-2 are both respiratory viruses and the diseases they cause can present with similar symptoms, symptomatic patients seen at sentinel sites can be sampled and their specimens can be tested for both influenza and SARS-CoV-2 viruses in addition to other respiratory viruses.

Same reporting platforms. Reporting channels for rapid sharing of information from this systematic, consistent testing system already exist.

10. How can countries ensure well-functioning surveillance systems for influenza and COVID-19?

To ensure functioning of sentinel surveillance system for both influenza and COVID-19, the GISRS network, regional influenza networks, and national influenza surveillance officers are urged to consider realistic and practical solutions related to persistent influenza threats and the ongoing COVID-19 response. With the co-circulation of influenza and SARS-CoV-2, both of which are of public health importance, it is recommended to urgently strengthen and adapt existing national influenza surveillance systems for both influenza and COVID-19 responses; to integrate COVID-19 surveillance into ongoing influenza sentinel surveillance systems as much as possible under strategies tailored to the needs and capacity specific to the country; forecast demand, anticipate challenges and potential disruptions to existing infrastructures, and plan for surge capacity in National Influenza Centres and sentinel surveillance sites.

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