Public health surveillance for COVID-19

Interim guidance

7 August 2020

World Health Organization

Background

This document summarizes current WHO guidance for public health surveillance of coronavirus disease 2019 (COVID-19) in humans caused by infection with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). This guidance combines and supersedes two earlier documents: Global surveillance guidance for COVID-19 caused by human infection with COVID-19 virus: Interim guidance and Surveillance strategies for COVID-19 human infection: Interim Guidance 10 May 2020.

This document should be read in conjunction with the WHO guidance on preparedness, readiness and response activities, and contact tracing for COVID-19.

Updated information and other guidance on COVID-19 can be found on the WHO COVID-19 website.

What is new in this new version:

- Revision of suspected and probable case definitions to integrate increased knowledge on the clinical spectrum of COVID-19 signs and symptoms and consider situations where testing is not available to all
- Updated approaches to surveillance including environmental and serological surveillance for SARS-CoV-2
- Revision of variables included in weekly surveillance to fit with new case definition and objectives of surveillance (that is, inclusion of probable cases, health care workers cases and updated age groups for reporting cases and deaths)
- Information on the importance of the collection of metadata for the analysis and interpretation of surveillance data
- Recommendations for ending case-based reporting for global surveillance and replacing it with aggregate reporting.

Purpose of this document

This document provides guidance to Member States on the implementation of surveillance for COVID-19 and the reporting requirements for WHO.

Definitions for surveillance

1. Case definition

The case definitions for suspected and probable cases below have been revised to account for updated evidence on the most common or predictive symptoms and clinical and radiographic signs present in COVID-19 as well as known transmission dynamics. The current case definition integrates recent knowledge on signs and symptoms of COVID-19 issued from:

- publications describing the clinical spectrum of COVID-19 among hospitalized (e.g., Guan 2020, Menni 2020) and non-hospitalized (e.g., Spinato 2020; Tostamnn 2020, Struyf 2020) COVID-19 patients and WHO Clinical management of COVID-19
- WHO's and partners' analysis of sensitivity, specificity and predictive value of most described signs and symptoms using surveillance data
- expert consultations with clinicians, radiologists and laboratory scientists connected to global expert networks who supported validation of the definition.

Countries may need to adapt COVID-19 case definitions depending on their local epidemiological situation and other factors. All countries are encouraged to publish adapted definitions online and in regular situation reports and to document periodic updates to definitions that may affect the interpretation of surveillance data.

Suspected COVID-19 case (two suspected case definitions A or B):

A. A person who meets the clinical **AND** epidemiological criteria:

Clinical criteria:

1. Acute onset of fever AND cough;

   OR

2. Acute onset of ANY THREE OR MORE of the following signs or symptoms: fever, cough, general weakness/fatigue[1], headache, myalgia, sore throat, coryza, dyspnoea, anorexia/nausea/vomiting, diarrhoea, altered mental status.

AND

Epidemiological criteria:

1. Residing or working in an area with high risk of transmission of the virus: for example, closed residential settings and humanitarian settings, such as camp and camp-like settings for displaced persons, any time within the 14 days prior to symptom onset;

   OR

2. Residing in or travel to an area with community transmission[2] anytime within the 14 days prior to symptom onset;

   OR

3. Working in health setting, including within health facilities and within households, anytime within the 14 days prior to symptom onset.

B. A patient with severe acute respiratory illness (SARI: acute respiratory infection with history of fever or measured fever of ≥ 38 C°; and cough; with onset within the last 10 days; and who requires hospitalization).

Probable COVID-19 case:

A. A patient who meets clinical criteria above AND is a contact of a probable or confirmed case, or epidemiologically linked to a cluster of cases which has had at least one confirmed case identified within that cluster.

B. A suspected case (described above) with chest imaging showing findings suggestive of COVID-19 disease*

* Typical chest imaging findings suggestive of COVID-19 include the following (Manna 2020):

- chest radiography: hazy opacities, often rounded in morphology, with peripheral and lower lung distribution
- chest CT: multiple bilateral ground glass opacities, often rounded in morphology, with peripheral and lower lung distribution
- lung ultrasound: thickened pleural lines, B lines (multifocal, discrete, or confluent), consolidative patterns with or without air bronchograms.

C. A person with recent onset of anosmia (loss of smell) or ageusia (loss of taste) in the absence of any other identified cause.

D. Death, not otherwise explained, in an adult with respiratory distress preceding death AND who was a contact of a probable or confirmed case or epidemiologically linked to a cluster which has had at least one confirmed case identified within that cluster.

Confirmed COVID-19 case:

A person with laboratory confirmation of COVID-19 infection, irrespective of clinical signs and symptoms.

See Laboratory testing for coronavirus disease (COVID-19) in suspected human cases guidance, for details.

Note: Clinical and public health judgment should be used to determine the need for further investigation in patients who do not strictly meet the clinical or epidemiological criteria. Surveillance case definitions should not be used to guide clinical management.

[1] Signs separated with slash (/) are to be counted as one sign.

[2] Community transmission: Countries /territories/areas experiencing larger outbreaks of local transmission defined through an assessment of factors including, but not limited to: large numbers of cases not linkable to transmission chains, large numbers of cases from sentinel lab surveillance or increasing positive tests through sentinel samples (routine systematic testing of respiratory samples from established laboratories), multiple unrelated clusters in several areas of the country/territory/area.

2. Definition of a contact

A contact is a person who has experienced any one of the following exposures during the **2 days before and the 14 days after the onset** of symptoms of a probable or confirmed case:

1. face-to-face contact with a probable or confirmed case within 1 metre and for at least 15 minutes
2. direct physical contact with a probable or confirmed case
3. direct care for a patient with probable or confirmed COVID-19 disease without using recommended personal protective equipment
   OR
4. other situations as indicated by local risk assessments.

More information on contact ascertainment is available in Contact tracing in the context of COVID-19.

Note: for confirmed asymptomatic cases, the period of contact is measured as the 2 days before through the 14 days after the date on which the sample that led to confirmation was taken.

3. Definition of death due to COVID-19

A COVID-19 death is defined for surveillance purposes as a death resulting from a clinically compatible illness in a probable or confirmed COVID-19 case, unless there is a clear alternative cause of death that cannot be related to COVID-19 disease (e.g. trauma). There should be no period of complete recovery between the illness and death.

4. Recommendations for laboratory testing

Suspect and probable cases should be investigated for the presence of SARS-CoV-2 virus using available laboratory tests. While recommended response activities are largely the same for probable and confirmed cases, testing of probable cases, where resources allow, is still useful since it can exclude patients as cases and reduce the burden required to isolate and contact trace those patients.

Depending on the intensity of the transmission in a specific location, the number of cases and the laboratory capacity, a subset of suspect or probable cases can be prioritized for testing. WHO has provided recommendations on how to prioritize persons to be tested during community transmission in Laboratory testing strategy recommendations for COVID-19 interim guidance.

Recommended COVID-19 surveillance for Member States

This section provides an overview of surveillance approaches that Member States should consider for comprehensive national surveillance for COVID-19. The section emphasises the need to adapt and reinforce existing national systems where appropriate and scale up surveillance capacities as needed.

When considering national capacities for surveillance, Member States should include regular reporting to WHO as per the requirements below.

1. Aims and objectives

The aim of national surveillance for COVID-19 is to enable public health authorities to reduce transmission of COVID-19, thereby limiting associated morbidity and mortality.

The objectives of COVID-19 surveillance are to:

- enable rapid detection, isolation, testing, and management of cases
- monitor trends in COVID-19 deaths
- identify, follow-up and quarantine of contacts
- detect and contain clusters and outbreaks, especially among vulnerable populations
- guide the implementation and adjustment of targeted control measures, while enabling safe resumption of economic and social activities
- evaluate the impact of the pandemic on health-care systems and society
- monitor longer term epidemiologic trends and evolution of SARS-CoV-2 virus
- contribute to the understanding of the co-circulation of SARS-CoV-2 virus, influenza and other respiratory viruses, and other pathogens.

2. Surveillance approaches

Most countries need significantly strengthened surveillance capacities to rapidly identify and care for cases of COVID-19, trace and quarantine their contacts and monitor disease trends over time. Comprehensive national surveillance for COVID-19 will require the adaptation and reinforcement of existing national systems, where appropriate, and the scale-up of additional surveillance capacities, as needed. Digital technologies for rapid reporting, contact tracing and data management and analysis may support these capacities.

Robust comprehensive surveillance, once in place, should be maintained even in areas where transmission has been suppressed or controlled, even if there are few or no cases. It is critical that new cases and clusters of COVID-19 be detected rapidly before outbreaks and/or widespread transmission occurs. Ongoing surveillance for COVID-19 is also important to understand longer-term epidemiological trends, such as incidence and mortality among different age groups, which population groups are at higher risk for severe disease and death and potential epidemiological changes over time.

Key actions for comprehensive COVID-19 surveillance include:

- use, adapt and strengthen existing surveillance systems
- strengthen laboratory and testing capacities
- use, adaptation and enhancement of public health workforce to carry out case finding, contact tracing and testing
- include COVID-19 as a mandatory notifiable disease
- implement immediate reporting
- establish systems to monitor contact tracing activity.

It is important to maintain routine syndromic surveillance for other infectious diseases, especially those caused by respiratory pathogens, such as influenza and respiratory syncytial virus, through surveillance for influenza-like-illness (ILI), severe acute respiratory infection (SARI), atypical pneumonia and unexplained fever, with sampling and laboratory testing of all or a subset of cases. This is critical for understanding trends in other diseases with similar presentations to guide appropriate public health preparedness and clinical management.

3. Essential surveillance for COVID-19

Considering the potential for rapid and exponential growth of COVID-19 outbreaks, new cases and clusters should be identified and reported as rapidly as possible, and data should be included in any relevant epidemiological analyses within 24 hours of diagnosis. National authorities should include COVID-19 as a mandatory notifiable disease with requirements for immediate reporting.

Surveillance systems should be geographically comprehensive, and surveillance for vulnerable or high-risk populations should be enhanced. This will require a combination of surveillance systems including contact tracing for all levels of the health-care system, at the community level, in closed residential settings and in other vulnerable groups.

Table 1 shows how surveillance systems can be combined across different sites.

Table 1. Surveillance systems across different sites/contexts

System / Site/ Context	Immediate case notification	Contact tracing	Virologic surveillance	Cluster investigations	Mortality surveillance	Serologic surveillance
Community	X	X		X	X	X
Primary Care Sites (non-sentinel ILI/ARI)	X		X	X		
Hospitals (non-sentinel ILI/SARI)	X		X	X	X	X
Sentinel ILI/ARI/ SARI sites	X		X			
Closed settings*	X	X		X	X	X
Health care-associated COVID-19 infection	X	X		X	X	X

*Including but not limited to long term living facilities, prisons and dormitories.

3.1 Surveillance approaches by site/context

3.1.1 Surveillance in the Community

Where possible, individuals who have signs and symptoms of COVID-19 and all suspected cases should be able to access evaluation and testing, ideally, at the primary care level. When testing at the primary level is not accessible, individuals in the community can play an important role in the surveillance of COVID-19. Community-based surveillance (CBS) – the systematic detection and reporting of events of public health significance within a community by community members – may serve to bridge the gap between the community and the health system. In CBS, alerts generated by trained volunteers are reported to health authorities for verification and response through established surveillance and referral mechanisms. More guidance on establishing CBS, including simplified alert case definitions, is available from the International Federation of Red Cross and Red Crescent Societies, here.

Participation in contact tracing and cluster investigations are other important ways in which individuals and communities can contribute to the surveillance of COVID-19 and breaking chains of transmission. Contact tracing is the identification and follow-up of all persons who may have had contact with an individual with COVID-19. By following such contacts daily for up to 14 days since they had contact with the source case, it is possible to identify individuals who are at high risk of being infectious and/or ill and to quarantine them before they transmit the infection to others. Contact tracing can be combined with door-to-door case-finding or systematic testing in closed settings, such as residential facilities, or with routine testing for occupational groups, such as health workers or essential workers. See Contact tracing guidelines for COVID-19.

3.1.2 Surveillance at the primary care level

Surveillance in primary care settings is needed to detect cases and clusters in the community. Where possible, testing should be available at primary care clinics. A complementary option is to establish dedicated COVID-19 community testing facilities, such as drive-through sites or fixed sites in community buildings. Patients with probable or confirmed COVID-19 should be notified within 24 hours of identification. Rapid data reporting and analysis are critical to detect new cases and clusters and to initiate contact tracing. Therefore, a minimum number of data variables should be collected for each case: age, sex, location of residence, date of illness onset, date of sample taken and test result. Daily data reporting to local or national public health authorities can be facilitated using online systems, through mobile phone applications, via SMS text message or over the telephone. Zero reporting – the reporting of zero cases when none are detected – by all sites at the primary care level, ideally daily, is crucial to verifying that the surveillance system is continuously functioning and for monitoring virus circulation.

3.1.3 Hospital-based surveillance

Patients with probable or confirmed COVID-19 admitted to hospitals should be notified to national public health authorities within 24 hours of identification. Some essential data (e.g. outcome) may not be immediately available but should not delay notification to public health authorities.

The minimum essential data from hospital settings should include:

- age, sex/gender and place of residence
- date of illness onset, date of sample collection, date of admission
- type of laboratory test and laboratory test result
- if the case is a health care worker or not
- severity of the patient at the time of reporting (admitted and treated with ventilation or admitted to intensive care unit)
- outcome of the patient after illness (date of discharge or death).

Daily zero reporting from hospitals is crucial to verify that the surveillance system is continuously functioning.

3.1.4 Sentinel site (ILI/ARI/SARI) surveillance

Sentinel syndromic surveillance is a complementary approach to the other forms of surveillance listed in this document. The advantage of utilizing a sentinel surveillance system is that a systematic, standardized approach to testing is used and not affected by changes in testing strategies affecting the other COVID-19 surveillance approaches.

Countries that conduct primary care and/or hospital-based sentinel surveillance for influenza-like-illness (ILI), acute respiratory infection (ARI), severe acute respiratory infection (SARI) or pneumonia should continue this syndromic surveillance and continue to collect respiratory specimens using existing case definitions through sentinel networks. Laboratories should continue virologic testing of routine sentinel site samples for influenza, with the addition of testing samples for COVID-19. Countries are encouraged to conduct year-round sentinel surveillance for acute respiratory syndromes with testing of samples for COVID-19.

Within the existing surveillance systems, the patients selected for additional testing for COVID-19 should preferably be representative of the population and include all ages and both sexes. If possible, continue to collect samples from both ILI and SARI sentinel sites to represent both mild and severe illness. It is recognized that, based on the local situation, resources, and epidemiology, countries may wish to prioritize sampling among inpatients (SARI or pneumonia cases) to understand COVID-19 circulation in patients with more severe disease.

COVID-19 cases identified through sentinel surveillance should be reported into overall national COVID-19 case counts, as well as through relevant sentinel-site channels.

Additional guidance on sentinel site surveillance for COVID-19 is found in Operational considerations for COVID-19 surveillance using GISRS.

3.1.5 Closed settings

Dedicated enhanced surveillance for some high-risk groups residing or working in closed settings is necessary to ensure the prompt detection of cases and clusters faster than through primary-care or hospital-based surveillance. People who live in closed environments, such as prisons, residential facilities, retirement communities and care homes for persons with disabilities, can be especially vulnerable to COVID-19. The reasons include living in settings where the probability of transmission may be higher than in the general population or having health conditions or predisposing factors that increase their risk of developing severe illness and death. Enhanced surveillance in closed settings includes the use of active case finding through daily screening for signs and symptoms for COVID-19, including daily temperature monitoring; and daily zero-reporting for all individuals in high-risk groups under surveillance.

3.2 Health care-associated COVID-19 infections

In countries with mandatory reporting systems for health care-associated infections, COVID-19 should be included as a priority condition for reporting within these systems, in addition to being counted within general COVID-19 surveillance. All cases and clusters in health care settings should be investigated and documented for their source and transmission patterns to allow rapid control. Ideally, specific reporting of the number of COVID-19 cases and deaths in health workers should be implemented. Additional resources on COVID-19 infection among health workers in a health care setting can be accessed here and here.

3.3 Mortality Surveillance

The number of COVID-19 deaths (see definition below) occurring in hospitals should be reported daily. The number of COVID-19 deaths occurring in the community, including in long-term-care facilities, should also be reported daily if possible or at least weekly. For both hospital and community COVID-19 deaths, the age, sex, and location of death should be recorded. Reporting of deaths for COVID-19 surveillance is distinct from legal requirements of death certification, which should be done as routinely required by civil registration systems. Vital statistics should be used to monitor excess all-cause mortality over time. Countries should also monitor deaths due to non-specific respiratory causes (e.g. unspecified pneumonia), which may represent undiagnosed COVID-19; and changes in rates of other causes of death, which may be related to the COVID-19 pandemic effects on health systems. In places where civil registration and vital statistics systems are limited or non-existent, rapid mortality surveillance may be considered. Further guidance can be found in the document Revealing-the-toll-of-covid-19.

3.4 Laboratory testing data surveillance

Data on the number of individuals tested for SARS-CoV-2 should be collected from all relevant laboratories. While surveillance systems will typically capture the number of COVID-19 cases, it is also important to collect information on the testing criteria and the total number of individuals tested for SARS-CoV-2 virus (this is distinct from the number of tests conducted, which may not be an accurate denominator due to the possibility of repeat testing of a single individual). Knowing the testing denominator can indicate the level of surveillance activity, and the proportion of positive tests can indicate the intensity of transmission among individuals. At the time of writing, nucleic acid amplification (e.g. RT-PCR) is the WHO-recommended assay for confirmation of a case. If other diagnostic methods are used, the number of tests conducted, and cases confirmed by each diagnostic method used should be recorded and reported.

In addition, standardized sampling and testing in sentinel surveillance allows for monitoring trends. Guidance can be found in Operational considerations for COVID-19 surveillance using the Global Influenza and Surveillance Response System (GISRS).

4. Additional surveillance methods and approaches for COVID-19

There are additional surveillance approaches that can be used along with the essential elements of comprehensive surveillance for COVID-19. New approaches, such as environmental surveillance of non-infective viral fragments of the SARS-CoV-2 virus in wastewater, are being developed but are not yet robust enough to use routinely.

4.1 Event-based surveillance

The capacity to rapidly detect any changes in the overall COVID-19 situation can be further strengthened through robust event-based surveillance (EBS) mechanisms. EBS captures unstructured information from formal and informal channels such as online content, radio broadcasts and print media across all relevant sectors to complement conventional public health surveillance efforts. Successful EBS implementation requires dedicated human resources and clear processes to sift through large volumes of information to filter, triage, verify, compare, assess and communicate relevant content. Numerous web-based systems have been developed over the years to support EBS activities, many of which converge through the WHO-led Epidemic Intelligence from Open Sources (EIOS) initiative. It is equally important to monitor for other potential events that may emerge in parallel, having further impact on lives and compromising COVID-19 response efforts. Further guidance on EBS can be found at https://africacdc.org/download/africa-cdc-event-based-surveillance-framework/.

4.2 Telephone hotlines

Telephone hotlines made available to the public for advice and referral to health-care services may provide an early indication of disease spread in a community. Effectively running a telephone hotline service requires dedicated resources and trained staff to triage calls and appropriately refer callers to the relevant health-care or other service.

4.3 Participatory surveillance

Participatory disease surveillance enables members of the public to self-report signs or symptoms, without laboratory testing or assessment by a health care provider (Menni 2020). Participatory disease surveillance relies on voluntary reporting and is frequently facilitated by dedicated smart phone applications. While this type of surveillance may not be very specific for identifying cases of COVID-19, the analysis of trends of self-reported illness by members of the public can indicate communities where early disease spread may be occurring. Data collected from participatory surveillance can also give indications of changes in healthcare seeking behaviour, which are important to understand when interpreting facility-based surveillance data.

4.4 Serological surveillance

Population-based surveys of antibody seropositivity and the use of serology in specific settings/populations can help to provide estimates of the proportion of a population that has been infected by SARS-CoV-2 virus as measured by antibodies. Enhanced surveillance, surveys and outbreak investigations can assess the extent of infection in the general or subpopulations, in specific age groups and potentially, the proportion of unrecognized infections (e.g., asymptomatic or subclinical infections). Further information about the use of serology and sero-epidemiology in the context of COVID-19 can be found at https://www.who.int/emergencies/diseases/novel-coronavirus-2019/serology-in-the-context-of-covid-19.

4.5 Surveillance in humanitarian and other low-resource settings

In refugee camps and among displaced populations and in other humanitarian or low-resource settings, additional considerations for implementation can be considered.

Case detection can include several strategies. Event-based surveillance can help pick up early warnings and alerts. Where Early Warning, Alert and Response (EWAR) or CBS systems are in place, COVID-19 should be integrated into them; and active case finding can be conducted where feasible. In health-care facilities, syndromic surveillance may be put in place. Vulnerable groups including health workers, persons with risk factors for developing severe disease and persons with insufficient access to health care should be prioritized for surveillance and response, as should closed settings with high risk of disease transmission.

Testing strategies should target suspect cases following WHO case definitions. Further prioritization can depend on the transmission classification, high risk groups and resources available.

Further information can be found in the Interagency Guidance Scaling-up covid-19 outbreak readiness and response operations in humanitarian situations. Additional guidance for humanitarian operations, camps and other fragile settings can be found here.

5. Reporting and analysis of surveillance data

The essential surveillance data for COVID-19 described above should be reported, compiled, and analysed daily, with zero reporting when there are no cases. Data should be compiled either nationally or at an appropriate government administrative level (e.g., district, province, prefecture, state). More in-depth analyses on age, sex, testing patterns and severity should also be conducted on a periodic basis. Routine analysis reports should be distributed to every reporting site in the surveillance system and ideally made publicly available via a government website. Many national and local public health agencies have developed online dashboards to report surveillance data.

To meaningfully interpret surveillance data in the context of this new disease, WHO recommends that the surveillance data be analysed and presented with clear descriptions of: case definitions in use for probable and confirmed cases (e.g. whether persons with positive results on rapid tests are counted as confirmed case); detection strategies (e.g., active case finding, community detection); and testing strategies (targeted or systematic testing, testing limited to hospitalised patients, etc.); including changes to definitions/criteria over time. Changes in definitions and/or criteria have an impact on case ascertainment and, consequently, multiple epidemiologic parameters, such as the epidemic curve and calculation of the case fatality ratio.

Relevant data should be reported to the World Health Organization as outlined in the section below: reporting COVID-19 surveillance data to WHO.

Countries are also encouraged to monitor the quality of COVID-19 surveillance by monitoring performance indicators such as timeliness, completeness and representativeness of surveillance data.

Reporting COVID-19 surveillance data to WHO

WHO requests that Member States report daily counts of cases and deaths and weekly aggregate counts of cases and deaths at different levels of aggregation.

1. Objectives of global surveillance

The updated objectives below build on global surveillance to date. Objectives of global surveillance are to:

- monitor trends in COVID-19 at national and global levels
- monitor mortality caused by, and indirectly associated with, COVID-19
- estimate morbidity and mortality for health care workers
- assess the impact of control measures.

Country metadata

Member States are requested to provide additional surveillance metadata to WHO to facilitate interpretation of submitted surveillance data:

1. Definition of epidemiologic period/week in use in country (e.g. "Monday to Sunday")
2. Case definitions used by the country, and the date these definitions came into effect
3. Surveillance/detection strategy or strategies in place in the country, and the date these strategies came into effect
4. Testing strategy or strategies in place in the country and the date these strategies came into effect
5. Situation reports whenever they are issued.

Data should be submitted using the dedicated mailbox for COVID-19 surveillance (covidsurveillance@who.int) or channelled through respective WHO Regional Offices.

2. Daily aggregated data collection

Daily counts of COVID-19 cases and deaths are compiled by WHO Regional Offices, which in turn receive data either directly from Member States or through extraction from official government public sources (e.g. ministry of health websites). Member States are thus encouraged to continue providing these daily counts on an ongoing basis. WHO collects and reports the number of confirmed COVID-19 cases and deaths daily in its situation reports, global dashboard (covid19.who.int) and elsewhere.

Counts reflect laboratory-confirmed cases and deaths, based on WHO case definitions unless stated otherwise (see Country, territory, or area-specific updates and errata). All data represent date of reporting as opposed to date of symptom onset. All data are subject to continuous verification and may change based on retrospective updates to accurately reflect trends, changes in country case definitions and/or reporting practices. Major updates to country data are noted in Country, territory, or area-specific updates and errata.

Counts of new cases and deaths are calculated by subtracting previous cumulative total counts from the current count. Due to differences in reporting methods, cut-off times, retrospective data consolidation and reporting delays, the number of new cases may not always reflect daily totals published by individual countries, territories or areas.

Further information on the data collected and displayed can be found here.

3. Weekly aggregated reporting

The aim of ongoing weekly aggregate reporting is to obtain further information on global COVID-19 trends for enhanced analysis. New variables are added to take into consideration the new case definition (including probable cases) and objectives of global surveillance (health care workers count of cases and deaths) and are shown in **bold** in the list below:

- number of confirmed cases
- **number of probable cases**
- number of confirmed deaths
- **number of probable deaths**
- number of individuals hospitalized (confirmed and probable)
- number discharged (confirmed and probable)
- **number of health care workers infected (confirmed + probable) as a subset of total cases count**
- **number of health care workers who died due to COVID-19 (confirmed + probable) as a subset of total death count**
- number of persons tested
- **number of persons tested by PCR**
- confirmed + **probable** cases by age group and sex (see below)
- confirmed + **probable** deaths by age group and sex (see below)
- transmission classification.

Age categories have been changed in the latest form: The following age categories (in years) are requested: 0-4, 5-9, 10-14, 15-19, 20-29, 30-39, 40-49, 50-59, 60-64, 65-69, 70-74, 75-79, 80 and over.

These data can be reported via Excel using the form "Global Surveillance of COVID-19: WHO process for reporting aggregated data- V2" available here. A data dictionary is included. MS can also report using the dedicated submission weekly surveillance platform. The weekly surveillance platform for the collection of the minimum variables at the national level and the transmission scenario at national and sub-national levels is available for Member States to self-report their data directly to WHO (for further information and to obtain login credentials, please email covidsurveillance@who.int). Weekly zero case reporting is advised, as appropriate. The platform provides a data visualisation dashboard for direct visualisation of the new data entered.

The transmission classification at national level (administrative level 0) should be updated weekly through the weekly aggregate surveillance platform or by email. In case a Member State wishes to update transmission classification during the week, an email should be sent to covidsurveillance@who.int.

WHO recommends using the following categories to describe transmission patterns at national (and sub-national levels wherever possible) to guide decisions for preparedness, readiness and response activities.

Table 2: Definition of the categories for transmission pattern

Category number	Category name	Definition
1	No cases	Countries/territories/areas with no cases
2	Sporadic cases	Countries/territories/areas with one or more cases, imported or locally detected
3	Clusters of cases	Countries/territories/areas experiencing cases, clustered in time, geographic location and/or by common exposures
4	Community transmission	Countries /territories/areas experiencing larger outbreaks of local transmission defined through an assessment of factors including, but not limited to: - large numbers of cases not linkable to transmission chains - large numbers of cases from sentinel lab surveillance or increasing positive tests through sentinel samples (routine systematic testing of respiratory samples from established laboratories) - multiple unrelated clusters in several areas of the country/territory/area.

WHO requests that Member States report the classification for administrative level 0 as a priority**.** When national transmission classification is not available, WHO will assign the highest transmission classification reported in any administrative level 1 to the national level.

During the evolution of the epidemic, transmission classification can be upgraded or downgraded as the situation dictates. When there is movement from one scenario to another WHO recommends:

- from a lower to a higher transmission scenario: change to be reported at any time (in the next weekly update)
- from higher to lower transmission scenario: observe during a 28-day period before confirming downgrading of transmission.

Before changing transmission classification, WHO recommends that a consultation be conducted between the Member State and the WHO Country Office to consider how surveillance performance and testing strategy influence the observed epidemiology.

The deadline for Member State submission of weekly data and transmission classification for each epidemiologic week is Thursday of the following week. Member States are requested to submit weekly data even when no new cases were reported during the week (zero reporting).

The data will be publicly available without editing or filtering by WHO to all Member States and the general public through the WHO website; it may be pooled with other data to inform international response operations and may be periodically published in WHO situation updates and other formats for the benefit of all Member States.

4. Case based reporting

Reporting of individual case report forms is no longer required by WHO.

On a voluntary basis, Member States may wish to continue to submit case report forms in consultation with their WHO Regional Offices. Data sharing policies regarding case-based data and analysis strategy and output sharing will be managed by the relevant Regional Office.

Although WHO recommends ceasing case-based reporting for surveillance, the Organization encourages countries to participate in the reporting of clinical data on COVID-19 patients using the dedicated tools available at: https://www.who.int/publications/i/item/WHO-2019-nCoV-Clinical_CRF-2020.4

5. Reporting of COVID-19 through Global Influenza Surveillance and Response System (GISRS)

WHO has a long history of monitoring influenza trends and virology through the Global Influenza Surveillance and Response System (GISRS), which gathers information on ILI, ARI, SARI and pneumonia cases and mortality, mainly through sentinel surveillance. Countries are encouraged to maintain and strengthen existing sentinel syndromic surveillance and to additionally test samples collected for influenza surveillance for COVID-19 (see https://www.who.int/influenza/gisrs_laboratory/covid19/en/. Data from sentinel syndromic surveillance and from laboratory testing for influenza and COVID-19 (numbers tested and numbers positive) identified at GISRS sites should be reported to WHO via existing reporting platforms and existing formats and frequencies, both through the GISRS system and the aggregate reporting for COVID-19 (as outlined above). Further information about reporting to GISRS can be found at Operational considerations for COVID-19 surveillance using GISRS.

Selected references

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WHO continues to monitor the situation closely for any changes that may affect this interim guidance. Should any factors change, WHO will issue a further update. Otherwise, this interim guidance document will expire 2 years after the date of publication.

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