Surveillance strategies for COVID-19 human infection

CORONAVIRUS (COVID-19) UPDATE NO. 29

5 June 2020

EPI·WiN

World Health Organization

Current global situation

- Nearly 6.5 million COVID-19 cases globally
- More than 380 000 deaths

Top ten countries with the highest number of new cases over the past 24 hours:


Brazil – 28 936


USA – 24 890


India - 9 304


Russian Federation – 8 831


Chile - 4 942


Peru - 4 845


Pakistan - 4 801

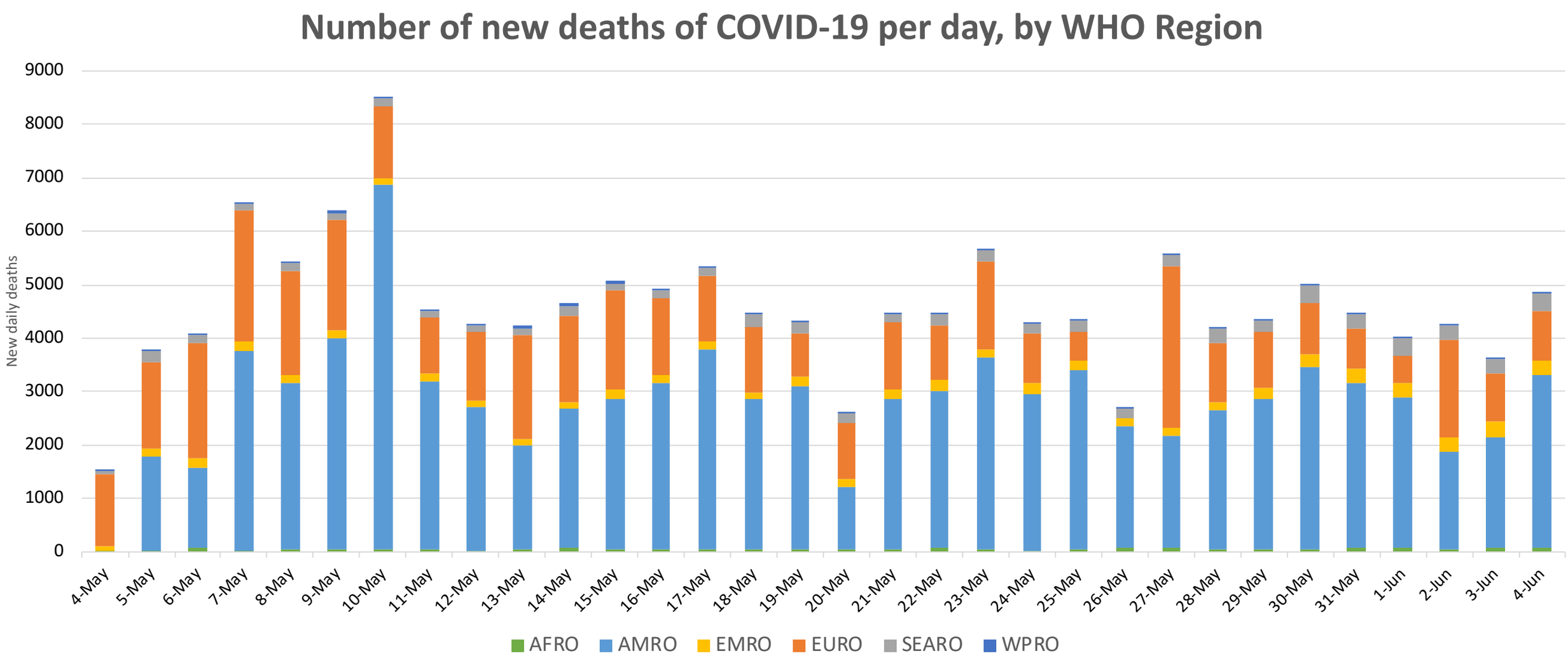

Mexico - 3 891


Iran (Islamic Republic of) - 3 134


Bangladesh - 2 695

Data as of 06h00 05.05.20

Current global situation



Why is COVID-19 surveillance important?

- During the pandemic, stringent public health and social measures (PHSM) have been implemented to slow the spread of COVID-19
- As national authorities consider lifting some of these measures, it is critical that robust surveillance is in place or put in place to control the spread of COVID-19 and guide ongoing implementation of control measures.

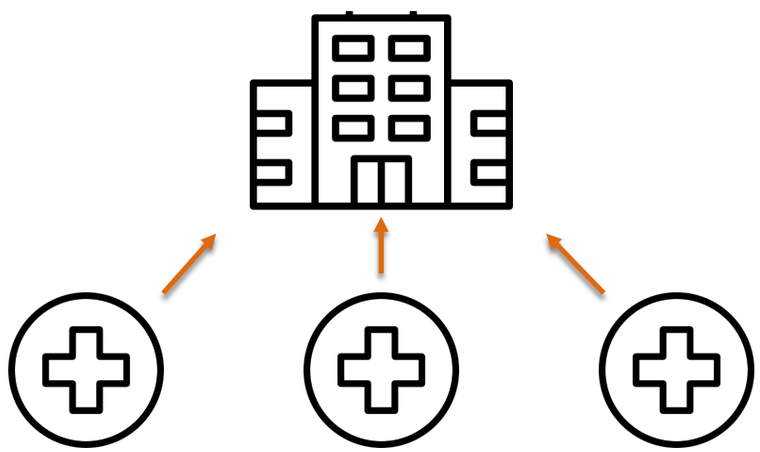
Source: WHO Interim guidance Surveillance strategies for COVID-19 human infection

The objectives of COVID-19 surveillance

- enable rapid detection, isolation, testing, and management of suspected cases
- guide the implementation of control measures
- detect and contain outbreaks among vulnerable populations
- evaluate the impact of the pandemic on health-care systems and society
- monitor longer term epidemiologic trends and evolution of COVID-19 virus
- understand the co-circulation of COVID-19 virus, influenza and other respiratory viruses

Key considerations for comprehensive COVID-19 surveillance

- Use, adapt and strengthen existing surveillance systems
- Include COVID-19 as a mandatory notifiable disease
- Implement immediate reporting where feasible
- Conduct surveillance at different levels of the health care system
- Establish population denominators to aid in data interpretation
- Establish laboratory testing denominators
- Ensure that existing surveillance of respiratory disease such as ILI/SARI* are maintained.



***ILI – influenza-like illness**
SARI – severe acute respiratory infection

Case definitions for surveillance of COVID-19

See the latest World Health Organization COVID-19 case definitions at:
https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance/surveillance-and-case-definitions
Fifth revision since January 11th, January 21, January 30th, February 28th, March 20th: in response to new information/studies/publications.

ILI and SARI case definitions can be found at:
https://www.who.int/influenza/surveillance_monitoring/ili_sari_surveillance_case_definition/en/

Essential surveillance for COVID-19

- Surveillance systems should be geographically comprehensive and include all persons and communities at risk

Table 1 shows how surveillance systems can be combined across different sites to collect data comprehensively.

TYPE OF SURVEILLANCE	SURVEILLANCE SITES					
	Individuals in the community	Primary care sites (non-sentinel ILI/SARI)	Hospitals (non-sentinel ILI/SARI)	Sentinel ILI/SARI	Residential facilities & vulnerable groups	Vital statistics office
Immediate case notification system	X	X	X	X	X	
Contact tracing system	X					
Sentinel virus surveillance			X	X		
Sentinel case surveillance			X	X		
Cluster investigations	X	X	X	X		
Special settings			X		X	
Mortality	X		X	X	X	X

Essential surveillance for COVID-19 continued

- **Individuals in the community** can play an important role in surveillance of COVID-19 by getting tested when they have signs and symptoms of COVID-19; and participating in contact tracing and cluster investigations
- **Surveillance at primary care** is to detect clusters and cases in the community through testing at primary care clinics or at community testing facilities. Daily data reporting to local/national authorities must be fast (minimum # data variables and use of mobile app, text message or phone call)
- **Hospital based surveillance** is to report probable or confirmed COVID-19 cases and deaths within 24 hours
- **Sentinel surveillance using the existing Global Influenza Surveillance and Response System (GISRS)** can be used to monitor trends in community transmission of COVID-19 virus, understand co-circulation of respiratory viruses, and support the update of diagnostic tests.
- **Enhanced surveillance for residential facilities and vulnerable groups** including active case finding.

Additional surveillance approaches for COVID-19

In addition to essential elements of comprehensive conventional surveillance for COVID-19, some additional approaches could be used to complement:

- **Event-based surveillance** from formal and informal channels such as online content, radio broadcasts and print media across all relevant sectors,
- **Participatory Surveillance** public to self-report signs or symptoms, without laboratory testing or assessment by a health care provider
- **Telephone hotlines** available to the public for advice and referral to health care services may provide an early indication of disease spread in a community.
- **Serologic testing (recent or past infections) and surveillance of environmental samples from waste water** – is being explored

WHO guidance on surveillance

Surveillance strategies for COVID-19 human infection

Published 10 May 2020

Contact tracing in the context of COVID-19

Published 10 May 2020 (See EPI-WIN update 27)

Considerations in the investigation of cases and clusters of COVID-19

Published 2 April 2020

Operational considerations for COVID-19 surveillance using GISRS

Published 26 March 2020

Global Surveillance for COVID-19 caused by human infection with COVID-19 virus

Published 20 March 2020

Considerations for quarantine of individuals in the context of containment for coronavirus disease (COVID-19)

Published 19 March

COVID-19 technology access pool

35 countries and multiple international partners and institutions have signed up to support the COVID-19 Technology Access Pool (C-TAP): an initiative aimed at making vaccines, tests, treatments and other health technologies to fight COVID-19 accessible to all.

There are five key elements to the initiative:

- Public disclosure of gene sequences and data;
- Transparency around the publication of all clinical trial results;
- Governments and other funders are encouraged to include clauses in funding agreements with pharmaceutical companies and other innovators about equitable distribution, affordability and the publication of trial data;
- Licensing any potential treatment, diagnostic, vaccine or other health technology to the Medicines Patent Pool - a United Nations-backed public health body that works to increase access to, and facilitate the development of, life-saving medicines for low- and middle-income countries.
- Promotion of open innovation models and technology transfer that increase local manufacturing and supply capacity, including through joining the Open Covid Pledge and the Technology Access Partnership (TAP).

Take action now https://www.who.int/emergencies/diseases/novel-coronavirus-2019/global-research-on-novel-coronavirus-2019-ncov/covid-19-technology-access-pool/take-action-now

COVID-19 technology access pool

"Global solidarity and collaboration are essential to overcoming COVID-19," said WHO Director-General Dr Tedros Adhanom Ghebreyesus. "Based on strong science and open collaboration, this information-sharing platform will help provide equitable access to life-saving technologies around the world."

Implementing partners

medicines patent pool

TECH ACCESS PARTNERSHIP

Unitaid
Innovation in Global Health

Information resources

WHO WhatsApp messaging service

Receive the latest news and information on COVID-19. To subscribe:

text 'hi' to +41 79 893 1892

New EPI-WIN website

Access to timely, accurate, and easy-to-understand advice and information from trusted sources

www.who.int/epi-win

Other Chat Bot Links:

Viber

Facebook Messenger