

# Coronavirus disease 2019 (COVID-19) Situation Report – 73

Data as reported by national authorities by 10:00 CET 2 April 2020

## HIGHLIGHTS

- No new countries/territories/areas reported cases of COVID-19 in the past 24 hours.
- WHO has released a Medical Product Alert that warns consumers, healthcare professionals, and health authorities against a growing number of falsified medical products that claim to prevent, detect, treat or cure COVID-19. Find more [here](#).
- WHO is working with Iraq to increase surveillance and response capacities. WHO has printed hundreds of thousands of prevention and transmission control messages, taken mobile health teams to the streets, and delivered urgent consignments of personal protective equipment (PPE) and laboratory test kits. More information can be found [here](#).
- WHO has been working with governments and partners around the world, across many areas of activity: conducting needs assessments, providing hand sanitizers and masks for health professionals, providing training on the clinical management of patients with COVID-19, collaborating with local media outlets and conducting awareness raising activities, delivering test kits, conducting simulation exercises, and shipping personal protective equipment through WHO logistical hubs. As an example, WHO EURO has released a photo story of WHO’s activities in Kyrgyzstan, available [here](#).
- Our understanding of the transmission of COVID-19 virus continues to improve with the evolution of the outbreak. For more, see ‘Subject in Focus’.

## SITUATION IN NUMBERS total (new) cases in last 24 hours

### Globally

896 475 confirmed (72 836)  
45 525 deaths (4923)

### Western Pacific Region

107 626 confirmed (1204)  
3723 deaths (22)

### European Region

503 006 confirmed (38 809)  
33 604 deaths (3515)

### South-East Asia Region

5324 confirmed (149)  
216 deaths (21)

### Eastern Mediterranean Region

58 193 confirmed (3884)  
3279 deaths (164)

### Region of the Americas

216 912 confirmed (28161)  
4565 deaths (1165)

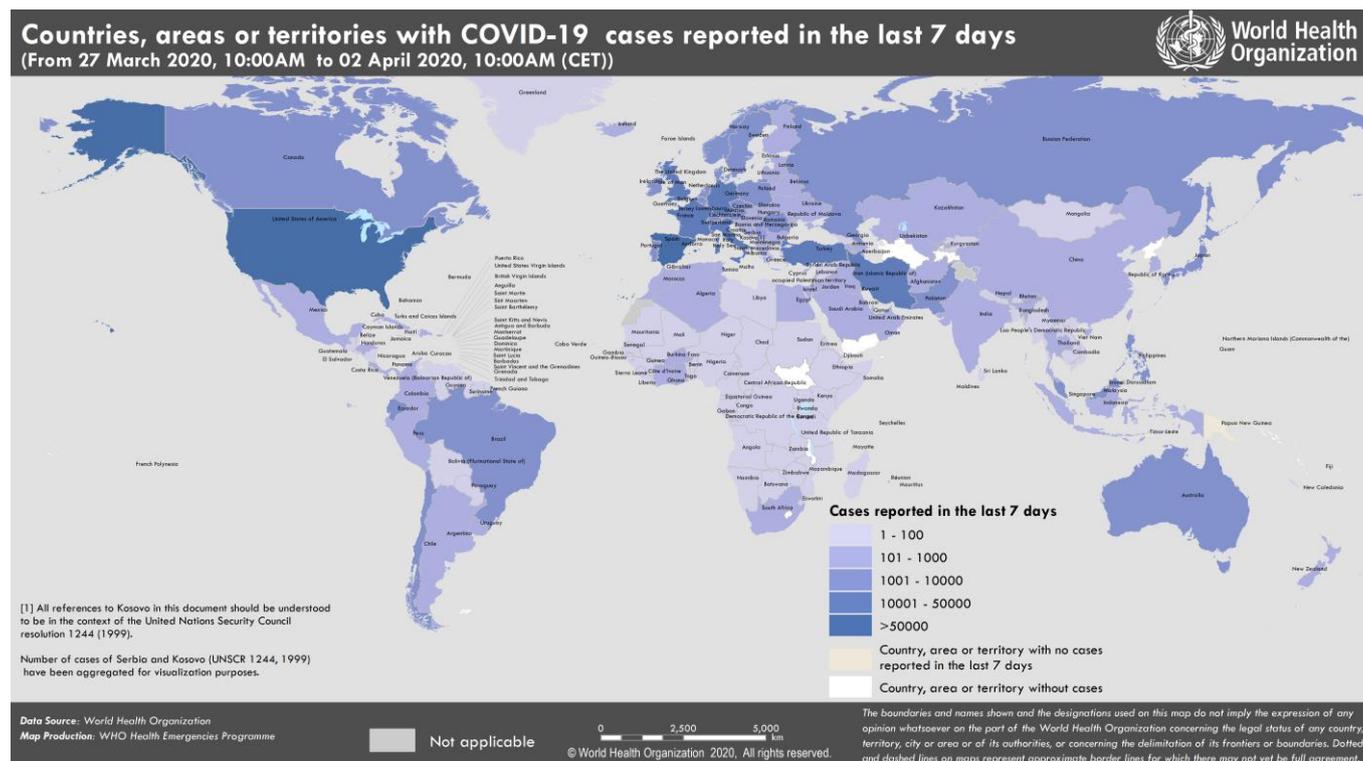
### African Region

4702 confirmed (629)  
127 deaths (36)

### WHO RISK ASSESSMENT

Global Level      Very High

Figure 1. Countries, territories or areas with reported confirmed cases of COVID-19, 2 April 2020



## **SUBJECT IN FOCUS: The routes of transmission from COVID-19 patients**

As the COVID-19 outbreak continues to evolve, we are learning more about this new virus every day. Here we summarize what has been reported about transmission of the COVID-19 virus, and provide a brief overview of available evidence on transmission from symptomatic, pre-symptomatic and asymptomatic people infected with COVID-19.

### **Symptomatic transmission**

By way of definition, a symptomatic COVID-19 case is a case who has developed signs and symptoms compatible with COVID-19 virus infection. Symptomatic transmission refers to transmission from a person while they are experiencing symptoms.

Data from published epidemiology and virologic studies provide evidence that COVID-19 is primarily transmitted from symptomatic people to others who are in close contact through respiratory droplets, by direct contact with infected persons, or by contact with contaminated objects and surfaces.<sup>1-7</sup> This is supported by detailed experiences shared by technical partners via WHO global expert networks, and reports and presentations by Ministries of Health.

Data from clinical and virologic studies that have collected repeated biological samples from confirmed patients provide evidence that shedding of the COVID-19 virus is highest in upper respiratory tract (nose and throat) early in the course of the disease.<sup>8-11</sup> That is, within the first 3 days from onset of symptoms.<sup>10-11</sup> Preliminary data suggests that people may be more contagious around the time of symptom onset as compared to later on in the disease.

### **Pre-symptomatic transmission**

The incubation period for COVID-19, which is the time between exposure to the virus (becoming infected) and symptom onset, is on average 5-6 days, however can be up to 14 days. During this period, also known as the “pre-symptomatic” period, some infected persons can be contagious. Therefore, transmission from a pre-symptomatic case can occur before symptom onset.

In a small number of case reports and studies, pre-symptomatic transmission has been documented through contact tracing efforts and enhanced investigation of clusters of confirmed cases.<sup>12-17</sup> This is supported by data suggesting that some people can test positive for COVID-19 from 1-3 days before they develop symptoms.<sup>6,16</sup> Thus, it is possible that people infected with COVID-19 could transmit the virus before significant symptoms develop. It is important to recognize that pre-symptomatic transmission still requires the virus to be spread via infectious droplets or through touching contaminated surfaces.

### **Asymptomatic transmission**

An asymptomatic laboratory-confirmed case is a person infected with COVID-19 who does not develop symptoms. Asymptomatic transmission refers to transmission of the virus from a person, who does not develop symptoms.

There are few reports of laboratory-confirmed cases who are truly asymptomatic, and to date, there has been no documented asymptomatic transmission. This does not exclude the possibility that it may occur. Asymptomatic cases have been reported as part of contact tracing efforts in some countries.

WHO regularly monitors all emerging evidence about this critical topic and will provide an update as more information becomes available.

### **Selected references**

1. Liu J, Liao X, Qian S et al. Community transmission of severe acute respiratory syndrome coronavirus 2, Shenzhen, China, 2020. *Emerg Infect Dis* 2020 doi.org/10.3201/eid2606.200239
2. Chan J, Yuan S, Kok K et al. A familial cluster of pneumonia associated with the 2019 novel coronavirus indicating person-to-person transmission: a study of a family cluster. *Lancet* 2020 doi: 10.1016/S0140-6736(20)30154-9
3. Li Q, Guan X, Wu P, et al. Early transmission dynamics in Wuhan, China, of novel coronavirus-infected pneumonia. *N Engl J Med* 2020; doi:10.1056/NEJMoa2001316.
4. Huang C, Wang Y, Li X, et al. Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China. *Lancet* 2020; 395: 497–506.

5. Burke RM, Midgley CM, Dratch A, Fenstersheib M, Haupt T, Holshue M, et al. Active monitoring of persons exposed to patients with confirmed COVID-19 — United States, January–February 2020. *MMWR Morb Mortal Wkly Rep*. 2020 doi : 10.15585/mmwr.mm6909e1external icon
6. World Health Organization. Report of the WHO-China Joint Mission on Coronavirus Disease 2019 (COVID-19) 16-24 February 2020 [Internet]. Geneva: World Health Organization; 2020 Available from: <https://www.who.int/docs/default-source/coronaviruse/who-china-joint-mission-on-covid-19-final-report.pdf>
7. Ong SW, Tan YK, Chia PY, Lee TH, Ng OT, Wong MS, et al. Air, surface environmental, and personal protective equipment contamination by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) from a symptomatic patient. *JAMA*. 2020 Mar 4 [Epub ahead of print].
8. Wang W, Xu Y, Ruqin G, et al. Detection of SARS-CoV-2 in Different Types of Clinical Specimens. *JAMA* 2020 doi:10.1001/jama.2020.3786.
9. Lauer SA, Grantz KH, Bi Q et al. The Incubation Period of Coronavirus Disease 2019 (COVID-19) From Publicly Reported Confirmed Cases: Estimation and Application. *Ann Intern Med* 2020 doi: 10.7326/M20-0504.
10. Liu Y, Yan LM, Wan L et al. Viral dynamics in mild and severe cases of COVID-19. *Lancet Infect Dis* doi.org/10.1016/S1473-3099(20)30232-2
11. Wolfel R, Corman V, Guggemos W et al Virological assessment of hospitalized cases of coronavirus disease 2019. doi: 10.1101/2020.03.05.20030502.
12. Yu P, Zhu J, Zhang Z, Han Y. A familial cluster of infection associated with the 2019 novel coronavirus indicating possible person-to-person transmission during the incubation period. *J Infect* 2020 doi: 10.1093/jiaa077
13. Huang R, Xia J, Chen Y, Shan C, Wu C. A family cluster of SARS-CoV-2 infection involving 11 patients in Nanjing, China *Lancet Infect Dis* 2020 doi: 10.1016/S1473-3099(20)30147-X
14. Pan X, Chen D, Xia Y et al. Asymptomatic cases in a family cluster with SARS-CoV-2 infection. *Lancet Infect Dis* 2020 doi : 10.1016/S1473-3099(20)30114-6
15. Tong Z-D, Tang A, Li K-F, Li P, Wang H-L, Yi J-P, et al. Potential presymptomatic transmission of SARS-CoV-2, Zhejiang Province, China, 2020. *Emerg Infect Dis*. 2020 doi : 10.3201/eid2605.200198
16. Wei WE, Li Z, Chiew CJ, Yong SE, et al. Presymptomatic Transmission of SARS-CoV-2 — Singapore, January 23–March 16, 2020. *MMWR*, 1 April 2020/69.
17. Kimball A, Hatfield KM, Arons M, James A, et al. Asymptomatic and Presymptomatic SARS-CoV-2 Infections in Residents of a Long-Term Care Skilled Nursing Facility — King County, Washington, March 2020. *MMWR*, 3 April 2020, 69(13);377–381.

## SURVEILLANCE

**Table 1. Countries, territories or areas with reported laboratory-confirmed COVID-19 cases and deaths. Data as of 2 April 2020\***

Reporting Country/ Territory/Area <sup>†</sup>	Total confirmed ‡ cases	Total confirmed new cases	Total deaths	Total new deaths	Transmission classification <sup>§</sup>	Days since last reported case
<b>Western Pacific Region</b>						
China	82724	93	3327	6	Local transmission	0
Republic of Korea	9976	89	169	4	Local transmission	0
Australia	4976	269	21	1	Local transmission	0
Malaysia	2908	142	45	2	Local transmission	0
Japan	2384	206	57	0	Local transmission	0
Philippines	2311	227	96	8	Local transmission	0
Singapore	1000	74	3	0	Local transmission	0
New Zealand	723	76	1	0	Local transmission	0
Viet Nam	218	11	0	0	Local transmission	0
Brunei Darussalam	131	2	1	0	Local transmission	0
Cambodia	109	0	0	0	Local transmission	1
Mongolia	14	2	0	0	Imported cases only	0
Lao People's Democratic Republic	10	1	0	0	Local transmission	0
Fiji	5	0	0	0	Local transmission	7
Papua New Guinea	1	0	0	0	Imported cases only	12
<b>Territories**</b>						
Guam	77	8	3	1	Local transmission	0
French Polynesia	37	0	0	0	Local transmission	1
New Caledonia	16	0	0	0	Local transmission	1
Northern Mariana Islands (Commonwealth of the)	6	4	0	0	Local transmission	0
<b>European Region</b>						
Italy	110574	4782	13157	727	Local transmission	0
Spain	102136	7719	9053	864	Local transmission	0
Germany	73522	6156	872	140	Local transmission	0
France	56261	4784	4019	505	Local transmission	0
The United Kingdom	29478	4324	2532	743	Local transmission	0
Switzerland	17070	962	378	5	Local transmission	0
Turkey	15679	2148	277	63	Local transmission	0
Belgium	13964	1189	828	123	Local transmission	0
Netherlands	13614	1019	1173	134	Local transmission	0
Austria	10711	529	146	18	Local transmission	0
Portugal	8251	808	187	27	Local transmission	0
Israel	5591	462	21	0	Local transmission	0
Sweden	4947	512	239	59	Local transmission	0
Norway	4665	218	32	4	Local transmission	0
Czechia	3589	281	39	8	Local transmission	0
Ireland	3447	212	85	14	Local transmission	0

Denmark	3107	247	104	14	Local transmission	0
Russian Federation	2777	440	24	7	Local transmission	0
Poland	2554	243	43	10	Local transmission	0
Romania	2460	215	85	16	Local transmission	0
Luxembourg	2319	141	29	6	Local transmission	0
Finland	1446	62	17	0	Local transmission	0
Greece	1375	61	50	1	Local transmission	0
Iceland	1220	85	2	0	Local transmission	0
Serbia	1060	160	13	0	Local transmission	0
Croatia	963	96	6	0	Local transmission	0
Slovenia	841	27	15	2	Local transmission	0
Ukraine	804	135	20	3	Local transmission	0
Estonia	779	34	5	1	Local transmission	0
Lithuania	581	48	8	1	Local transmission	0
Armenia	571	39	3	0	Local transmission	0
Hungary	525	33	20	4	Local transmission	0
Bosnia and Herzegovina	464	51	13	1	Local transmission	0
Latvia	446	48	0	0	Local transmission	0
Republic of Moldova	423	70	5	2	Local transmission	0
Bulgaria	422	23	10	2	Local transmission	0
Slovakia	400	37	0	0	Local transmission	0
Andorra	396	20	13	1	Local transmission	0
Kazakhstan	386	38	3	1	Local transmission	0
Azerbaijan	359	61	5	0	Local transmission	0
North Macedonia	354	25	11	2	Local transmission	0
Cyprus	320	58	9	1	Local transmission	0
Albania	277	34	15	2	Local transmission	0
San Marino	236	0	28	2	Local transmission	1
Belarus	192	40	2	2	Local transmission	0
Uzbekistan	190	17	2	0	Local transmission	0
Malta	188	21	0	0	Local transmission	0
Georgia	121	6	0	0	Local transmission	0
Montenegro	120	15	2	0	Local transmission	0
Kyrgyzstan	115	4	0	0	Local transmission	0
Liechtenstein	72	4	0	0	Under investigation	0
Monaco	37	0	0	0	Local transmission	1
Holy See	6	0	0	0	Under investigation	3
<b>Territories**</b>						
Faroe Islands	173	4	0	0	Local transmission	0
Kosovo <sup>[1]</sup>	125	13	1	0	Local transmission	0
Gibraltar	69	0	0	0	Local transmission	2
Jersey	81	18	2	0	Local transmission	0
Guernsey	78	18	1	0	Local transmission	0
Isle of Man	65	13	0	0	Local transmission	0
Greenland	10	0	0	0	Under investigation	4
<b>South-East Asia Region</b>						
Thailand	1771	0	12	0	Local transmission	1
Indonesia	1677	149	157	21	Local transmission	0
India	1636	0	38	0	Local transmission	1

Sri Lanka	143	0	2	0	Local transmission	1
Bangladesh	54	0	6	0	Local transmission	1
Maldives	18	0	0	0	Local transmission	1
Myanmar	15	0	1	0	Local transmission	1
Nepal	5	0	0	0	Imported cases only	4
Bhutan	4	0	0	0	Imported cases only	3
Timor-Leste	1	0	0	0	Under investigation	12
<b>Eastern Mediterranean Region</b>						
Iran (Islamic Republic of)	47593	2987	3036	138	Local transmission	0
Pakistan	2291	252	31	5	Local transmission	0
Saudi Arabia	1720	157	16	6	Local transmission	0
Qatar	835	54	2	0	Local transmission	0
United Arab Emirates	814	150	8	2	Local transmission	0
Egypt	779	69	52	6	Local transmission	0
Iraq	728	34	52	2	Local transmission	0
Morocco	676	38	39	3	Local transmission	0
Bahrain	569	2	4	0	Local transmission	0
Lebanon	479	16	12	0	Local transmission	0
Tunisia	423	29	12	2	Local transmission	0
Kuwait	342	25	0	0	Local transmission	0
Jordan	278	4	5	0	Local transmission	0
Afghanistan	235	43	4	0	Local transmission	0
Oman	231	21	1	0	Local transmission	0
Djibouti	34	3	0	0	Local transmission	0
Libya	10	0	0	0	Local transmission	1
Syrian Arab Republic	10	0	2	0	Imported cases only	2
Sudan	7	0	2	0	Imported cases only	1
Somalia	5	0	0	0	Imported cases only	1
<b>Territories**</b>						
occupied Palestinian territory	134	0	1	0	Local transmission	1
<b>Region of the Americas</b>						
United States of America	187302	24103	3846	996	Local transmission	0
Canada	9005	1310	105	16	Local transmission	0
Brazil	5717	1138	201	42	Local transmission	0
Chile	3031	293	16	4	Local transmission	0
Ecuador	2372	132	146	71	Local transmission	0
Peru	1323	258	24	0	Local transmission	0
Dominican Republic	1284	175	57	6	Local transmission	0
Mexico	1215	121	29	1	Local transmission	0
Panama	1181	192	30	6	Local transmission	0
Argentina	1054	88	27	3	Local transmission	0
Colombia	906	108	16	2	Local transmission	0
Costa Rica	347	33	2	0	Local transmission	0
Uruguay	338	18	2	1	Local transmission	0
Cuba	212	26	6	0	Local transmission	0
Honduras	172	33	10	8	Local transmission	0

Venezuela (Bolivarian Republic of)	143	14	3	0	Local transmission	0
Bolivia (Plurinational State of)	115	8	7	1	Local transmission	0
Trinidad and Tobago	89	4	5	2	Local transmission	0
Paraguay	69	4	3	0	Local transmission	0
Guatemala	39	3	1	0	Local transmission	0
Jamaica	38	2	1	0	Local transmission	0
Barbados	33	0	0	0	Local transmission	2
El Salvador	32	2	1	1	Local transmission	0
Guyana	19	7	2	0	Local transmission	0
Haiti	16	1	0	0	Imported cases only	0
Bahamas	15	1	0	0	Local transmission	0
Saint Lucia	13	4	0	0	Local transmission	0
Dominica	11	0	0	0	Local transmission	6
Grenada	9	0	0	0	Local transmission	2
Saint Kitts and Nevis	8	0	0	0	Imported cases only	1
Suriname	8	0	0	0	Imported cases only	5
Antigua and Barbuda	7	0	0	0	Imported cases only	5
Nicaragua	5	1	1	0	Imported cases only	0
Belize	3	0	0	0	Local transmission	2
Saint Vincent and the Grenadines	1	0	0	0	Imported cases only	20
<b>Territories**</b>						
Puerto Rico	286	47	11	3	Local transmission	0
Martinique	128	9	3	1	Local transmission	0
Guadeloupe	125	11	6	1	Local transmission	0
Aruba	55	0	0	0	Local transmission	1
French Guiana	51	5	0	0	Local transmission	0
United States Virgin Islands	30	0	0	0	Local transmission	2
Bermuda	32	5	0	0	Local transmission	0
Sint Maarten	6	0	0	0	Imported cases only	2
Cayman Islands	14	2	1	0	Local transmission	0
Curaçao	11	0	1	0	Imported cases only	2
Saint Barthélemy	6	0	0	0	Under investigation	2
Saint Martin	21	3	2	0	Under investigation	0
Montserrat	5	0	0	0	Imported cases only	5
Turks and Caicos Islands	5	0	0	0	Local transmission	2
British Virgin Islands	3	0	0	0	Imported cases only	1
Anguilla	2	0	0	0	Local transmission	6
<b>African Region</b>						
South Africa	1380	27	5	0	Local transmission	0
Algeria	847	263	58	23	Local transmission	0
Burkina Faso	261	0	14	0	Local transmission	1
Ghana	195	43	5	0	Local transmission	0
Côte d'Ivoire	190	21	0	0	Local transmission	0
Senegal	190	15	1	1	Local transmission	0
Mauritius	154	11	5	0	Local transmission	0

Cameroon	139	0	6	0	Local transmission	2
Nigeria	139	28	2	1	Local transmission	0
Democratic Republic of the Congo	123	14	11	3	Local transmission	0
Rwanda	82	7	0	0	Local transmission	0
Kenya	81	31	1	0	Local transmission	0
Niger	74	54	5	2	Local transmission	0
Madagascar	53	0	0	0	Local transmission	1
Uganda	44	11	0	0	Local transmission	0
Togo	36	2	2	1	Local transmission	0
Zambia	36	1	0	0	Local transmission	0
Guinea	30	14	0	0	Local transmission	0
Mali	28	10	0	0	Local transmission	0
Ethiopia	26	0	0	0	Local transmission	1
Congo	22	3	2	2	Local transmission	0
United Republic of Tanzania	20	1	1	0	Local transmission	0
Eritrea	15	9	0	0	Imported cases only	0
Equatorial Guinea	14	0	0	0	Local transmission	2
Benin	13	4	0	0	Imported cases only	0
Namibia	11	0	0	0	Imported cases only	3
Mozambique	10	2	0	0	Local transmission	0
Seychelles	10	2	0	0	Imported cases only	0
Eswatini	9	0	0	0	Imported cases only	5
Guinea-Bissau	9	0	0	0	Imported cases only	1
Angola	8	1	2	0	Imported cases only	0
Central African Republic	8	2	0	0	Imported cases only	0
Zimbabwe	8	0	1	0	Local transmission	1
Chad	7	0	0	0	Imported cases only	1
Gabon	7	0	1	0	Imported cases only	5
Liberia	6	3	0	0	Local transmission	0
Cabo Verde	5	0	1	0	Imported cases only	5
Mauritania	5	0	0	0	Imported cases only	4
Botswana	3	0	1	1	Imported cases only	1
Gambia	3	0	1	0	Imported cases only	4
Burundi	2	0	0	0	Imported cases only	1
Sierra Leone	2	1	0	0	Imported cases only	0
<b>Territories**</b>						
Réunion	281	34	0	0	Local transmission	0
Mayotte	116	15	2	2	Local transmission	0
<b>Subtotal for all regions</b>	<b>895 763</b>	<b>72 836</b>	<b>45 514</b>	<b>4923</b>		
International conveyance (Diamond Princess)	712	0	11	0	Local transmission	17
<b>Grand total</b>	<b>896 475</b>	<b>72 836</b>	<b>45 525</b>	<b>4923</b>		

\*Numbers include both domestic and repatriated cases

†The designations employed and the presentation of the material in this publication do not imply the expression of any opinion whatsoever on the part of WHO concerning the legal status of any country, territory, city or area or of its authorities, or concerning the delimitation of its frontiers or boundaries. Dotted and dashed lines on maps represent approximate border lines for which there may not yet be full agreement.

‡Case classifications are based on [WHO case definitions](#) for COVID-19.

§Transmission classification is based on WHO analysis of available official data and may be subject to reclassification as additional data become available. Countries/territories/areas experiencing multiple types of transmission are classified in the highest category for which there is evidence; they may be removed from a given category if interruption of transmission can be demonstrated. It should be noted that even within categories, different countries/territories/areas may have differing degrees of transmission as indicated by the differing numbers of cases and other factors. Not all locations within a given country/territory/area are equally affected.

Terms:

- **Community transmission** is evidenced by the inability to relate confirmed cases through chains of transmission for a large number of cases, or by increasing positive tests through sentinel samples (routine systematic testing of respiratory samples from established laboratories).
- **Local transmission** indicates locations where the source of infection is within the reporting location.
- **Imported cases only** indicates locations where all cases have been acquired outside the location of reporting.
- **Under investigation** indicates locations where type of transmission has not been determined for any cases.
- **Interrupted transmission** indicates locations where interruption of transmission has been demonstrated (details to be determined)

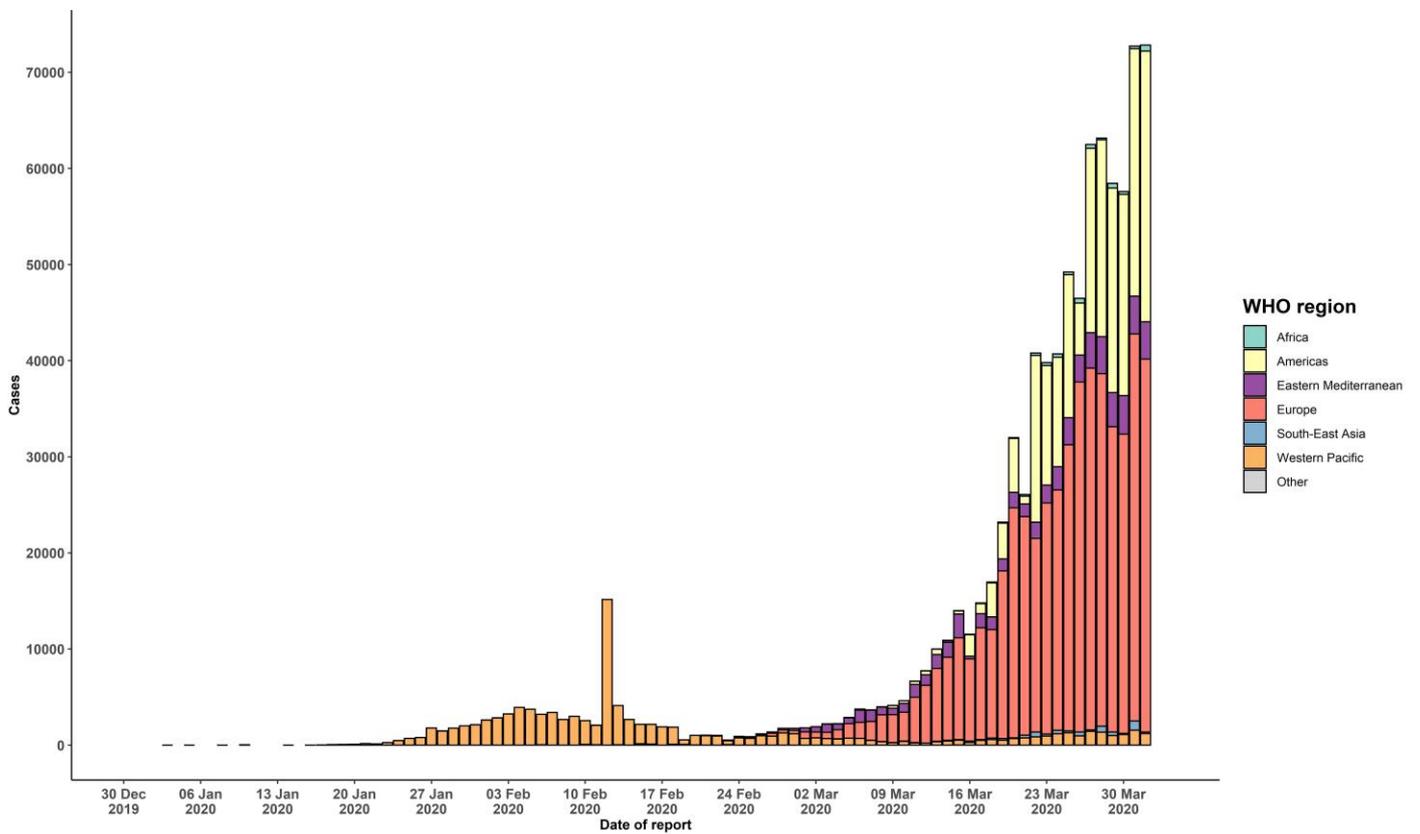
\*\* "Territories" include territories, areas, overseas dependencies and other jurisdictions of similar status

[1] All references to Kosovo should be understood to be in the context of the United Nations Security Council resolution 1244 (1999).

Due to differences in reporting methods, retrospective data consolidation, and reporting delays, the number of new cases may not always reflect the exact difference between yesterday's and today's totals. WHO COVID-19 Situation Reports present official counts of confirmed COVID-19 cases, thus differences between WHO reports and other sources of COVID-19 data using different inclusion criteria and different data cutoff times are to be expected.

Erratum: Deaths for Syrian Arab Republic has been revised. Cases and new cases for Kuwait have been revised.

Figure 1. Epidemic curve of confirmed COVID-19, by date of report and WHO region through 2 April 2020



## STRATEGIC OBJECTIVES

WHO's strategic objectives for this response are to:

- Interrupt human-to-human transmission including reducing secondary infections among close contacts and health care workers, preventing transmission amplification events, and preventing further international spread\*;
- Identify, isolate and care for patients early, including providing optimized care for infected patients;
- Identify and reduce transmission from the animal source;
- Address crucial unknowns regarding clinical severity, extent of transmission and infection, treatment options, and accelerate the development of diagnostics, therapeutics and vaccines;
- Communicate critical risk and event information to all communities and counter misinformation;
- Minimize social and economic impact through multisectoral partnerships.

\*This can be achieved through a combination of public health measures, such as rapid identification, diagnosis and management of the cases, identification and follow up of the contacts, infection prevention and control in health care settings, implementation of health measures for travelers, awareness-raising in the population and risk communication.

## PREPAREDNESS AND RESPONSE

- To view all technical guidance documents regarding COVID-19, please go to [this webpage](#).
- WHO has developed interim guidance for laboratory diagnosis, advice on the use of masks during home care and in health care settings in the context of the novel coronavirus (2019-nCoV) outbreak, clinical management, infection prevention and control in health care settings, home care for patients with suspected novel coronavirus, risk communication and community engagement and Global Surveillance for human infection with novel coronavirus (2019-nCoV).
- WHO is working closely with International Air Transport Association (IATA) and have jointly developed a guidance document to provide advice to cabin crew and airport workers, based on country queries. The guidance can be found on the [IATA webpage](#).
- WHO has been in regular and direct contact with Member States where cases have been reported. WHO is also informing other countries about the situation and providing support as requested.
- WHO is working with its networks of researchers and other experts to coordinate global work on surveillance, epidemiology, mathematical modelling, diagnostics and virology, clinical care and treatment, infection prevention and control, and risk communication. WHO has issued interim guidance for countries, which are updated regularly.
- WHO has prepared a [disease commodity package](#) that includes an essential list of biomedical equipment, medicines and supplies necessary to care for patients with 2019-nCoV.
- WHO has provided recommendations to reduce risk of [transmission from animals to humans](#).
- WHO has published an [updated advice for international traffic in relation to the outbreak of the novel coronavirus 2019-nCoV](#).
- WHO has activated the R&D blueprint to accelerate diagnostics, vaccines, and therapeutics.
- OpenWHO is an interactive, web-based, knowledge-transfer platform offering online courses to improve the response to health emergencies. [COVID-19 courses can be found here](#) and courses in [additional national languages here](#). Specifically, WHO has developed online courses on the following topics:
  - A general introduction to emerging respiratory viruses, including novel coronaviruses (available in Arabic, Chinese, English, French, Russian, Spanish, Hindi, Indian Sign Language, Persian, Portuguese, Serbian and Turkish);
  - Clinical care for Severe Acute Respiratory Infections (available in English, French, Russian, Indonesian and Vietnamese);
  - Health and safety briefing for respiratory diseases - ePROTECT (available in Chinese, English, French, Russian, Spanish, Indonesian and Portuguese);
  - Infection Prevention and Control for Novel Coronavirus (COVID-19) (available in Chinese, English, French, Russian, Spanish, Indonesian, Italian, Japanese, Portuguese and Serbian); and
  - COVID-19 Operational Planning Guidelines and COVID-19 Partners Platform to support country preparedness and response (available in English and coming soon in additional languages).
- WHO is providing guidance on early investigations, which are critical in an outbreak of a new virus. The data collected from the protocols can be used to refine recommendations for surveillance and case definitions, to characterize the key epidemiological transmission features of COVID-19, help understand spread, severity, spectrum of disease, impact on the community and to inform operational models for implementation of countermeasures such as case isolation, contact tracing and isolation. Several protocols are available [here](#). One such protocol is for the investigation of “early COVID-19 cases and contacts (the [“First Few X \(FFX\) Cases and contact investigation protocol for 2019-novel coronavirus \(2019-nCoV\) infection”](#))”. The protocol is designed to gain an early understanding of the key clinical, epidemiological and virological characteristics of the first cases of COVID-19 infection detected in any individual country, to inform the development and updating of public health guidance to manage cases and reduce the potential spread and impact of infection.

## RECOMMENDATIONS AND ADVICE FOR THE PUBLIC

If you are not in an area where COVID-19 is spreading or have not travelled from an area where COVID-19 is spreading or have not been in contact with an infected patient, your risk of infection is low. It is understandable that you may feel anxious about the outbreak. Get the facts from reliable sources to help you accurately determine your risks so that you can take reasonable precautions (see [Frequently Asked Questions](#)). Seek guidance from WHO, your healthcare provider, your national public health authority or your employer for accurate information on COVID-19 and whether COVID-19 is circulating where you live. It is important to be informed of the situation and take appropriate measures to protect yourself and your family (see [Protection measures for everyone](#)).

If you are in an area where there are cases of COVID-19 you need to take the risk of infection seriously. Follow the advice of WHO and guidance issued by national and local health authorities. For most people, COVID-19 infection will cause mild illness however, it can make some people very ill and, in some people, it can be fatal. Older people, and those with pre-existing medical conditions (such as cardiovascular disease, chronic respiratory disease or diabetes) are at risk for severe disease (See [Protection measures for persons who are in or have recently visited \(past 14 days\) areas where COVID-19 is spreading](#)).

## CASE DEFINITIONS

WHO periodically updates the [Global Surveillance for human infection with coronavirus disease \(COVID-19\)](#) document which includes case definitions.

For easy reference, case definitions are included below.

### **Suspect case**

A. A patient with acute respiratory illness (fever and at least one sign/symptom of respiratory disease, e.g., cough, shortness of breath), AND a history of travel to or residence in a location reporting community transmission of COVID-19 disease during the 14 days prior to symptom onset.

**OR**

B. A patient with any acute respiratory illness AND having been in contact with a confirmed or probable COVID-19 case (see definition of contact) in the last 14 days prior to symptom onset;

**OR**

C. A patient with severe acute respiratory illness (fever and at least one sign/symptom of respiratory disease, e.g., cough, shortness of breath; AND requiring hospitalization) AND in the absence of an alternative diagnosis that fully explains the clinical presentation.

### **Probable case**

A. A suspect case for whom testing for the COVID-19 virus is inconclusive.

a. Inconclusive being the result of the test reported by the laboratory.

**OR**

B. A suspect case for whom testing could not be performed for any reason.

### **Confirmed case**

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

- Technical guidance for laboratory testing can be found [here](#).

### **Definition of contact**

A contact is a person who 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 meter and for more than 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 proper personal protective equipment<sup>1</sup>; OR
4. Other situations as indicated by local risk assessments.

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 was taken* which led to confirmation.

---

<sup>1</sup> World Health Organization. Infection prevention and control during health care when COVID-19 is suspected [https://www.who.int/publications-detail/infection-prevention-and-control-during-health-care-when-novel-coronavirus-\(ncov\)-infection-is-suspected-20200125](https://www.who.int/publications-detail/infection-prevention-and-control-during-health-care-when-novel-coronavirus-(ncov)-infection-is-suspected-20200125)