

### Novel Coronavirus (COVID-19): Health Claims Update 2

The World Health Organization (WHO) labeled the COVID-19 outbreak a pandemic on 11th March 2020, following the emergence of more confirmed cases in six of the world's seven continents (only Antarctica has no confirmed cases). The situation is continuing to develop, but as we have learned more about the virus and its trajectory, we wanted to provide claims-focused updates to our clients. This article also provides some clinical insights into the condition. As always, we welcome dialogue and feedback, and will continue to update you as this pandemic and its impact progresses.



Sincerely,

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### Diagnosis

COVID-19 is caused by the virus designated as SARS-CoV-2, so named due to its similarity with the virus responsible in the SARS outbreak in 2003. The virus continues to spread rapidly with cases recorded in most countries around the world. Information about the current global status of the virus's spread is available from a dashboard maintained by Johns Hopkins University. To access, please click [https://www.arcgis.com/apps/opsdashboard/index.html?utm\\_source=On%20the%20Ballot%20030620\\_03/06/2020&utm\\_medium=email&utm\\_campaign=WEX\\_On%20The%20Ballot&rid=195665#/bda7594740fd40299423467b48e9ecf6](https://www.arcgis.com/apps/opsdashboard/index.html?utm_source=On%20the%20Ballot%20030620_03/06/2020&utm_medium=email&utm_campaign=WEX_On%20The%20Ballot&rid=195665#/bda7594740fd40299423467b48e9ecf6).

WHO has recommended that all suspected cases of COVID-19 be screened for infection with SARS-CoV-2 with RT-PCR (reverse transcription polymerase chain reaction). If testing is not yet available in the country where the insured lives, specimens should be sent to WHO-designated laboratories using the strict shipment instructions established by WHO. To access, please click <https://www.who.int/publications-detail/guidance-for-laboratories-shipping-specimens-to-who-reference-laboratories-that-provide-confirmatory-testing-for-covid-19-virus>.



The following specimens should be collected:

- Upper respiratory specimens: nasopharyngeal and oropharyngeal swab or wash in ambulatory patients, and/or
- Lower respiratory specimens: sputum (if produced) and/or endotracheal aspirate or bronchoalveolar lavage in patients with more severe respiratory disease

Patients testing positive for COVID-19 are generally admitted to a health care facility for further treatment. Patients whose test results are still pending should be considered "patients under investigation" (PUI), subject to infection control protocols to ensure that their exposure to the public or close contact with them is minimal. ("Close contact" is defined as ideally at least 1.8 meters/~6 feet of distance between individuals, but minimally, 1 meter/~3 feet.)

## Disease Progression

Symptoms of COVID-19 are non-specific. Disease presentation can range from no symptoms to severe pneumonia and death. Typical signs and symptoms include:

- fever (87.9%)
- dry cough (67.7%)
- fatigue (38.1%)
- sputum production (33.4%)
- shortness of breath (18.6%)
- sore throat (13.9%)
- headache (13.6%)
- myalgia or arthralgia (14.8%)
- chills (11.4%)
- nausea or vomiting (5.0%)
- nasal congestion (4.8%)
- diarrhea (3.7%)
- hemoptysis (coughing up blood) (0.9%)
- conjunctival congestion (0.8%)

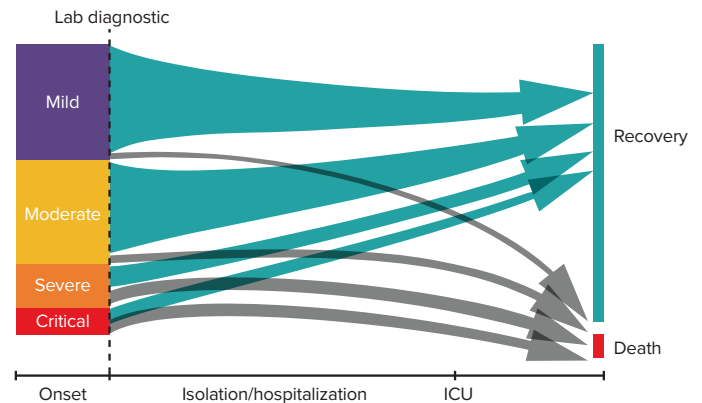
Patients with COVID-19 generally develop signs and symptoms, including mild respiratory symptoms and fever, an average of five to six days after infection (range: one to 14 days). Most people (approximately 80%) infected with COVID-19 experience mild to moderate disease and recover. About 14% of cases, however, are severe and require respiratory support, and approximately 5% are critical, requiring advanced life support.

Individuals at the highest risk for severe disease and death include people 60 years of age and older and those who have underlying conditions such as hypertension, diabetes, cardiovascular disease, chronic respiratory disease, and cancer. Expression of this disease among children appears to be relatively rare as well as mild, with less than 3% of total reported cases seen among individuals less than 19 years of age.

Median time from onset to clinical recovery for mild cases is approximately two weeks. For severe or critical disease, recovery is approximately three to six weeks. The period from onset of symptoms to development of severe disease is about one week. For patients who have died, the time from symptom onset to death ranges from two to eight weeks.

The chart below, from WHO, summarizes the pattern of disease progression of COVID-19, based on data from China through February 20, 2020:

### Pattern of disease progression for COVID-19 in China



Note: The relative size of the boxes for disease severity and outcome reflect the proportion of cases reported as of 20 February 2020. The size of the arrows indicates the proportion of cases who recovered or died. Disease definitions are described above. Moderate cases have a mild form of pneumonia.

Source: <https://www.who.int/docs/default-source/coronaviruse/who-china-joint-mission-on-covid-19-final-report.pdf>

WHO states the relative size of the boxes for disease severity and outcome in this graph reflect the proportion of cases reported as of 20 February 2020. The size of the arrows indicates the proportion of those who recovered or died, and “moderate” cases are those who had a mild form of pneumonia.

## Treatment

There are no specific antiviral or immune modulating agents proven (or even recommended) to improve outcomes. Regular pulse oximetry should be performed for all patients to monitor oxygen saturations. Mainstay treatments include: supportive care by clinical category (mild, moderate, severe and critical); and investigational treatments (33 of them) such as hydrochloroquine, lopinavir/ritonavir, alpha interferon, ribavirin, and arbidol.

The application of intubation / invasive ventilation and ECMO (extracorporeal membrane oxygenation) is recommended for critically ill patients as these can improve survival. There is widespread use of traditional Chinese medicines in China to treat COVID-19, the effects and effectiveness of which are still being evaluated.

The most effective way to combat COVID-19 right now is still prevention. At this point there are no vaccines, so the most effective strategy is physical containment. Patients with COVID-19 are not permitted visitors. Staff members at health care facilities containing COVID-19 patients are to use coveralls, masks, eye coverings, and gloves at all times, removing them only when they leave the ward. Patients are discharged after clinical recovery, which is defined as: afebrile >3 days, resolution of symptoms and radiologic improvement, and two negative PCR tests taken 24 hours apart. Upon discharge, patients are asked to minimize family and social contact and to wear a mask for the next 14 days.

The average length of stay in a hospital or healthcare facility is 12 days. This information is based on data from China, where the average length of stay may be shorter or longer than in other countries due to various factors (e.g., higher mortality rate due to death soon after admission, pressure on facilities to discharge patients, delay in admissions, etc.). The general rule is that patients should be discharged from the hospital or healthcare facility when clinically indicated. However, many hospitals outside of China are keeping COVID-19 patients for approximately 14 days. This is probably due to the typical clinical course of the disease progression, and the strict discharge criteria based on clinical recovery.

Based on data from China, care rates are:

Level of Care	% of suspected / confirmed patients
Isolation	100%
Home care	? (max 6.4%)
Hospital admission	93.6%
ICU admission	5%

Exact figures for home care in China are not available. However, those not admitted to a hospital would either be monitored at home, refused admission, or may have died before they could be admitted. Published guidelines from WHO recommend all suspected cases be screened,

but the decision to admit a patient rests on the clinician. Most clinicians would rather admit patients suspected to be infected with COVID-19 unless there is a severe capacity shortage at the hospital, in which case home care may be recommended with strict conditions.

## Discharge Criteria

Ideally, COVID-19 patients may be discharged from the hospital and moved to home care (or other types of non-hospital care and isolation) based on the following:

- Clinical criteria; e.g., no fever for at least three days, improved respiratory symptoms, pulmonary imaging showing obvious absorption of inflammation, no hospital care needed for other pathology, clinician assessment.
- Laboratory evidence of SARS-CoV-2 clearance in respiratory samples, consisting of two to four negative RT-PCR tests for respiratory tract samples (nasopharynx and throat swabs with sampling interval  $\geq 24$  hours). Testing at a minimum of seven days after the first positive RT-PCR test is also recommended for patients who clinically improve earlier.
- Serology: appearance of specific IgG levels when an appropriate serological test is available.

The discharge of mild COVID-19 cases from hospital may be considered, provided they can be placed into home care or another type of community care.

After discharge, 14 days of further isolation with regular health monitoring (e.g., follow-up visits, phone calls) can be considered as long as the patient's home is equipped for patient isolation and the patient takes all necessary precautions in order to protect family members and the community from infection and further spread.

As the global outbreak continues to develop, governments and statutory bodies of various countries are issuing guidance on testing, hospital admission, and self-isolation specific to the health delivery system and capability. Such guidance may differ from WHO guidance.

## References

European Centre for Disease Control and Prevention. Novel coronavirus (SARS-CoV-2): Discharge criteria for confirmed COVID-19 cases – When is it safe to discharge COVID-19 cases from the hospital or end home isolation? Technical Report. 2020.

World Health Organization. Report of the WHO-China Joint Mission on Coronavirus Disease 2019 (COVID-19). 16-24 February 2020. <https://www.who.int/docs/default-source/coronaviruse/who-china-joint-mission-on-covid-19-final-report.pdf>.

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