

COVID-19 Publications Highlights

1st March 2020



ABOUT WHAT ?

This document provides summaries and highlights on the recent up-to-date publications, either the official reports from highly recognized institutes or the scientific publications in the literature.

GLOBAL SITUATION

- The number of confirmed COVID-19 infections surged to more than **86,986**, with the cases in mainland China crossing **79,826**. In other countries, the cases reached at least **7160** reported from **other** countries.
- New WHO Member States (Brazil, Denmark, Estonia, Georgia, Greece, Norway, Pakistan, Romania, and North Macedonia, Belarus, Lithuania, Netherlands, New Zealand, and Nigeria Mexico and San Marino) reported cases of COVID19 in the **past 72hours**.
- Deaths due to the COVID-19 have exceeded **2,979**, including **2874** deaths in mainland China while in other countries, **105** deaths as of the mid of 1st March.
- The total number of recoveries rose to more than **42,576** globally.
- South Korea has announced **813** new positive cases of coronavirus, bringing its total to **3,526**, as of the mid of 1st March. With **5** additional deaths, the toll increased to **17**.
- In Italy, total number of confirmed cases **1,128** whereas total deaths reach up to **29**
- Japan has announced **45** new positive cases of coronavirus, bringing its total to **241**, as of mid of 1st March. With **1** additional deaths, the toll increased to **5**. Diamond princess cruise ship reported **705** confirmed cases with **6** deaths.
- WHO RISK ASSESSMENT
 - China Very High
 - Regional Level Very High
 - Global Level Very High

GULF SITUATION

- Kuwait confirmed **45** cases though Bahrain confirmed **41** cases. Also, Oman reported **6** confirmed cases. Iraq confirmed **13** cases. The infections in Kuwait, Bahrain, Oman and Iraq were linked to people returning from a religious gathering site in Iran. Qatar reported the first case yesterday whereas United Arab Emirates (**21**). In Iran, the number of confirmed cases surged to **593**, all cases not linked to China as a likely place of exposure while COVID-19 related deaths reached **43**.
- Other neighboring countries that have reported cases of the virus are Lebanon (**4**), Pakistan (**4**), Egypt, Afghanistan one case in each country.

UPDATE ON INFECTION PREVENTION AND CONTROL

Infection prevention and control (IPC) is a major factor in preventive and mitigation measures for COVID-19. To ensure evidence-based quality guidance and prompt response to global demand for personal protective equipment (PPE), WHO has convened the IPC expert global network of specialists from around the world since the beginning of the outbreak. Experts are members of the Global Infection Prevention and Control Network (GIPCN) or members of relevant institutions caring for COVID-19 patients. This network discusses technical aspects of IPC measures, and shares epidemiological updates and experiences across affected countries. In consultation with this global IPC expert network, WHO has released three key IPC interim guidance materials <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/technical-guidance/infection-prevention-and-control>

Updates on IPC activities include the following:

- Publishing the guidance document: Rational use of personal protective equipment for COVID-19 https://apps.who.int/iris/bitstream/handle/10665/331215/WHO-2019-nCov-IPCPPE_use-2020.1-eng.pdf. This document summarizes WHO recommendations for the appropriate use of PPE in health care and community settings, including the handling of cargo.
- Deployment of IPC specialists to Italy to support the COVID-19 response and to facilitate IPC training in the European region.
- Development of Frequently Asked Questions (FAQ) in response to queries from the public and communities on blood safety, PPE for specimen collection, cleaning & disinfection, self-isolation and self-monitoring.

- Launching the OpenWHO online course “Infection Prevention and Control (IPC) for COVID-19” on 25 February <https://openwho.org/courses/COVID-19-IPC-EN>. The course has been accessed by 15,391 users as of 28 February.

RECENT PUBLICATIONS

Publication	Summary	Comments
<p>Development of epitope-based peptide vaccine against novel Coronavirus 2019 (SARS-COV-2): Immunoinformatics approach</p>	<p>Genetically, a novel Coronavirus (SARS-COV-2) is closely related to the SARS-CoV and MERS-CoV. The situation is getting worse and worse, therefore, there is an urgent need for designing a suitable peptide vaccine component against the SARS-COV-2. Here, we characterized spike glycoprotein to obtain immunogenic epitopes. Next, we chose 13 Major Histocompatibility Complex-(MHC) I and 3 MHC-II epitopes, having antigenic properties. These epitopes are usually linked to specific linkers to build vaccine components and molecularly dock on Toll-Like Receptor (TLR)-5 to get binding affinity. Therefore, in order to provide a fast immunogenic profile of these epitopes they performed immunoinformatics analysis so that rapid development of vaccine might bring this disastrous situation to the end earlier.</p>	<p>Present immunoinformatic analysis pointed out 13 MHC-I and 3 MHC-II epitopes within the spike glycoprotein of SARS-COV-2.</p> <p>These epitopes are the ideal candidate to formulate a multi-epitopic peptide vaccine, not only because of being selected from the linear B-cell epitopic region but also because of their antigenic property was confirmed.</p> <p>Moreover, the molecular docking of vaccine components with the TLR-5 proves the significance and effectiveness of these epitopes as an ideal vaccine candidate against SARS-COV-2. However, these immunoinformatic analyses require several in vitro and in vivo validations prior to formulating the vaccine to resist COVID-19.</p>

This document provides guidance to WHO Member States on implementation of global surveillance of COVID-19. The objectives of this global surveillance are:

1. to monitor trends of the disease where human to human transmission occurs;
2. rapidly detect new cases in countries where the virus is not circulating;
3. provide epidemiological information to conduct risk assessments at the national, regional and global level; and
4. provide epidemiological information to guide preparedness and response measures.

[Global Surveillance for human infection with coronavirus disease \(COVID-19\)](#)

[Revised case reporting form for COVID-19 for confirmed cases and their outcome](#)

[Template for line listing in Excel format](#)

[Revised data dictionary in Excel format](#)

The major objectives of the Joint Mission were as follows:

- To enhance understanding of the evolving COVID-19 outbreak in China and the nature and impact of ongoing containment measures;
- To share knowledge on COVID-19 response and preparedness measures being implemented in countries affected by or at risk of importations of COVID-19;
- To generate recommendations for adjusting COVID-19 containment and response measures in China and internationally; and
- To establish priorities for a collaborative programme of work, research and development to address critical gaps in knowledge and response and readiness tools and activities.

[Report of the WHO-China Joint Mission on Coronavirus Disease 2019 \(COVID-19\)](#)

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

Clinical characteristics of 50466 hospitalized patients with 2019-nCoV infection

This study aims to summarize reliable evidences of evidence-based medicine for the treatment and prevention of the 2019 novel coronavirus (2019-nCoV) by analyzing all the published studies on the clinical characteristics of patients with 2019-nCoV. PubMed, Cochrane Library, Embase, and other databases were searched. Several studies on the clinical characteristics of 2019-nCoV infection were collected for Meta-analysis.

Fever and cough are the most common symptoms in patients with 2019-nCoV infection, and most of these patients have abnormal chest CT examination. Several people have muscle soreness or fatigue as well as ARDS. Diarrhea, hemoptysis, headache, sore throat, shock, and other symptoms only occur in a small number of patients. The case fatality rate of patients with 2019-nCoV infection is lower than that of Severe Acute Respiratory Syndrome (SARS) and Middle East Respiratory Syndrome (MERS).
<https://onlinelibrary.wiley.com/doi/10.1002/jmv.25735>

Clinical trial analysis of 2019-nCoV therapy registered in China

With more and more patients diagnosed, China has carried out more than one hundred clinical studies of new coronavirus infection, including antiviral drugs, antimalarial drugs, glucocorticoids, plasma therapy, virus vaccine and other western drugs. The primary endpoints included symptom improvement and virus nucleic acid turning negative, but the optimal endpoint has not been determined. Although the final results of studies will take a long time to complete, the interim research data may provide some help for the current urgent demand for drug treatment.

Based on the analysis of the current situation of the epidemic in China, effective quarantine measures have been carried out throughout the country, however, a large number of patients are in urgent need of treatment with a significant proportion of critically ill patients.
<https://onlinelibrary.wiley.com/doi/epdf/10.1002/jmv.25733>

Epidemiological and Clinical Characteristics of SARS-CoV-2 and SARS-CoV: A System Review

Now the data of 2019 corona virus disease (COVID-19) are still limited. In this article, they summarized the early epidemiologic and clinical

The epidemiological and clinical characteristics of SARS and COVID-19 in China are very similar, but

characteristics of SARS and COVID-19 in different countries. Aim to provide recommendations for the understanding and prevention of COVID-19.

also difference. In general, COVID-19 is transmitted in more diverse ways and is more infectious, so the early recognition of disease by healthcare worker and patient is very important. Active and effective isolation measures for suspected and close contacts are necessary.
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3541144

COVID-19: self-isolation for patients undergoing testing

This guidance provides advice for individuals who are awaiting results from diagnostic testing for COVID-19 and do not require admission to hospital.

[Guidance for NHS clinicians on home isolation of a patient whilst being tested for SARS-CoV-2](#)

[Advice for home isolation](#)

[Advice sheet: home isolation \(English\)](#)

[Poster for home isolation](#)

[Advice sheet: home isolation \(Mandarin\)](#)

[Advice for people who live in the same accommodation as the patient](#)

[Advice for people who live in the same accommodation as the patient \(English\)](#)

[Advice for people who live in the same accommodation as the patient \(Mandarin\)](#)

[Emergency Legal Preparedness & Novel Coronavirus: A Primer](#)

This Primer outlines legal, policy and practical guidance to understand the Novel Coronavirus and its related public health emergency response, including:

- » A brief overview of Novel Coronavirus
- » International legal response efforts
 - › World Health Organization
 - › Foreign governments
- » U.S. legal preparedness/response
- » Additional related resources

<https://www.networkforphl.org/wp-content/uploads/2020/02/Western-Region-Primer-COVID.pdf>

[Update and Interim Guidance on Outbreak of Coronavirus Disease 2019 \(COVID-19\)](#)

The Centers for Disease Control and Prevention (CDC) continues to closely monitor and respond to the COVID-19 outbreak caused by the novel coronavirus, SARS-CoV-2.

This CDC Health Alert Network (HAN) Update provides updated guidance on evaluating and testing persons under investigation (PUIs) for COVID-19. It supersedes guidance provided in CDC's HAN 427 distributed on February 1, 2020.

<https://emergency.cdc.gov/han/2020/han00428.asp>

[Evaluating and Reporting Persons Under Investigation \(PUI\)](#)

The CDC clinical criteria for a COVID-19 person under investigation (PUI) have been developed based on what is known about MERS-CoV and SARS-CoV and are subject to change as additional information becomes available.

https://www.cdc.gov/coronavirus/2019-ncov/hcp/clinical-criteria.html?CDC_AA_refVal=https%3A%2F%2Fwww.cdc.gov%2Fcoronavirus%2F2019-ncov%2Fclinical-criteria.html

[Guidance for wearing and removing personal protective equipment in healthcare settings for the care of patients with suspected or confirmed COVID-19](#)

- The general objectives of the document are:
- to present the minimal set of personal protective equipment (PPE) required for managing suspected or confirmed COVID-19 cases;
- to make healthcare workers aware of the critical aspects of the donning and doffing of PPE;
- to strengthen occupational safety in healthcare workers for patients suspected of, or confirmed with, COVID19.
- This document is based on current COVID-19 knowledge and PPE best practices.

<https://www.ecdc.europa.eu/sites/default/files/documents/COVID-19-guidance-wearing-and-removing-personal-protective-equipment-healthcare-settings-updated.pdf>