Philippine COVID-19 Living Recommendations

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By:

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In cooperation with:

Philippine Society for Microbiology
and Infectious Diseases

Funded by:

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and Control Bureau

IMPORTANT NOTICE: These living recommendations will be updated as new evidence are published in the medical literature. It is critical that you take note of the date when the evidence was last reviewed. Additional recommendations may have to be developed as needed.

INTRODUCTION

Given the magnitude of the impact of COVID-19 in the country and the current priority given to it by health care providers, public health officials and the government, the need for clinical practice guidelines to optimize health care through effective management and control of the spread of this disease is imperative. Furthermore, an *infodemic* from the rapid pace of scientific developments on COVID-19 management is running side-by-side with the pandemic. We offer these living recommendations to health care providers to guide their diagnosis and treatment decisions on individual patient care. For policy makers and program managers, these living recommendations can serve to inform policy and provide timely guidance on effective interventions to be prioritized, implemented and made accessible to health care providers and the public.

While there are existing international guidelines and living systematic reviews on COVID-19, there is a need to localize the recommendations from the evidence in our setting by local experts, end-users and other relevant stakeholders. With the rapidly evolving science, the Living clinical practice guideline (CPG) development process is used wherein recommendations are switched to a living status based on the likelihood of new evidence and the importance of the recommendation in health care policy decision making. Living systematic reviews will be maintained to provide up-to-date, evidence-based living recommendations on the treatment, diagnosis, prevention and control of COVID-19.

DISCLAIMER

As a living guideline, the recommendations will be updated, and new recommendations will be added as the evidence evolves. The living recommendations are based on the best evidence available in scientific literature at the time of its formulation. However, this living CPG is not a comprehensive guide to all practice questions and management options on COVID-19. This is not meant to restrict the practitioner in using sound clinical judgement and sharing the decision with the patient, and from considering other management options according to the patient's particular needs and preferences. This CPG can serve to inform policy, but it is not meant to serve as a basis for approving or denying financial coverage or insurance claims merely because of nonconformance with recommendations. Neither are the recommendations supposed to be considered as legal rules for dictating certain modes of action to the exclusion of others.

LIVING CPG DEVELOPMENT METHODS

The development process of the Philippine Living CPG follows the Philippine Department of Health's (DOH) Manual for Clinical Practice Guideline Development [DOH 2018] and the Grading of Recommendations, Assessment, Development, and Evaluation or GRADE Approach [Schünemann et al 2013].

The specific phases of the CPG development process are as follows:

1. **Guideline Preparation** – The Steering Committee identified and convened members of the Living CPG task force: Lead CPG Developer (Steering Committee), Evidence Review Experts (ERE) or Technical Working Group (TWG) and the Consensus Panel. A total of 24 specialty societies and stakeholders are represented in the task force.

   The Steering Committee, together with the TWG and other key stakeholders, finalized the health questions to be addressed in the CPG. The Steering Committee selected the members of the Consensus Panel based on their knowledge and experience, and potential conflicts of interest in consultation with the heads of the professional medical societies and stakeholder organizations. The Consensus Panel is composed of multi-sectoral representatives such as practitioners, both specialists and non-specialists, and patient advocates. The panel members were selected from the designated representatives of the relevant specialty groups. Some stakeholders, such as nurses, acted as patient advocates to reflect patients' and public's views and preferences.

   Several orientation sessions were conducted for the technical reviewers and consensus panel members on the COVID Living CPG development process. Technical reviewers were re-trained on evidence synthesis and the GRADE methodology. Consensus panel members were oriented on how to interpret the evidence summaries and generate the GRADE evidence-to-decision framework.

2. **Evidence Synthesis** - Evidence Review Experts reviewed and appraised existing CPGs and published literature, prepared evidence summaries, and drafted evidence-based recommendations. They are composed of members with one or more of the following experts: methodologists, clinical epidemiologists, evidence-based practitioners, etc. They ideally have attended previous training on CPG development and evidence synthesis, or have previous experience on CPG development.

   For each health question, a systematic literature search was done. All eligible studies were critically appraised independently by the assigned reviewers.

Evidence tables and evidence summaries were generated by the TWG using the GRADE approach. Draft recommendations were formulated based on the certainty of the evidence. All these steps were done by at least two independent reviewers.

During this stage of development, several technical coordinators with expertise on CPG Development and Evidence-Based Medicine oversee the retrieval and appraisal of evidence and the creation of the draft recommendations. A writer ensured that the draft recommendations are uniform, concise, and clear. The Steering Committee organized several practice sessions for the ERE to finalize their presentations, and discuss them with other EREs, Steering Committee and technical experts. Evidence summaries were collated, formatted, and prepared for presentation to the Consensus Panel.

3. **Evidence to Decision** - Upon completion of the evidence summaries by the ERE, several en banc meetings with the Consensus Panel were conducted wherein the evidence summaries and draft recommendations were presented for discussion and consensus voting. Prior to each meeting, panelists were requested to respond to a survey form to complete the Evidence to Decision framework wherein apart from looking at the benefit and harm of the interventions, factors such as resource implication, feasibility, and acceptability are also considered. The Consensus Panel ranked the outcomes for each set of clinical questions according to whether they were critical, important but not critical or of low importance for decision making. Critical outcomes were primary factors that should influence a recommendation, while those with lower importance did not bear on these recommendations. In a scale of 1-9, those rated 7-9 were critical outcomes, 4-6 were important but not critical outcomes and 1-3 were outcomes of limited importance. Grading of the strength of recommendations are based on the overall certainty of the evidence, trade-offs between benefits and harms, values and preferences of patients, resource implications and impact on equity. A skilled facilitator moderated the discussions during this meeting.

   Each member voted on the draft recommendation as follows: yes, no or abstain. Consensus was defined as at least 75% agreement among the members for both the direction and strength of recommendation. If consensus was not reached, members discussed the reasons in support of their votes for or against the recommendation. The voting was repeated, up to three rounds, until a consensus is reached. Any issues left unsettled after the en banc meeting were finalized through a modified Delphi activity.

4. **Living CPG Process** – From the standard guideline development process above, several recommendations were prioritized to a *living status* according to the

following: priority for decision making, reasonable chance that new evidence changes the existing recommendation, and likelihood of new research evidence [Akl et al, 2020]. Members of the EREs working on living recommendations (1) performed continual surveillance of literature to update the living systematic review with new evidence and (2) updated the Evidence Summary tables and draft recommendations for panel discussion. The Steering Committee reviews the updated evidence summary and determines if the update will be presented to the Consensus Panel again. If so, the Consensus Panel is convened in an online meeting to discuss the new evidence and any changes in the living recommendation.

The Living CPG Development Process is summarized in the figure below:

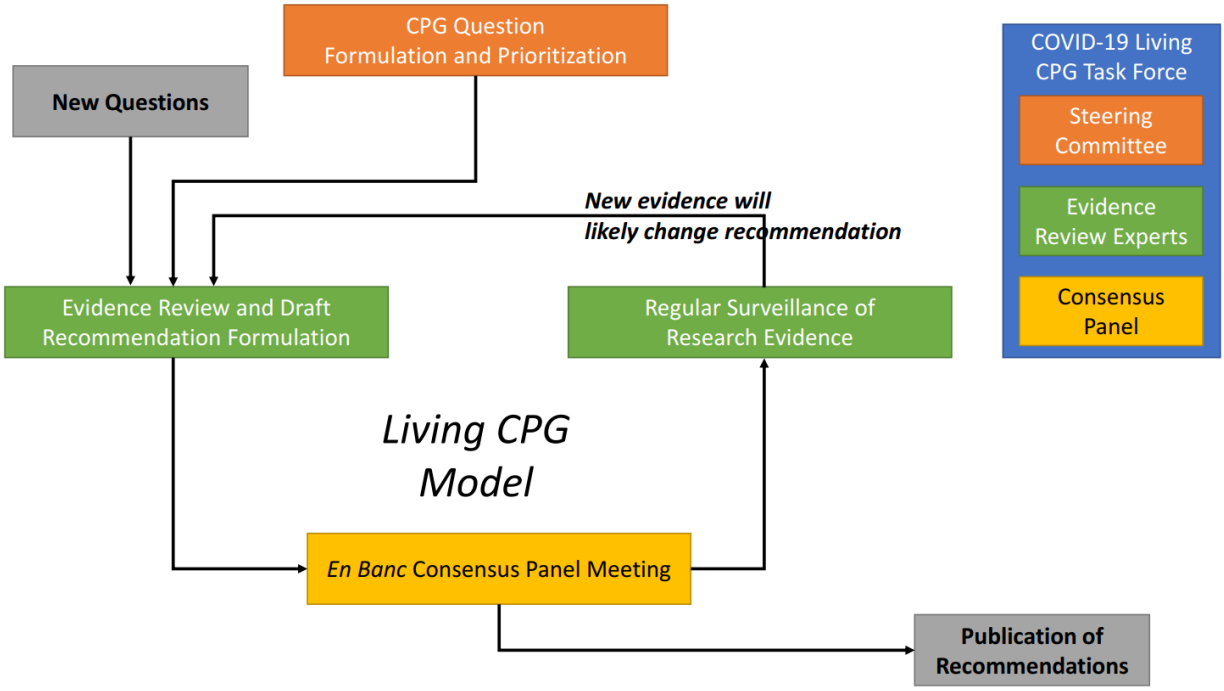

Figure 1. Process adapted by the Philippine COVID-19 Living Clinical Practice Guidelines.

This Living CPG tackles five central themes in COVID-19, and each theme is represented by a separate CPG Consensus Panel:

- Screening and diagnosis
- Treatment
- Critical care and respiratory management
- Non-pharmacologic, adjunct, and infection control interventions
- Vaccines and prophylactic interventions

MANAGEMENT OF CONFLICT OF INTEREST

As outlined in the DOH CPG Manual, all members involved in the creation of this Clinical Practice Guideline, including the Steering Committee, Technical Working Group and Consensus Panel, were screened for possible conflict of interests. All members declared any conflicts of interest within the last four years using a uniform Declaration of Conflict of Interest (DCOI) form. These were reviewed by the Steering Committee and an independent Oversight Committee, to screen and manage the COIs declared. The Oversight Committee is responsible for recommending the extent of participation that can be allowed. The decisions of the Oversight Committee will be reported and published with the Living CPG.

GRADE METHODOLOGY

The Consensus Panel evaluated the direction and strength of recommendation using the GRADE approach, based on the (1) over-all certainty of evidence for each question, (2) balance between benefits and harms, (3) values, preferences, and burden on patients, (4) cost and resource use, and (5) other considerations.

The certainty of evidence is one of the bases of the Consensus Panel in making the final recommendation. The following table shows the definition and implication of each:

Table 1. Definitions and Implications of each GRADE Certainty of Evidence

Certainty of Evidence	**Definition**	**Implication**
High	We are very confident that the true effect lies close to that of the estimate of the effect.	Further research is **very unlikely to change confidence** in the estimate of effect.
Moderate	We are moderately confident in the effect estimate: The true effect is likely to be close to the estimate of the effect, but there is a possibility that it is substantially different	Further research is **likely to have an important impact on confidence** in the estimate of effect and may change the estimate.
Low	Our confidence in the effect estimate is limited: The true effect may be substantially different from the estimate of the effect.	Further research is **very likely to have an important impact on confidence** in the estimate of effect and is likely to change the estimate.
Very Low	We have very little confidence in the effect estimate: The true effect is likely to be substantially different from the estimate of effect.	Any estimate of effect is **very uncertain.**

The implications of strong and weak recommendations are as follows [Schünemann et al 2013]:

Table 2. Implications of the Strength of Recommendation to Patients, Clinicians and Policymakers.

	Strong Recommendation	Weak Recommendation
Patients	Most individuals in this situation would want the recommended course of action and only a small proportion would not.	Most individuals in this situation would want the suggested course of action, but many would not.
Clinicians	• Most individuals should receive the recommended course of action. • Adherence to this recommendation according to the guideline could be used as a certainty criterion or performance indicator.	• Recognize that different choices will be appropriate for different patients. • Clinicians must help each patient arrive at a management decision consistent with her or his values and preferences.
Policy makers	The recommendation can be adapted as policy in most situations including for the use as performance indicators.	Policy making will require substantial debates and involvement of many stakeholders. Policies are also more likely to vary between regions.

Previous recommendations done during Phase 1 of the living CPG that were coined as "conditional" has been rephrased to "weak" recommendations.

There are three reasons where the consensus panels were unable to make a recommendation:

- confidence in effect estimates is so low that the panels feel a recommendation is too speculative
- trade-offs are so closely balanced, and the values and preferences and resource implications not known or too variable
- management options have very different undesirable consequences, and individual patients' reactions to these consequences are likely to be variable

A strong recommendation is usually stated as "We recommend/ We recommend against…", while a weak recommendation is worded "We suggest/ We suggest against…". Finally, when there is no recommendation that can be made, the sentence starts with "There is no/ insufficient evidence to recommend…"

CONTACT US

Send us an email at covidcpg.ph@gmail.com for any questions or clarifications on the outputs and process of this Living CPG. You may also suggest a clinical question for the consideration of the Living Clinical Practice Guidelines COVID-19 Taskforce.

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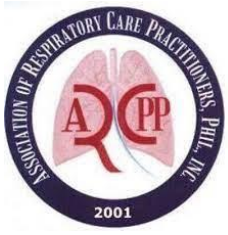

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Living Recommendations on Screening and Diagnosis of COVID-19

14-day Symptom-based Test

Should the 14-day symptom-based test be used in screening for COVID-19 infection in apparently healthy adults?

We suggest to do an initial screening for ANY influenza-like illness, typical and atypical COVID-19 symptoms* within the past 14 days in apparently healthy adults and children, especially for individuals with known exposure to a laboratory-confirmed case of COVID-19. *(Very low certainty of evidence; Weak recommendation)*

**Symptoms include but not limited to: fever/chills, cough, shortness of breath/dyspnea, sore throat, runny nose, myalgia, headache, fatigue/malaise, diarrhea, nausea/vomiting, abdominal pain, anosmia, ageusia, wheezing, chest pain, altered mental status, seizures, rash, pink eye*

Updated as of 29 Nov 2021

Antibody test for reinfection

Among symptomatic individuals previously diagnosed with COVID-19, should antibody testing be done to diagnose presumptive COVID-19 reinfection?

We recommend against the use of SARS-CoV-2 Ab testing to diagnose presumptive COVID-19 reinfection among symptomatic patients previously diagnosed with COVID-19* *(Very low certainty of evidence; Strong recommendation)*.

**NAAT (RT-PCR) and Genomic sequencing are the recommended diagnostic tests to confirm COVID-19 reinfection.*

Updated as of 09 Apr 2021

Antibody tests for seroprevalence

Should antibody tests be used for COVID-19 seroprevalence studies among adult populations?

We suggest using antibody tests that accurately measure IgG or total antibodies to determine COVID-19 seroprevalence among adults when needed for public health purposes. *(Very low certainty of evidence; Weak recommendation)*

We suggest against using antibody tests detecting IgM to determine COVID-19 seroprevalence among adults when needed for public health purposes. *(Very low certainty of evidence; Weak recommendation)*

We suggest against using lateral flow immunoassay (LFIA) tests to determine COVID-19 seroprevalence among adults when needed for public health purposes. *(Very low certainty of evidence; Weak recommendation)*

We recommend against routine measurement of SARS-CoV-2 antibody titers after vaccination. *(No evidence; Strong recommendation)*

Updated as of 22 Nov 2021

Breath Test

Should breath test be used to detect COVID-19 infection?

There is insufficient evidence to recommend the use of breath test in detecting COVID-19 infection *(Low certainty of evidence)*

Updated as of 29 Nov 2021

Clinical Specimen

Which clinical specimens can be used as an alternative to nasopharyngeal swab RT-PCR* for the diagnosis of COVID-19?

We recommend the use of the following specimens as alternative specimens to nasopharyngeal swab RT-PCR for the diagnosis of COVID-19 among symptomatic and asymptomatic patients suspected of COVID-19 in hospital and outpatient settings:.

- oropharyngeal swab *(Moderate certainty of evidence; Strong recommendation)*
- saliva drool/spit and oral saliva (*Moderate certainty of evidence; Strong recommendation*)
- nasal swab/wash *(Moderate certainty of evidence; Strong recommendation)*
- throat swab *(Low certainty of evidence; Strong recommendation)*

We suggest the use of saliva swab and posterior oropharyngeal saliva specimens as an alternative specimen to nasopharyngeal swab RT-PCR for the diagnosis of COVID-19 among symptomatic and asymptomatic patients with suspected COVID-19 in hospital and community/outpatient settings. *(Low certainty of evidence; Weak recommendation)*

We recommend against the use of sputum as an alternative specimen to nasopharyngeal swab RT-PCR for the diagnosis of COVID-19. *(Very low certainty of evidence; Strong recommendation)*

There is no evidence to recommend the use of bronchoalveolar lavage as an alternative specimen to nasopharyngeal swab RT-PCR for the diagnosis of COVID-19.

*SARS COV-2 RT-PCR of nasopharyngeal swabs remains the diagnostic test of choice to confirm the diagnosis of COVID-19 among suspected individuals.

Updated as of 20 Feb 2021

Clinical risk assessment for surgery

Among asymptomatic individuals scheduled for non-urgent, non-emergency surgery, should RT-PCR and clinical risk assessment vs clinical risk assessment alone be done to screen for COVID-19?

We recommend the use of both clinical risk assessment and RT-PCR* to screen for COVID-19 among asymptomatic individuals scheduled for non-emergency surgery *(Very low certainty of evidence; Strong recommendation)*.

We recommend the use of both clinical risk assessment and Antigen-Rapid Diagnostic Test (Ag-RDT)** to screen for COVID-19 among asymptomatic individuals scheduled for non-emergency surgery when RT-PCR testing is not available or when prolonged turnaround time is considered *(Very low certainty of evidence; Strong recommendation)*.

**Use high-risk PPE regardless of RT-PCR or Ag-RDT test results in areas with prevalence of 1% or higher.*
***Ag-RDT should have a sensitivity of 80% and specificity of 97%*

Updated as of 09 Apr 2021

Cycle Threshold

Among COVID-19 confirmed patients, should certain RT-PCR cycle threshold values be used to determine infectivity?

There is insufficient evidence to recommend an RT-PCR cycle threshold cut-off value* to determine infectivity among COVID-19 confirmed patients. *(Very low certainty of evidence)*

*Interpretation of RT-PCR cycle threshold values may vary and is dependent on the PCR assay used, gene target, sample type, and timing of sample collection.

Updated as of 22 Nov 2021

D-dimer

Should D-dimer be used to guide anticoagulation among adult patients with COVID-19?

We suggest the use of D-dimer to guide anticoagulation of patients with COVID-19, because of its significant association with mortality, thromboembolism, and worsening severity of disease *(Low certainty of evidence; Weak recommendation).*

Updated as of 26 May 2021

Diagnostic Markers (LDH, CRP, Ferritin)

Should LDH, CRP, and Ferritin be used to guide immunotherapy in patients with COVID-19?

There is insufficient evidence to recommend the use of specific cut-off values of CRP, LDH and Ferritin to guide the initiation of immunotherapy in patients with COVID-19 *(Low certainty of evidence).*

Updated as of 13 Dec 2021

HIT Test Kits

Should heparin induced thrombocytopenia (HIT) test kits be used for COVID-19 vaccine induced thrombosis with thrombocytopenia (VITT)?

We suggest against the use of PF4 antibody ELISA Heparin Induced Thrombocytopenia (HIT) test kits and non-ELISA rapid HIT test kits for COVID-19 Vaccine Induced Thrombosis and Thrombocytopenia (VITT). *(Low certainty of evidence; Weak recommendation)*

Updated as of 29 Nov 2021

Pooled Testing using RT-PCR

Should pooled testing using RT-PCR for SARS-CoV-2, versus individual testing using RT-PCR, be used for screening and surveillance for SARS-CoV-2 in patients with suspected COVID-19 infection?

We suggest the use of pooled RT-PCR testing in targeted* low-risk and low-prevalence populations using a pool size of 5 in individuals suspected of COVID-19 infection. *(Moderate certainty of evidence; Weak recommendation)*

**Target population refer to the list of PSP and DOH*

Updated as of 06 Mar 2021

Procalcitonin

Should procalcitonin be used to guide the initiation of antibiotic therapy in patients diagnosed with COVID-19?

We suggest against the use of procalcitonin alone as a basis for initiating antibiotic therapy among COVID-19 confirmed patients. *(Very low certainty of evidence, Weak recommendation)*

If available, we recommend using a procalcitonin level of less than or equal to 0.25ng/ml for discontinuing antibiotic therapy among COVID-19 confirmed patients. *(Very low certainty of evidence, Strong recommendation)*

Updated as of 13 Dec 2021

Prognostic Models

Among adult patients diagnosed with COVID-19, should prognostic models be used to predict the likelihood of severe disease and mortality?

To guide the decision to admit patients with COVID-19 to the hospital:
We suggest the use of the following scoring systems:

- Age, BUN, number of Comorbidities, CRP, SpO2/FiO2 ratio, Platelet count, Heart rate (ABC2-SPH) risk score,
- Confusion Urea Respiration Blood Pressure (CURB-65) severity score,
- Risk Stratification in the Emergency Department in Acutely Ill Older Patients (RISE-UP) score, and
- Rapid Emergency Medicine Score (REMS).

(Low certainty of evidence; Weak recommendation)

There is insufficient evidence to recommend the use of the 4C Mortality Score, COVID Outcome Prediction in the Emergency Department (COPE) model, and Quick Sepsis-related Organ Failure Assessment (qSOFA) score. *(Very low certainty of evidence)*

To guide in the expectant monitoring of hospitalized patients:
We suggest the use of the 4C Deterioration model. *(Low certainty of evidence; Weak recommendation)*

There is insufficient evidence to recommend the use of the Modified Early Warning Score (MEWS) and National Early Warning Score 2 (NEWS2) scoring systems. *(Very low certainty of evidence)*

Updated as of 17 Dec 2021

Pulse Oximetry

Should pulse oximetry be used for at-home monitoring of COVID-19 patients?
We suggest pulse oximetry with close clinical monitoring by qualified medical personnel in suspected and confirmed COVID-19 patients especially those who are at high risk for deterioration. *(Very low certainty of evidence; Weak recommendation)*

Updated as of 22 Nov 2021

Rapid Antigen Tests

Should rapid antigen tests be used in the diagnosis of COVID-19 in clinically suspected patients?
We suggest the use of rapid antigen test for the diagnosis of symptomatic individuals suspected of COVID-19 as an alternative to RT-PCR if all the following conditions are met: *(Low certainty of evidence; Weak recommendation)*

a. Individuals are in the early phase of illness (less than or equal to 7 days from onset of symptoms)
b. Testing kits demonstrated sensitivity of more than or equal to 80% AND have very high specificity of more than or equal to 97%

We suggest against the use of rapid antigen test for screening purposes. *(Low certainty of evidence; Weak recommendation)*

We suggest against the use of saliva as specimen for rapid antigen test in patients suspected of COVID-19 infection. *(Low certainty of evidence; Weak recommendation)*

We suggest against the use of rapid antigen tests alone in asymptomatic patients suspected of COVID-19 infection. *(Low certainty of evidence; Weak recommendation)*

We suggest the use of rapid antigen tests for the diagnosis of individuals suspected of COVID-19 during the setting of an outbreak provided that all the following conditions are met: *(Very low certainty of evidence; Weak recommendation)*

a. Individuals are in the early phase of illness (less than or equal to 7 days from onset of symptoms); AND

b. Testing kits demonstrated sensitivity of more than or equal to 80% AND have very high specificity of more than or equal to 97%.

There is insufficient evidence to recommend for or against the use of repeat antigen testing for screening or diagnosis of COVID-19. *(Very low certainty of evidence)*

A negative rapid antigen test should be confirmed with an RT-PCR in settings or situations wherein COVID-19 is highly suspected (e.g., symptomatic or asymptomatic close contacts of probable or confirmed COVID-19 individuals).

Updated as of 22 Nov 2021

Self-Administered Rapid Antigen Tests

Among patients suspected to have COVID-19, how accurate are self-administered rapid antigen tests alone compared to RT-PCR for the diagnosis of COVID-19?

We suggest the use of self-administered rapid antigen test for the diagnosis of COVID-19 in symptomatic individuals, provided that ALL OF THE FOLLOWING conditions are met: *(Low certainty of evidence; Weak recommendation)*

1. Ease of collecting samples is ensured;
2. Ease of interpretation is ensured;
3. Test kits have passed flex studies; AND
4. Individuals present with symptoms for less than 7 days.

We suggest against the use of self-administered rapid antigen test for routine screening of COVID-19. *(Low certainty of evidence; Weak recommendation)*

Updated of 11 Nov 2021

Repeat Testing using RT-PCR

Should repeat RT-PCR testing after an initial negative RT-PCR (versus single RT-PCR testing) be done to diagnose COVID-19 in symptomatic patients?

We suggest to repeat RT-PCR testing when the initial RT-PCR test is negative among symptomatic patients with highly suspected to have COVID-19 infection. *(Low certainty of evidence; Weak recommendation)*

Updated as of 06 Mar 2021

Return to work

What criteria should be used for allowing workers who were previously infected with COVID-19 to return to work?

For asymptomatic, not severely immunocompromised fully vaccinated adults, we suggest the use of the following symptom-based criteria for return to work clearance:
(Very low certainty of evidence; Weak recommendation)

a. At least 8 days have passed since the first positive COVID-19 RT-PCR test; AND
b. No symptoms have developed during this period.

For asymptomatic, not severely immunocompromised not fully vaccinated adults, we suggest the use of the following symptom-based criteria for return to work clearance:
(Very low certainty of evidence; Weak recommendation)

a. At least 10 days have passed since the first positive COVID-19 RT-PCR test; AND
b. No symptoms have developed during this period.

For symptomatic, not severely immunocompromised adults with mild-to-moderate COVID-19 diagnosis and any vaccination status, we suggest the use of the following symptom-based criteria for return to work clearance: *(Very low certainty of evidence; Weak recommendation)*

a. At least 10 days have passed since the onset of symptoms; AND
b. No fever during the previous 24 hours; AND
c. There has been substantial improvement in respiratory symptoms of the acute illness.

For symptomatic, not severely immunocompromised adults with severe-to-critical COVID-19 diagnosis and any vaccination status, we suggest the use of the following symptom-based criteria for return to work clearance: *(Very low certainty of evidence; Weak recommendation)*

a. At least 21 days have passed since the onset of symptoms; AND
b. No fever during the previous 24 hours; AND
c. There has been substantial improvement in respiratory symptoms of the acute illness.

For symptomatic, severely immunocompromised adults* with any vaccination status, we suggest the use of the following for return to work clearance: *(Very low certainty of evidence; Weak recommendation)*

a. At least 22 days have passed since the onset of symptoms; AND
b. No fever during the previous 24 hours; AND
c. There has been substantial improvement in respiratory symptoms of the acute illness; AND
d. PCR test results are negative on at least 1 respiratory specimen.

*Severely immunocompromised individuals include the following:

- Individuals receiving active chemotherapy for cancer
- Being within one year out from receiving a hematopoietic stem cell or solid organ transplant
- Untreated HIV infection with CD4 <200
- Primary immunodeficiency
- Taking immunosuppressive medications (e.g., drugs to suppress rejection of transplanted organs or to treat rheumatologic conditions such as mycophenolate and rituximab)
- Taking more than 20mg a day of prednisone for more than 14 days

Updated as of 17 December 2021

Risk Factors for Long COVID

Should certain risk factors be used to predict the development of long COVID?

There is insufficient evidence in using symptoms*, biologic factors or severity of acute COVID-19 in predicting the development of long COVID-19 symptoms. *(Very low certainty of evidence)*

**The most common symptoms of long COVID-19 identified were fatigue, dyspnea, sleep disturbance, anxiety or depression, and memory impairment.*

Updated of 29 Nov 2021

Serum Tryptase

Should serum tryptase be used to test individuals who had anaphylaxis after receiving the COVID-19 vaccine?

We suggest against using serum tryptase for patients who had anaphylaxis after receiving COVID-19 vaccine. *(Very low certainty of evidence; Weak recommendation)*

Updated of 29 Nov 2021

Thoracic Imaging

Among individuals suspected of COVID-19, how accurate are thoracic imaging modalities compared to RT-PCR alone in diagnosis COVID-19?

We suggest against the use of chest x-ray to diagnose COVID-19 infection among asymptomatic individuals. *(Very low certainty of evidence, Weak recommendation)*

We suggest chest x-ray to facilitate rapid triage, infection control and clinical management among any of the following:

- patients with mild features of COVID 19 at risk for progression
- patients with moderate to severe features of COVID 19
- patients with symptoms of at least 5 days duration

(Very low certainty of evidence, Weak recommendation)

We suggest against the use of lung ultrasound alone in diagnosing patients with suspected COVID-19 infection. *(Very low certainty of evidence, Weak recommendation)*

We suggest against the routine use of CT scan for diagnosing COVID-19 among suspected patients with COVID-19 presenting at the emergency department if RT-PCR testing is readily available with timely results. *(Very low certainty of evidence, Weak recommendation)*

If RT-PCR test is not available, we suggest using non-contrast chest CT scan for symptomatic patients suspected of having COVID-19 to guide early triage and management under the following conditions

- Mild COVID-19 patients who are at risk for progression
- Moderate to severe COVID-19 patient

(Very low certainty of evidence, Weak recommendation)

Updated of 13 Dec 2021

Severity Classification of COVID-19

Updated as of 28 October 2021

CLASSIFICATION	CRITERIA
Mild COVID-19	• No pneumonia or desaturation • Acute onset of fever and cough or any three (3) or more of the following: ○ Fever ○ Cough ○ Coryza ○ Sore throat ○ Diarrhea ○ Anorexia/nausea/vomiting ○ Loss of sense of smell or taste ○ General weakness/body malaise/fatigue ○ Headache ○ Myalgia
Moderate COVID-19	a. With pneumonia* **BUT** no difficulty of breathing or shortness of breath, RR < 30 breaths/min, oxygen saturation# ≥ 94% at room air **OR** b. Without pneumonia but with risk factors for progression: elderly (60 years old and above) and/or with comorbidities
Severe COVID-19	• With pneumonia* and **ANY** one of the following: ○ Signs of respiratory distress ○ Oxygen saturation# < 94% at room air ○ Respiratory rate of ≥30 breaths/minute ○ Requiring oxygen supplementation
Critical COVID-19	• With pneumonia* and **ANY** of the following: ○ Impending respiratory failure requiring high flow oxygen, non-invasive or invasive ventilation ○ Acute respiratory distress syndrome ○ Sepsis or shock ○ Deteriorating sensorium ○ Multi-organ failure ○ Thrombosis

*Pneumonia - evidence of lower respiratory disease during clinical assessement (e.g. cough, fever plus crackles) and/or imaging (CXR, ultrasound, CT scan)

#Proper recording of the O2 saturation: finger should be inserted in the oximeter for about 10-20 seconds; patient should be still and not talking

Artesunate (artemisinin)

Among patients with COVID-19, should artesunate (artemisinin) be used for treatment?

We suggest against the use of artesunate, artemisinin or pyronaridine tetraphosphate + artesunate in the treatment of COVID-19. *(Very low certainty of evidence, Weak recommendation)*

Updated as of 18 Nov 2021

Azithromycin

Should azithromycin be used in the treatment of patients with COVID-19 infection?

We recommend against the use of azithromycin among patients with COVID-19 infection. *(Moderate certainty of evidence; Strong recommendation)*

Updated as of 01 Dec 2021

Bamlanivimab

Among COVID-19 patients, should bamlanivimab in combination with etesevimab be used for treatment?

We suggest the use of bamlanivimab and etesevimab combination therapy as treatment for mild to moderate, non-hospitalized COVID-19 patients with at least 1 risk factor* for progression to severe disease. *(Low certainty of evidence; Weak recommendation)*

*Risk factors for severe COVID-19: age ≥65 years, body-mass index ≥35 kg/m^2, cardiovascular disease (including hypertension), chronic lung disease (including asthma), chronic metabolic disease (including diabetes), chronic kidney disease (including receipt of dialysis), chronic liver disease, and immunocompromised conditions

Updated as of 15 Oct 2021

Baloxavir

Should baloxavir be used for the treatment of COVID-19?

We suggest against the use of baloxavir as treatment for patients with COVID-19 infection. *(Very low certainty of evidence; Weak recommendation)*

Updated as of 20 May 2021

Baricitinib

Among patients with COVID-19, should baricitinib be used for treatment?

We suggest the use of baricitinib in addition to dexamethasone and remdesivir as treatment for hospitalized COVID-19 patients who require low-flow oxygen, high-flow oxygen, and non-invasive ventilation. *(Low certainty of evidence; Weak recommendation)*

There is insufficient evidence to recommend baricitinib as an alternative to tocilizumab as treatment for hospitalized COVID-19 patients. *(Very low certainty of evidence)*

Updated as of 21 Oct 2021

Bevacizumab

Should bevacizumab be used for the treatment of COVID-19?

We suggest against the use of bevacizumab as treatment for patients with COVID-19 infection. *(Very low certainty of evidence; Weak recommendation)*

Updated as of 06 Dec 2021

Casirivimab - imdevimab

Among patients with COVID-19, should casirivimab - imdevimab be used for treatment?

We suggest the use of casirivimab-imdevimab as treatment for symptomatic, non-hospitalized patients with at least 1 risk factor* for severe COVID-19. (*Moderate certainty of evidence; Weak recommendation)*

We recommend against casirivimab-imdevimab as treatment for hospitalized COVID-19 patients. (*Low certainty of evidence; Strong recommendation)*

There is insufficient evidence to recommend casirivimab-imdevimab as treatment for asymptomatic COVID-19 patients. *(Low certainty of evidence)*

*Risk factors: age >50 years, obesity, cardiovascular disease (including hypertension), chronic lung disease (including asthma), chronic metabolic disease (including diabetes), chronic kidney disease (including receipt of dialysis), chronic liver disease, and immunocompromised conditions.

Updated as of 20 Dec 2021

Colchicine

Should colchicine be used in the treatment of patients with COVID-19 infection?

We suggest against the use of colchicine in the treatment of COVID-19 *(Very low certainty of evidence; weak recommendation)*

Updated of 08 Nov 2021

Convalescent Plasma

Should convalescent plasma be used in the treatment of patients with COVID-19 infection?

We recommend against the use of convalescent plasma among patients with COVID-19 infection. *(Moderate certainty of evidence; Strong recommendation)*

Updated as of 18 Nov 2021

Famotidine

Should famotidine be used for the treatment of COVID-19?

We suggest against the use of famotidine in the treatment of COVID-19. *(Very low certainty of evidence; Weak recommendation)*

Updated as of 30 May 2021

Favipiravir

Among patients with COVID-19, should favipiravir be used for treatment?

There is insufficient evidence to recommend the use of favipiravir among patients with COVID-19. *(Low certainty of evidence)*

Updated as of 08 Nov 2021

Fluvoxamine

Among patients with COVID-19, should fluvoxamine be used for treatment?

There is insufficient evidence to recommend the use of fluvoxamine among patients with COVID-19 infection *(Low certainty of evidence)*

Updated as of 08 Nov 2021

Hydroxychloroquine/Chloroquine

Should hydroxychloroquine/ chloroquine, with or without azithromycin be used in the treatment of patients with COVID-19 infection?

We recommend against the use of hydroxychloroquine/chloroquine, with or without azithromycin among patients with COVID-19 infection. *(Moderate certainty of evidence; Strong recommendation)*

Updated as of 19 Feb 2021

Ibuprofen

Should ibuprofen be used in the treatment of patients with COVID-19 infection?

We recommend against the use of ibuprofen as treatment among patients with COVID-19 infection. *(Very low certainty of evidence; Strong recommendation)*

Updated as of 05 Mar 2021

Imatinib

Among patients with COVID-19, should imatinib be used for treatment?

There is insufficient evidence to recommend the use of imatinib among patients with COVID-19 infection *(Low certainty of evidence)*

Updated as of 08 Nov 2021

Infliximab

Among patients with COVID-19, should infliximab be used for treatment?

We suggest against the use of infliximab among patients with COVID-19 infection *(Very low certainty of evidence; Weak recommendation)*

Updated as of 15 Oct 2021

Inhalational Corticosteroids

Among patients with COVID-19, should inhaled corticosteroids be used as treatment?

There is insufficient evidence to recommend the use of inhaled corticosteroids in the treatment of non-hospitalized COVID-19 patients. *(Very low certainty of evidence)*

Updated as of 18 Nov 2021

Interferon

Should interferon be used in the treatment of patients with COVID-19 infection?

We recommend against the use of interferon in the treatment of COVID-19 patients. *(Very low certainty of evidence; Strong recommendation)*

Updated as of 06 Dec 2021

Intravenous immunoglobulin (IVIG)

Should IVIG be used for the treatment of COVID-19?

We suggest against the use of intravenous immunoglobulin as treatment for moderate to severe COVID-19. *(Very low certainty of evidence; Weak recommendation)*

Updated as of 18 May 2021

Ivermectin

Should ivermectin be used in the treatment of patients with COVID-19 infection?

We recommend against the use of ivermectin for the treatment of patients with COVID-19 of any severity *(Very low certainty of evidence; Strong recommendation)*

We suggest against the use of ivermectin combined with doxycycline for the treatment of patients with COVID-19. *(Very low certainty of evidence; Weak recommendation)*

Updated as of 06 Dec 2021

Leronlimab

Among patients with COVID-19, should leronlimab be used as treatment?

We suggest against the use of leronlimab as treatment for COVID-19. *(Very low certainty of evidence, Weak recommendation)*

Updated as of 28 Oct 2021

Lianhua

Should Lianhua be used in the treatment of patients with COVID-19 infection?

There is insufficient evidence to recommend the use of Lianhua in treatment of patients with non-severe COVID-19 *(Very low certainty of evidence)*

Updated as of 06 Dec 2021

Lopinavir/Ritonavir

Should lopinavir/ritonavir be used in the treatment of COVID-19?

We recommend against the use of lopinavir/ritonavir as treatment for COVID-19 infection. *(Moderate certainty of evidence; Strong recommendation)*

Updated as of 07 Apr 2021

Mesenchymal Stem Cell Therapy

Should mesenchymal stem cell therapy be used for the treatment of COVID-19?

There is insufficient evidence to recommend using umbilical cord-derived mesenchymal stem cell therapy among adults with severe COVID-19 (PaO_2/FiO_2 ratio $\leq$ 300 mmHg). *(Very low certainty of evidence)*

Updated as of 29 May 2021

Molnupiravir

Among patients with COVID-19, should molnupiravir be used for treatment?

We suggest the use of molnupiravir within 5 days of symptom onset among non-hospitalized adult patients (18 years old and older) with mild to moderate COVID-19 infection with at least one risk factor* for progression. *(Low certainty of evidence, Weak recommendation)*

*Risk factors for progression include:
age >60 years, active cancer, chronic kidney disease, chronic obstructive pulmonary disease, obesity, serious heart conditions or diabetes mellitus

Updated as of 20 Dec 2021

Oseltamivir

Should oseltamivir be used for the treatment of COVID-19?

We recommend against the use of oseltamivir as treatment for patients with COVID-19 infection. *(Very low certainty of evidence; Strong recommendation)*

Updated as of 22 May 2021

Regdanvimab

Among patients with COVID-19, should regdanvimab be used for treatment?

We suggest against the use of regdanvimab for the treatment of mild to moderate COVID-19 *(Very low certainty of evidence; Weak recommendation)*

Updated as of 20 Dec 2021

Remdesivir

Should remdesivir be used in the treatment of patients with COVID-19 infection?

We suggest against the use of remdesivir in patients with COVID-19 infection who have O2 saturation ≥94% and do not require oxygen supplementation. *(Low certainty of evidence; Weak recommendation)*

We suggest the addition of remdesivir to dexamethasone in patients with COVID-19 infection who have O2 saturation < 94% and/or requiring oxygen supplementation. *(Low certainty of evidence; Weak recommendation)*

We suggest against the use of remdesivir in patients with COVID-19 infection who are already on invasive mechanical ventilation or ECMO. *(Low certainty of evidence, Weak recommendation)*

Updated as of 19 Feb 2021

Steam Inhalation

Should steam inhalation be used for the treatment of COVID-19?

We recommend against the use of steam inhalation alone in the treatment of COVID-19. *(Very low certainty of evidence; Strong recommendation)*

Updated as of 12 Mar 2021

Tocilizumab

Among patients with COVID-19, should tocilizumab be used for treatment?

We recommend the addition of tocilizumab to systemic steroids in patients showing rapid respiratory deterioration and/or requiring high doses of oxygen (high-flow nasal cannula, noninvasive or invasive mechanical ventilation) and with elevated biomarkers of inflammation (CRP). *(Moderate certainty of evidence, Strong recommendation)*

We recommend against the use of tocilizumab in patients with COVID-19 infection who do not require oxygen supplementation. *(Very low certainty evidence, Strong recommendation)*

Updated as of 28 Oct 2021

Tofacitinib

Among patients with COVID-19, should tofacitinib be used for treatment?

We suggest against the use of tofacitinib among hospitalized COVID-19 patients. *(Low certainty of evidence; Weak recommendation)*

Updated as of 21 Oct 2021

Virgin Coconut Oil

Should virgin coconut oil (VCO) be used in the treatment of patients with COVID-19 infection?

There is no evidence to recommend the use of VCO as treatment among patients with COVID-19 infection.

Updated as of 05 Mar 2021

Living Recommendations for the Critical Care and Respiratory Management of COVID-19

Anticoagulation

Should anticoagulation be used in treating patients diagnosed with COVID-19 infection?

We recommend the use of prophylactic over therapeutic dose anticoagulation among hospitalized patients with moderate, severe or critical COVID-19 disease unless there are any contraindications. *(Low certainty of evidence; Strong recommendation)*

We recommend the use of standard dose prophylactic anticoagulation over intermediate dose prophylactic anticoagulation among hospitalized patients with COVID-19 disease unless there are any contraindications. *(Moderate certainty of evidence; Strong recommendation)*

Updated as of 26 Oct 2021

Empiric antimicrobials

Should empiric antimicrobial coverage be given to patients with severe and critical COVID-19?

We recommend against the routine use of antibiotics in patients with severe and critical COVID-19 infection, unless with suspicion of secondary bacterial co-infection. For patients on empiric antibiotics, they should be assessed daily for the need for discontinuation, continuation or escalation based on clinical and laboratory parameters. *(Very low certainty of evidence; Strong recommendation)*

Updated as of 15 Apr 2021

Etoposide

Should etoposide be given among patients with severe COVID-19 pneumonia in cytokine storm?

We recommend against the use of etoposide among patients with COVID-19 pneumonia in cytokine storm *(Very low certainty of evidence; Strong recommendation)*

Updated as of 15 Apr 2021

Extracorporeal Membrane Oxygenation

Should Extracorporeal Membrane Oxygenation (ECMO) be used in the management of ARDS among COVID-19?

We suggest the use of ECMO for judiciously selected COVID-19 patients with severe Acute Respiratory Distress Syndrome (ARDS) based on the Extracorporeal Life Support Organization (ELSO) criteria *(Very low certainty of evidence; Weak recommendation)*

Updated as of 03 Jan 2022

Fluid Management

Should a conservative fluid management strategy be used in mechanically ventilated adult COVID-19 patients?

We suggest the use of conservative fluid management rather than liberal fluid management strategy in mechanically ventilated adult COVID-19 patients with acute respiratory distress syndrome who have been adequately resuscitated*. *(Low certainty of evidence; Weak recommendation)*

* *without tissue hypoperfusion and fluid responsiveness*

Updated as of 05 Mar 2021

Hemoperfusion

Should hemoperfusion be used in patients with COVID-19 infection?

There is insufficient evidence on the use of hemoperfusion among patients with COVID-19 infection. *(Low certainty of evidence)*

Updated as of 01 Dec 2021

High Flow Nasal Cannula

Should high flow nasal cannula be used in patients with COVID-19 infection?

We suggest the use of high flow nasal cannula for patients with severe to critical COVID-19 who do not respond to conventional oxygen therapy (low flow nasal cannula/face mask) *(Low certainty of evidence; Weak recommendation)*

Updated as of 01 Dec 2021

Hyperbaric Oxygen Therapy

Should hyperbaric oxygen therapy be used in the management of COVID-19 patients?

At present, we suggest against the use of hyperbaric oxygen therapy for the management of COVID-19 patients due to insufficient evidence. *(Very low certainty of evidence, Weak recommendation)*

Updated as of 01 Dec 2021

Inhaled Nitric Oxide

Should inhaled nitric oxide be used in patients with COVID-19?

We recommend against the use of nitric oxide among patients with COVID-19. *(Low certainty of evidence; Strong recommendation)*

Updated as of 26 Oct 2021

Mechanical Ventilation

Should lung protective ventilation, high PEEP and driving pressure-limited strategies be used in the management of adult patients with COVID-19-associated acute respiratory distress syndrome?

We suggest the use of a lung protective ventilation strategy (tidal volume 4-8 mL/kg predicted body weight and plateau pressure less than 30 cmH2O) in patients with COVID-19 infection and ARDS. *(Very low certainty of evidence; Weak recommendation)*

There is insufficient evidence to recommend the use of a higher PEEP strategy. We suggest to individualize PEEP or employ a PEEP strategy on respiratory mechanics (i.e., compliance) in patients with COVID-19 infection. *(Low certainty of evidence; Weak recommendation)*

There is insufficient evidence to recommend a driving pressure limited strategy in patients with COVID-19 infection. We suggest to keep the driving pressure $\leq$ 14 cmH2O. *(Low certainty of evidence; Weak recommendation)*

Updated as of 19 Feb 2021

Non-invasive Ventilation

Should non-invasive ventilation be used over high flow nasal cannula for patients with severe and critical COVID-19?

We suggest the use of either high flow nasal cannula or non-invasive positive pressure ventilation in COVID-19 patients with hypoxemic respiratory failure, in the absence of any indication for emergent invasive mechanical ventilation. *(Low certainty of evidence, Weak recommendation)*

Updated as of 03 Jan 2022

Pirfenidone or Nintedanib

Should pirfenidone versus nintedanib be used as therapy for post-COVID-19 pulmonary fibrosis?
There is insufficient evidence to recommend the use of pirfenidone or nintedanib among patients with post-COVID-19 pulmonary fibrosis *(Very low certainty of evidence)*

Updated as of 26 Oct 2021

Proning or Side Lying in Non-Intubated Patients

Should self -proning or side lying be used in non-intubated patients with COVID-19 infection?
We suggest self-proning position in non-intubated patients with severe and critical COVID-19 (*Very low certainty of evidence; Weak recommendation)*

There is insufficient evidence to recommend the use of side lying in non-intubated patients with severe to critical COVID-19 *(Very low certainty of evidence)*

Updated as of 26 Oct 2021

Pulmonary rehabilitation in patients with Long COVID-19

Should pulmonary rehabilitation be done among long COVID patients with residual pulmonary symptoms to improve pulmonary function and quality of life?
We recommend individualized pulmonary rehabilitation with pre-intervention medical clearance for long COVID patients who show residual respiratory symptoms *(Moderate certainty of evidence; Strong recommendation)*

Rapid Sequence Intubation

Should rapid sequence intubation or delayed sequence intubation be used for the management of COVID-19?
We suggest the use of rapid sequence intubation for COVID-19 patients to reduce infection among healthcare workers performing the procedure *(Very low certainty of evidence; Weak recommendation)*

Updated as of 15 Apr 2021

Sedation and Neuromuscular Blockade

Should sedation and neuromuscular blockade be done in mechanically ventilated patients with COVID-19 associated acute respiratory distress syndrome?
We suggest light over deep sedation in COVID-19 patients who are mechanically ventilated and who are anxious or agitated. *(Very low certainty of evidence, Weak recommendation)*

We suggest against routine use of NMB in mechanically ventilated COVID-19 ARDS patients. *(Low certainty of evidence, Weak recommendation)*

Updated as of 03 Jan 2022

Systemic Corticosteroids

Should systemic corticosteroids be used in patients with COVID-19 infection?

We recommend the use of dexamethasone for up to 10 days among patients with severe and critical COVID-19. *(Moderate certainty of evidence, Strong recommendation)*

We recommend the use of 6 mg to 12 mg per day of dexamethasone among patients with severe and critical COVID-19. *(Moderate certainty of evidence, Strong recommendation)*

We recommend against the use of corticosteroids among mild and moderate (non-oxygen requiring) COVID-19 patients. (*Moderate certainty of evidence, Strong recommendation)*

We suggest that steroid therapy be initiated as soon as diagnosed or categorized as severe or critical COVID-19. (*Very low certainty of evidence, Weak recommendation)*

Updated as of 03 Jan 2022

Living Recommendations on Non-Pharmacologic Interventions for Prevention and Control of COVID-19

Carbon Dioxide Monitors

Should carbon dioxide (CO2) monitors be used to reduce transmission of COVID-19?

We recommend the use of carbon dioxide (CO2) monitors in enclosed spaces to guide actions to improve ventilation and reduce transmission of SARS-CoV-2. *(Moderate certainty of evidence; Strong recommendation)*

Updated of 05 Nov 2021

Cloth Masks

Should cloth masks be used in the prevention and control of COVID-19 infection?

We recommend the proper use of either a well-fitted cloth mask or medical mask in the community setting. If a cloth mask will be used, we suggest that it should be made of at least two layers of cotton (e.g., t- shirt fabric) or non-woven nylon with aluminum nose bridge. *(Very low certainty of evidence; strong recommendation)*

Updated as of 03 Dec 2021

Copper-containing masks

Should copper-containing masks be used to decrease COVID-19 transmission?

There is no evidence to recommend the use of copper-containing over non-copper-containing masks to decrease COVID-19 transmission.

Updated as of 03 Dec 2021

Disinfection of Surfaces

Should surfaces be disinfected to prevent COVID-19 infection?

We recommend the practice of cleaning and disinfecting surfaces using the appropriate disinfecting chemical agents such as 0.5% sodium hypochlorite solution (bleach) or 70% alcohol to prevent COVID-19 infection.

For high touch surfaces and high traffic areas, such as in the workplace, disinfection should be done before shift, intermittently during shift and after the shift.

For household disinfection, once daily disinfection on high touch surfaces is recommended.
(Low certainty of evidence; Strong recommendation)

Updated as of 26 May 2021

Face Mask and Face Shield or Goggles vs Face Mask Alone

Is a facemask with face shield more effective than facemask alone in reducing SARS COV2 transmission?

We suggest against requiring the use of face shields in addition to face masks among the general public in non-healthcare settings. *(Very low certainty of evidence; Weak recommendation)*

We recommend the addition of face shields to face masks among the general public in areas with sustained community transmission of SARS-CoV-2. *(Very low certainty of evidence; Strong recommendation)*

We recommend the use of face shield plus medical face mask and standard personal protective equipment among health care workers not directly involved in the care of COVID-19 patients in areas with sustained community transmission of SARS-COV2. *(Very low certainty of evidence; Strong recommendation)*

Updated of 05 Nov 2021

Foot Baths

Should foot baths be used in the prevention and control of COVID-19 infection?

We recommend against the use of footbaths for the prevention and control of COVID-19 transmission. *(Very low certainty of evidence; Strong recommendation)*

Updated as of 26 Feb 2021

High Efficiency Particulate Air (HEPA) Filter

Should high efficiency particulate air (HEPA) filters be used in the prevention and control of COVID-19 infection in public spaces and locations with sustained community transmission?

We suggest the use of HEPA filter as an option to improve air quality for COVID-19 prevention and control in indoor spaces with inadequate ventilation. *(Low certainty of evidence; Weak recommendation)*

Updated as of 25 Feb 2021

Ionizing Air Filter

Should ionizing air filter be used in the prevention and control of COVID-19 infection in public spaces with sustained community transmission?

We recommend against the use of ionizing air purifier to reduce COVID-19 transmission in the community. *(Low certainty of evidence; Strong recommendation)*

Updated as of 26 Feb 2021

Misting Tents

Should misting tents or disinfection chambers be used in preventing and controlling COVID-19 transmission?

We recommend against the use of misting tents or disinfection chambers for preventing and controlling COVID-19 transmission. *(Very low certainty of evidence; Strong recommendation)*

Updated as of 26 Feb 2021

N95 Decontamination Techniques

What are effective decontamination techniques for N95 reuse?

In situations where there is shortage of filtering facepiece respirators (FFR), we suggest the use of Hydrogen Peroxide Vapor (HPV), Ultraviolet Germicidal Irradiation (UVGI), moist heat and peracetic acid dry fogging system (PAF) as options for N95 mask decontamination as recommended by the manufacturer based on their ability to reduce SARS-COV-2 load and infectivity while still maintaining N95 mask integrity. *(Low certainty of evidence; Weak recommendation)*

We recommend against the use of autoclave and alcohol as these methods alter filtering facepiece respirator's (N95) integrity and degrade filtration efficacy. *(Very low certainty of evidence; Strong recommendation)*

Updated as of 12 Mar 2021

PPE in Surgery

What is the appropriate PPE to be used use during surgeries to reduce the risk of virus transmission?

We recommend the use of appropriate PPE to include mask (N95 or higher standard), fluid repellent sealed well-fitting long gown, double gloves, apron, full face shield or goggles or visor, scrub hat, and disposable shoe covers or dedicated closed footwear among surgeons engaged in aerosol generating procedures of suspected or confirmed COVID-19 patients. *(Very low certainty of evidence; Strong recommendation)*

Updated as of 17 Apr 2021

PPE in Outpatient Settings

What is the appropriate PPE for healthcare workers in the outpatient setting to reduce the risk of virus transmission?

We recommend the use of at least surgical face mask and face shield for protection against COVID-19 infection among healthcare workers in the outpatient setting not performing aerosol generating procedures. Additional PPEs such as medical gowns and gloves should be worn as part of standard precautions during the performance of other procedures. *(Very low certainty of evidence; Strong recommendation)*

Updated as of 17 Apr 2021

PPE in Hospitals

What is the appropriate PPE for health care workers in the wards, ICU and emergency room to reduce the risk of virus transmission?

We recommend the use of the following PPE: disposable hat, medical protective mask (N95 or higher standard), goggles or face shield (anti-fog), medical protective clothing, disposable gloves and disposable shoe covers or dedicated closed footwear as an effective intervention in the prevention of COVID-19 among health care workers in areas with possible direct patient care of confirmed or probable COVID-19 patients and possible performance of aerosol generating procedures. *(Moderate certainty of evidence; Strong recommendation)*

Updated as of 17 Apr 2021

Physical Barriers

Should protective physical barriers be used to prevent COVID-19?

We suggest against the use of protective physical barrier enclosures (ex. aerosol box) for the prevention of COVID-19 among health care providers who perform aerosol generating medical procedures*. *(Very low certainty of evidence; Weak recommendation)*

We suggest the use of protective physical barriers in the prevention of COVID-19 in areas where physical distancing cannot be adhered to (e.g., offices, reception desk)**. *(Very low certainty of evidence; Weak recommendation)*

*Proper PPEs should be used by health care providers when performing aerosol-generating procedures.

** Adequate ventilation, physical distancing, use of facemasks and personal hygiene should still be maintained to prevent COVID-19 infections. Regular cleaning and disinfection of physical barriers should be practiced.

Updated as of 26 May 2021

Ultraviolet (UV) Lamps

Should ultraviolet (UV) lamps be used in the prevention and control of COVID-19 infection in public spaces in locations with sustained community transmission?

We recommend against the use of UV lamps or other UV devices in any place outside of a controlled clinic or hospital setting to prevent and control COVID-19 transmission. *(Low certainty of evidence; Strong recommendation)*

Updated as of 26 Feb 2021

Living Recommendations on Vaccines and Prophylactic Interventions for COVID-19

Vaccines

Are vaccines effective and safe in the prevention of COVID-19 infections?

We recommend the use of the following vaccines to prevent symptomatic SARS-CoV-2 infection in adults: *(Moderate certainty of evidence; Strong recommendation)*

1. BNT162b2 (Pfizer/BioNTech) (given as 0.3ml (30ug) intramuscular injections, in 2 doses, 21 days apart)
2. mRNA-1273 (Moderna) (given as 0.5ml (100ug) intramuscular injections, in 2 doses, 28 days apart)
3. ChAdOx1 (AstraZeneca) (given as 0.5 ml (5 x 106 vp) intramuscular injections, in 2 doses, at least 12 weeks apart)
4. Gam-COVID-Vac (Gamaleya) (given as rAd-26 0.5ml intramuscular injection, then rAd-5S 0.5 ml intramuscular injection 21 days after)
5. Ad26.COV2.S (Janssen/Johnson&Johnson) (given as 0.5ml single dose intramuscular injection)

We recommend the use of CoronaVac (Sinovac) (given as 0.5ml (600SU) intramuscular injection, in 2 doses, at 28 days apart) to prevent symptomatic SARS-CoV-2 infection among **healthy adults**. *(Low certainty of evidence; Strong recommendation)*

We recommend the use of BNT162b2 (Pfizer/BioNTech), mRNA-1273 (Moderna), ChAdOx1 (Astrazeneca), Gam-COVID-Vac (Gamaleya) and Ad26.COV2.S (Janssen/ Johnson&Johnson) vaccines to prevent symptomatic SARS-CoV-2 infection in **older adults (>64 year old).** *(Low certainty of evidence; Strong recommendation)*

We suggest the use of CoronaVac (Sinovac) to prevent SARS-COV-2 infection in older adults (>60 years old) (*Low certainty of evidence; Weak recommendation)*

We recommend the use of BNT162b2 (Pfizer/BioNTech), mRNA-1273 (Moderna), ChAdOx1 (Astrazeneca), Gam-COVID-Vac (Gamaleya), CoronaVac (Sinovac) and Ad26.COV2.S (Janssen/ Johnson&Johnson) vaccines in **pregnant and lactating women** after consultation with a physician. *(Very low certainty of evidence; Weak recommendation)*

We recommend the use of BNT162b2 (Pfizer/BioNTech), mRNA-1273 (Moderna), ChAdOx1 (Astrazeneca), Gam-COVID-Vac (Gamaleya) and Ad26.COV2.S (Janssen/ Johnson&Johnson) vaccines to prevent SARS-CoV-2 infection in **adults who have stable medical comorbidities and are at risk for severe infection**. *(Moderate certainty of evidence; Strong recommendation)*

We suggest the use of CoronaVac (Sinovac) to prevent SARS-CoV-2 infection in **adults who have stable medical comorbidities and are at risk for severe infection**. *(Very low certainty of evidence; Weak recommendation)*

We recommend the use of BNT162b2 (Pfizer/BioNTech), mRNA-1273 (Moderna), ChAdOx1 (Astrazeneca), Gam-COVID-Vac (Gamaleya),CoronaVac (Sinovac) and Ad26.COV2.S (Janssen/ Johnson&Johnson) vaccines to prevent SARS-CoV-2 infection in **immunocompromised patients** (i.e., diagnosed with HIV, hepatitis B and

C, those with cancer undergoing chemotherapy, transplant patients receiving immune-suppression) after medical clearance from a physician. *(Low certainty of evidence; Strong recommendation)*

We recommend **against** the use of these vaccines for those **who have known allergies to the contents / excipients** of the vaccine, such as polysorbate (ChAdOx1 (Astrazeneca), Gam-COVID-Vac (Gamaleya) and Ad26.COV2.S (Janssen/ Johnson&Johnson)) and polyethylene glycol or PEG200 DMG (BNT162b2 (Pfizer/BioNTech) and mRNA-1273 (Moderna)). *(Moderate to high certainty of evidence; Strong recommendation)*

Updated of 28 Nov 2021

BBIPBP-CorV (Sinopharm)

Among persons at risk, what is the clinical efficacy, effectiveness and safety of BBIBP-CorV (Sinopharm) in the prevention of SARS-COV2 infection?

We recommend the use of BBIBP-CorV (Sinopharm), given as 200U (WIV04) or 4ug (HBO2) in 0.5 ml in 2 doses, 21 days apart, to prevent symptomatic and asymptomatic COVID-19 infection among healthy adults (18 to 59 years old). *(Moderate certainty of evidence; Strong recommendation)*

We suggest the use of BBIBP-CorV to prevent severe COVID-19 infection among healthy adults (18 to 59 years old). *(Low certainty of evidence; Weak recommendation)*

We suggest the use of BBIBP-CorV to prevent symptomatic COVID-19 infection in the following:

a. adults with comorbidities (*Very low certainty of evidence; Weak recommendation)*
b. older persons (60 years and older) (*Very low certainty of evidence; Weak recommendation)*

There is insufficient evidence to recommend for or against the use of BBIBP-CorV to prevent COVID-19 infection among the following:

a. Children (3-17 years old) (*Very low certainty of evidence)*
b. Immunocompromised population (*Very low certainty of evidence)*
c. Pregnant and lactating women (*Very low certainty of evidence)*

In areas where the SARS-CoV-2 variants of concern are prevalent, there is insufficient evidence to recommend for or against the use of BBIBP-CorV to prevent COVID. (*Very low certainty of evidence)*

Updated of 02 Dec 2021

CoronaVac (Sinovac)

Is CoronaVac (Sinovac) effective and safe in the prevention of COVID-19-infections?: A Rapid Review (Update)

We recommend the use of the CoronaVac (Sinovac), [given as 0.5 mL (600SU)] to prevent symptomatic SARS-CoV-2 infection in:

- Healthy Adults *(Low certainty of evidence; Strong recommendation)*
- Pregnant women in their first trimester after consultation with a physician *(Very Low certainty of evidence; Strong recommendation)*
- Pregnant women in their 2nd and 3rd trimester and lactating women *(Very Low certainty of evidence; Strong recommendation)*
- Adults who have medical comorbidities *(including chronic respiratory disease and infection, cardiovascular disease, chronic kidney disease, cerebrovascular disease, diabetes mellitus, obesity, neurologic disorder, chronic liver disease and others like sickle cell disease, thalassemia, or Down's*

syndrome, as per DOH guidelines dated April 5, 2021 on the A3 Priority Group) (Low certainty of evidence; Strong recommendation)

- Immunocompromised patients after medical clearance from a physician *(the immunocompromised include those diagnosed with HIV, hepatitis B and C, those with cancer undergoing chemotherapy, transplant patients receiving immunosuppression) (Low certainty of evidence; Strong recommendation)*

We suggest the use of CoronaVac (Sinovac) to prevent SARS-CoV-2 infection in older adults (>60 years old). *(Low certainty of evidence; Weak recommendation)*

We suggest against the use of CoronaVac (Sinovac) to prevent SARS-CoV-2 infection in children (3 to 17 years old) *(Very Low certainty of evidence; Weak recommendation)*

In areas where Delta is the predominant variant of concern, we recommend the use of CoronaVac (Sinovac) *(Very Low certainty of evidence; Strong recommendation)*

Under the current context of low vaccine coverage and inadequate vaccine supply, we recommend against booster vaccination using CoronaVac (Sinovac) in the healthy, adult population (18 years old and above) *(Low certainty of evidence; Strong recommendation)*

For immunocompromised patients who received primary CoronaVac (Sinovac) vaccination, we recommend for heterologous booster vaccination *(Very Low certainty of evidence; Strong recommendation)*

Updated of 28Oct 2021

Covaxin/Bharat

Is vaccination with BBV152 (Covaxin/Bharat) effective and safe in the prevention of COVID-19 infections?

We recommend the use of BBV152 (Covaxin/Bharat), 0.5 mL/dose, in a two-dose regimen, 28 days apart for the prevention of symptomatic COVID-19 infection in healthy adults*. (Moderate certainty of evidence; Strong recommendation)*

We suggest the use of BBV152 (Covaxin/Bharat), 0.5 mL/dose, in a two-dose regimen, 28 days apart for the prevention of symptomatic COVID-19 infection:

a. Adults who have stable medical co-morbidities and are at high risk for severe infection *(Low certainty of evidence; Weak recommendation)*
b. Healthy, older adults (>60 years old) *(Low certainty of evidence; Weak recommendation)*
c. Pregnant and lactating women, after discussing with a physician *(No direct evidence; Weak recommendation)*
d. Immunocompromised patients, after discussing with a physician *(No direct evidence; Weak recommendation)*

We suggest against the use of BBV152 (Covaxin/Bharat) for the prevention of COVID-19 in children and adolescents. *(No evidence; Weak recommendation)*

We recommend against the use of BBV152 (Covaxin/Bharat) in individuals who have known allergies to its contents/excipients. *(Best practice statement)*

Updated of 21 Oct 2021

Novavax

Is NVX-Cov2373 (Novavax) effective and safe in the prevention of COVID-19 infections?

We suggest the use of NVX-CoV2373 (Novavax), given as 5ug (with 50ug Matrix M1 adjuvant) two doses, intramuscular, 21 days apart, for the prevention of symptomatic and severe SARS-CoV-2 infection in healthy adults. *(Low certainty of evidence; Weak recommendation)*

We suggest the use of NVX-CoV2373 (Novavax), given as 5ug (with 50ug Matrix M1 adjuvant) two doses, intramuscular, 21 days apart, for the prevention of symptomatic SARS-CoV-2 infection in older adults (>65 years old). *(Low certainty of evidence; Weak recommendation)*

We suggest the use of NVX-CoV2373 (Novavax), given as 5ug (with 50ug Matrix M1 adjuvant) two doses, intramuscular, 21 days apart, for the prevention of symptomatic SARS-CoV-2 infection in adults with comorbidities. *(Moderate certainty of evidence; Weak recommendation)*

We suggest against the use of NVX-CoV2373 (Novavax), for the prevention of symptomatic SARS-CoV-2 infection in the immunocompromised population (specifically HIV positive individuals). *(Very low certainty of evidence; Weak recommendation)*

We suggest against the use of NVX-CoV2373 for the prevention of symptomatic SARS-CoV-2 infection among pregnant and lactating women. (*No direct evidence; Weak recommendation)*

In areas where the Alpha variant is predominant, we suggest the use of the NVX-CoV2373 (Novavax) given as 5ug (with 50ug Matrix-M1 adjuvant), two doses, intramuscular, 21 days apart, to prevent symptomatic SARS-CoV-2 infection. *(Low certainty of evidence; Weak recommendation)*

In areas where the Beta variant is predominant, we suggest against the use of the NVX-CoV2373 (Novavax) to prevent symptomatic SARS-CoV-2 infection. *(Low certainty of evidence; Weak recommendation)*

There is insufficient evidence to recommend for or against the use of NVX-2373 for the prevention of symptomatic SARS-CoV-2 infection among children.

We recommend against the use of the NVX-CoV2373 (Novavax) in individuals who have known allergies to its contents/excipients, such as Matrix-M1. *(Best practice statement)*

Updated of 27 Dec 2021

Sputnik Light

Is rAd26 (Sputnik Light) effective and safe in the prevention of COVID-19 infections?

We suggest the use of the rAd26 (Sputnik Light), given as 10^{11}vp per 0.5ml, single dose, intramuscularly to prevent symptomatic SARS-CoV-2 infection in:

a. Healthy adults *(Low certainty, Weak recommendation)*
b. Older adults (60 years and older) *(Low certainty, Weak recommendation)*
c. Adults with comorbidities *(Low certainty, Weak recommendation)*

We suggest against the use of rAd26 (Sputnik Light) to prevent symptomatic SARS-CoV-2 infection in:

a. Children (3-17 years) *(No evidence, Weak recommendation)*
b. Pregnant and lactating women *(No evidence, Weak recommendation)*
c. Immunocompromised *(No evidence, Weak recommendation)*

In areas where Alpha, Beta or Delta is the predominant variant of concern, we suggest the use of rAd26 (Sputnik Light) to prevent COVID-19 infection. *(Very Low certainty, Weak recommendation)*

Updated of 04 Nov 2021

Boosters

Among adults who received the standard full doses of any COVID-19 vaccine, what is the clinical and immunologic efficacy and effectiveness and safety of a booster compared to no booster?

We suggest the following homologous booster vaccination regimen for the general adult population:

a. BNT162b2 *(Low certainty of evidence; Weak recommendation)*
b. mRNA-1273 *(Low certainty of evidence; Weak recommendation)*
c. ChAdOx1 *(Very low certainty of evidence; Weak recommendation)*
d. Ad26.Cov2.S *(Very low certainty of evidence; Weak recommendation)*
e. CoronaVac *(Very low certainty of evidence; Weak recommendation)*
f. BBIBP-CorV *(Very low certainty of evidence; Weak recommendation)*

There is insufficient evidence to recommend the following homologous booster vaccination in the general population:

a. Gam-COVID-Vac
b. BBV152

We suggest the following heterologous booster vaccination regimen for the general adult population:

a. BNT162b2 primary, mRNA-1273 booster *(Very low certainty of evidence; Weak recommendation)*
b. BNT162b2 primary, Ad26.CoV2.S booster *(Very low certainty of evidence; Weak recommendation)*
c. mRNA-1273 primary, BNT162b2 booster *(Very low certainty of evidence; Weak recommendation)*
d. mRNA-1273 primary, Ad26.CoV2.S booster *(Very low certainty of evidence; Weak recommendation)*
e. ChAdOx1 primary, BNT162b2 booster *(Very low certainty of evidence; Weak recommendation)*
f. Ad26.COV2.S primary, BNT162b2 booster *(Very low certainty of evidence; Weak recommendation)*
g. Ad26.COV2.S primary, mRNA-1273 booster *(Very low certainty of evidence; Weak recommendation)*
h. CoronaVac primary, BNT162b2 booster *(Very low certainty of evidence; Weak recommendation)*
i. CoronaVac primary, ChAdOx1 booster *(Very low certainty of evidence; Weak recommendation)*
j. BBIBP-CorV primary, BNT162b2 booster *(Very low certainty of evidence; Weak recommendation)*

There is insufficient evidence to recommend the use of the heterologous booster vaccination regimens other than the combinations included above in the general adult population.

We suggest the following homologous booster vaccination for the immunocompromised population:

a. BNT162b2 *(Very low certainty of evidence; Weak recommendation)*
b. mRNA-1273 *(Low certainty of evidence; Weak recommendation)*

There is insufficient evidence to recommend the following homologous booster vaccination for the immunocompromised population:

a. ChAdOx1
b. Ad26.CoV2.S
c. CoronaVac
d. Gam-COVID-Vac
e. BBV152
f. BBIBP-CorV

We suggest the following heterologous booster vaccination regimen for the immunocompromised population:

a. an mRNA vaccine primary, another mRNA vaccine *booster (Very low certainty of evidence; Weak recommendation)*
b. an mRNA vaccine primary, ChAdOx1 booster *(Low certainty of evidence; Weak recommendation)*
c. BNT162b2 primary, mRNA-1273 booster *Very low certainty of evidence; Weak recommendation)*
d. BNT162b2 primary, Ad26.CoV2.S booster *Very low certainty of evidence; Weak recommendation)*
e. mRNA-1273 primary, Ad26.CoV2.S booster *Very low certainty of evidence; Weak recommendation)*

There is insufficient evidence to recommend the use of the heterologous booster vaccination regimen other than the combinations included above in the immunocompromised population.

Updated of 27 Dec 2021

Heterologous vaccination

Among adults, what is the clinical and immunologic efficacy and effectiveness and safety of heterologous COVID-19 vaccination compared to standard homologous COVID-19 vaccination in preventing COVID-19 infection?

We recommend the use of heterologous COVID-19 vaccination for those with serious adverse event to the first dose. *(Very low certainty of evidence; Strong recommendation)*

We suggest the use of heterologous COVID-19 vaccination in the event of the unavailability of the second dose in the recommended schedule. *(Very low certainty of evidence; Weak recommendation)*

Updated of 22 Oct 2021

Vaccination against the Delta variant

Are COVID-19 vaccines efficacious in preventing COVID-19 infections caused by the B.1.617.2 (Delta) Variant?

In areas where the Delta variant is the predominant circulating variant, we recommend the use of the following vaccine to prevent symptomatic and severe COVID-19:

a. 2 doses of BBV152 (Covaxin/Bharat)
   (Moderate certainty of evidence; Strong recommendation)
b. 2 doses of BNT162b2 (Pfizer)
   (Low certainty of evidence; Strong recommendation)
c. 2 doses of mRNA-1273 (Moderna)
   (Low certainty of evidence; Strong recommendation)
d. 2 doses of ChAdOx1 (Astra Zeneca)
   (Low certainty of evidence; Strong recommendation)

e. 2 doses of CoronaVac (Sinovac)
(Very low certainty of evidence; Strong recommendation)

In areas where the Delta variant is the predominant circulating variant, we suggest the use of the following vaccines to prevent symptomatic and severe COVID-19:

a. Ad26.CoV2 (Janssen)
(Low certainty of evidence; Weak recommendation)
b. Gam-COVID-Vac (Sputnik V) *(Low certainty of evidence; Weak recommendation)*

Updated of 28 Oct 2021

Vaccination for children

Among children <18 years old, what is the efficacy/effectiveness and safety of COVID-19 vaccines compared to placebo in preventing COVID-19?

We recommend the use of the BNT162b2 (Pfizer/BioNTech) vaccine, [given as 0.3 mL (30 ug) intramuscular injections, in 2 doses, 21 days apart] for children 12-15 years old to prevent symptomatic SARS-CoV-2 infection. *(Moderate certainty of evidence; Strong recommendation)*

We suggest the use of the mRNA-1273 (Moderna) vaccine, [given as 0.5 mL (100 ug) intramuscular injections, in 2 doses, 28 days apart] for children 12-17 years old to prevent symptomatic SARS-CoV-2 infection. *(Low certainty of evidence; Weak recommendation)*

We suggest against the use of Coronavac (Sinovac), [given as 0.5 mL (600 SU) intramuscular injection, in 2 doses, 28 days apart] for children 3-17 years old to prevent symptomatic SARS-CoV-2 infection. *(No evidence; Weak recommendation)*

Updated of 21 Oct 2021

Vaccination for pregnant and lactating women

Is COVID-19 vaccination effective and safe among pregnant and lactating individuals and their infants in the prevention of COVID-19 infections?

We suggest the use of following vaccines, after the first trimester, for the prevention of COVID-19 infection in pregnant and lactating women.

a. BNT162b2 (Pfizer) *(Low certainty of evidence; Weak recommendation)*
b. mRNA-1273 (Moderna) *(Low certainty of evidence; Weak recommendation)*
c. ChAdOx1 (AstraZeneca) *(No direct evidence; Weak recommendation)*
d. Ad26.CoV2.S (Janssen/Johnson&Johnson) *(No direct evidence; Weak recommendation)*
e. CoronaVac (Sinovac) *(No direct evidence; Weak recommendation)*
f. BBIBP-CorV (Sinopharm) *(No direct evidence; Weak recommendation)*
g. BBV152 (Covaxin) *(No direct evidence; Weak recommendation)*

We suggest against the use of the following vaccines for the prevention of COVID-19 infection in pregnant and lactating women:

a. Gam-CoV-Vac (Sputnik V) *(No direct evidence; Weak recommendation)*
b. NVX-2373 (Novavax) *(No direct evidence; Weak recommendation)*

Updated of 27 Dec 2021

Aspirin as prophylaxis against COVID-19-induced coagulopathy

Should aspirin be used for prophylaxis against COVID-19-induced coagulopathy in patients with COVID-19?
There is insufficient evidence on the use of aspirin as prophylaxis against COVID-19-induced coagulopathy among patients with COVID-19. *(Very low certainty of evidence)*

Updated as of 02 Jun 2021

BCG Vaccine

Is BCG vaccination effective and safe in the prevention of COVID-19 infections?
We suggest against the use of BCG vaccine for the prevention of COVID-19 infection. *(Very low certainty of evidence; Weak recommendation)*

Updated as of 09 Apr 2021

Casirivimab + imdevimab

Among close contacts of COVID-19 patients, should casirivimab + imdevimab cocktail be used as post-exposure prophylaxis?

We suggest the subcutaneous use of casirivimab + imdevimab as day 4 post-exposure prophylaxis for COVID-19 close contacts*, ages 12 years and above weighing at least 40 kilograms, who are at risk for severe disease or hospitalization**. *(Moderate certainty of evidence; weak recommendation)*

**This includes the following people: elderly; BMI >25; those with chronic diseases such as hypertension, diabetes, and chronic kidney disease; those who are not expected to mount an adequate immune response to the vaccine due to immunosuppressive therapy or those in an immunocompromised state.

Updated of 04 Nov 2021

Hydroxychloroquine/Chloroquine

Should hydroxychloroquine/ chloroquine be used in the prevention of COVID-19?
We recommend against the use of HCQ for pre-exposure prophylaxis in adults who are at high risk of exposure to COVID-19 cases. *(Moderate certainty of evidence; Strong recommendation)*

We recommend against the use of HCQ for post-exposure prophylaxis in adults who are exposed to COVID-19 cases. *(Low certainty of evidence; Strong recommendation)*

Updated as of 12 Apr 2021

Ivermectin

Should ivermectin be used as COVID-19 prophylaxis for the general population?
We recommend against the use of ivermectin as COVID-19 prophylaxis for the general population. *(Very low certainty of evidence; Strong recommendation)*

We recommend against the use of ivermectin for COVID-19 as post-exposure prophylaxis for household contacts of confirmed COVID-19 patients. *(Very low certainty of evidence; Strong recommendation)*

We recommend against the use of ivermectin for COVID-19 as prophylaxis for healthcare workers. *(Very low certainty of evidence; Strong recommendation)*

Updated as of 17 Apr 2021

Lopinavir/Ritonavir

Should lopinavir/ritonavir be used as prophylaxis for the prevention of COVID-19?

We recommend against the use of lopinavir/ritonavir for chemoprophylaxis in individuals exposed to COVID-19 patients. *(Very low certainty of evidence; Strong recommendation)*

Updated as of 12 Mar 2021

Melatonin

Should melatonin be used in the prevention of COVID-19 infection?

We recommend against the use of melatonin as prevention for COVID-19 infection. *(Very low certainty of evidence; Strong recommendation)*

Updated as of 26 Feb 2021

Saline Nasal Irrigation

Should saline nasal irrigation be used for the prevention of COVID-19?

There is insufficient evidence to recommend the use of saline nasal irrigation (SNI) to prevent COVID-19 in healthy individuals. *(Very low certainty of evidence)*

Steam Inhalation

Should steam inhalation be used for the prevention of COVID-19?

We recommend against the use of steam inhalation in the prevention of COVID-19. *(Very low certainty of evidence; Strong recommendation)*

Updated as of 12 Mar 2021

Vitamin D

Should Vitamin D supplementation be used in the prevention of COVID-19 infection?

We recommend against the use of Vitamin D supplementation to prevent COVID-19 infection. *(Very low certainty of evidence; Strong recommendation)*

Updated as of 18 Mar 2021

Zinc

Should zinc supplementation be used in the prevention of COVID-19 infection?

We recommend against the use of zinc supplementation to prevent COVID-19 infection. *(Very low certainty of evidence; Strong recommendation)*

Updated as of 18 Mar 2021

Living Recommendations on Adjunct Interventions for Treatment of COVID-19

Anti-septic mouthwash or gargles

Should antiseptic mouthwashes or gargles be used as adjunctive and preventive treatment for COVID-19 infection?

We recommend against the use of any antiseptic mouthwash as an adjunctive therapy for patients with COVID-19. *(Very low certainty of evidence, Strong recommendation)*

We recommend against the use of any antiseptic mouthwash to prevent COVID-19 in healthy individuals. *(Very low certainty of evidence, Strong recommendation)*

Updated as of 21 Dec 2021

Aspirin as maintenance therapy

Should aspirin, taken as maintenance therapy for underlying medical conditions, be discontinued in patients with COVID-19?

There is insufficient evidence to recommend discontinuation of aspirin as maintenance therapy for underlying medical conditions in patients with COVID-19. *(Very low certainty of evidence)*

Updated as of 02 Jun 2021

Fatty Acids

Should oral fatty acid supplements be used as adjunct treatment for patients with COVID-19?

There is insufficient evidence to recommend the use of fatty acid supplements as adjunctive treatment for patients with COVID-19. *(Low certainty of evidence)*

Updated as of 16 Apr 2021

Ibuprofen

Does the concurrent use of Ibuprofen worsen COVID-19 outcomes?

We suggest that ibuprofen may still be used as symptomatic treatment of patients with COVID-19 infection if clinically warranted. Concurrent use of ibuprofen is not associated with worsening of COVID-19 outcomes. *(Very low certainty of evidence; Weak recommendation)*

Updated as of 13 Mar 2021

Lagundi (*Vitex negundo)*

Should lagundi *(Vitex negundo)* be used as adjunctive treatment for COVID-19 infection?

There is no evidence to recommend Lagundi (Vitex negundo) as adjunctive treatment for patients with COVID-19 infection.

Updated of 29 Oct 2021

Melatonin

Should melatonin be used in the adjunctive treatment of COVID-19?

There is insufficient evidence to recommend the use of melatonin as adjunct treatment for patients with COVID-19 infection. *(Very low certainty of evidence)*

Updated as of 20 Feb 2021

Nasal Sprays

Should nasal sprays be used in the prevention and treatment of COVID-19 infection?

We suggest against the use of nasal spray as an adjunct to treatment of COVID-19 infection (*Low certainty of evidence, Weak recommendation)*

Updated as of 03 Dec 2021

N-acetylcysteine

Should N-acetylcysteine be used as an adjunct treatment for patients diagnosed with COVID-19?

We recommend against the use of intravenous N-acetylcysteine as adjunct treatment for patients with COVID-19 infection. *(Moderate certainty of evidence; Strong recommendation)*

Updated as of 20 Feb 2021

Renin-Angiotensin-Aldosterone System Blockers (RAAS)

Should RAAS blockers be continued in patients with COVID-19?

We recommend continuing maintenance RAAS blockers for hypertension among patients with COVID-19 infection. *(Moderate certainty of evidence; Strong recommendation)*

Updated as of 13 Mar 2021

Statins

Should statins be used as adjunctive treatment for COVID-19 infection?

There is insufficient evidence to recommend statins as adjunctive treatment in patients with COVID-19. *(Very low certainty of evidence)*

Updated of 29 Oct 2021

Tawa-tawa *(Euphorbia hirta)*

Should tawa-tawa *(Euphorbia hirta)* be used as adjunctive treatment for COVID-19 infection?

There is no evidence to recommend Lagundi (Vitex negundo) as adjunctive treatment for patients with COVID-19 infection.

Updated of 29 Oct 2021

Virgin Coconut Oil

Should virgin coconut oil be used in the adjunctive treatment of COVID-19?

There is no evidence to recommend the use of virgin coconut oil as adjunct treatment for patients with COVID-19 infection.

Updated as of 20 Feb 2021

Vitamin B

Should B Vitamins be used as an adjunct in the treatment of COVID-19?

We suggest against the use of B vitamins as adjunct in the treatment of patients with COVID-19. *(Very low certainty of evidence; Weak recommendation)*

Updated as of 16 Apr 2021

Vitamin C

Should Vitamin C be used as adjunct treatment for COVID-19?

There is insufficient evidence to recommend the use of Vitamin C as adjunct treatment for patients with COVID-19 infection. *(Low certainty of evidence)*

Updated as of 21 Dec 2021

Vitamin D

Should Vitamin D supplements be used as adjunct treatment for COVID-19?

There is insufficient evidence to recommend the use of Vitamin D supplementation as adjunct treatment for patients with COVID-19 infection. *(Very low certainty of evidence)*

Updated as of 03 Dec 2021

Zinc

Should zinc be given as an adjunct treatment to patients diagnosed with COVID-19 infection?

There is insufficient evidence to recommend the use of zinc as adjunct treatment for patients with COVID-19 infection. *(Low certainty of evidence)*

Updated as of 21 Dec 2021