



MINISTRY OF HEALTH
REPUBLIC OF INDONESIA



german
cooperation

DEUTSCHE ZUSAMMENARBEIT

Implemented by:

giz

Deutsche Gesellschaft
für Internationale
Zusammenarbeit (GIZ) GmbH



ASEAN HEALTH PROTOCOL FOR PANDEMIC PREVENTIVE MEASURES IN PUBLIC PLACES





ASEAN Health Protocol for Pandemic Preventive Measures in Public Places

The ASEAN Secretariat
Jakarta

The Association of Southeast Asian Nations (ASEAN) was established on 8 August 1967. The Member States are Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand and Viet Nam.

The ASEAN Secretariat is based in Jakarta, Indonesia.

For inquiries, contact:

The ASEAN Secretariat

Community Relations Division (CRD)

70A Jalan Sisingamangaraja

Jakarta 12110, Indonesia

Phone: (62 21) 724-3372, 726-2991

Fax: (62 21) 739-8234, 724-3504

E-mail: public@asean.org

Catalogue-in-Publication Data

ASEAN Health Protocol for Pandemic Preventive Measures in Public Places
Jakarta, ASEAN Secretariat, November 2022

616.2414

1. ASEAN – Communicable Disease Control – Covid-19
2. Health Protocol - Guidelines

ISBN 978-623-5429-10-6 (EPUB)



ASEAN: A Community of Opportunities for All

The text of this publication may be freely quoted or reprinted, provided proper acknowledgement is given and a copy containing the reprinted material is sent to the Community Relations Division (CRD) of the ASEAN Secretariat, Jakarta.

General information on ASEAN appears online at the ASEAN Website: www.asean.org

Copyright Association of Southeast Asian Nations (ASEAN) 2022.

All rights reserved.



MINISTRY OF HEALTH
REPUBLIC OF INDONESIA



Implemented by:
giz Deutsche Gesellschaft
für Internationale
Zusammenarbeit (GIZ) GmbH



ASEAN HEALTH PROTOCOL FOR PANDEMIC PREVENTIVE MEASURES IN PUBLIC PLACES

Strengthening Regional Initiatives in ASEAN on COVID-19 Response
and other Public Health Emergencies

(The ASEAN COVID-19 Health Protocol)

Table of Content



- Introduction..... 4**

- SARS-CoV-2 and the COVID-19 Pandemic 6**
 - Covid-19 Transmission6
 - Reproductive number of coronaviruses7
 - Incubation, infectious period, symptoms, and complications8
 - New variants of the virus that causes covid-19.....9
 - Implications for preventing transmission.....10
 - Transition from pandemic to endemic.....10

- Strategies to break COVID-19 infection 12**
 - Community-based preventive measures13
 - A.1 Screening of individuals to prevent community exposures to active COVID-19 cases.....13
 - A.2 Proper ventilation in the community setting.....17
 - A.3 Enhanced cleaning and disinfection in the community setting17
 - A.4 Physical distancing measures in the community setting.....17
 - A.5 Promotion of personal preventive practices18
 - Personal preventive measures18
 - B.1 Vaccination18
 - B.2 Hand hygiene, respiratory etiquette, and wearing masks.....18
 - B.3 Ventilation.....19
 - B.4 Cleaning and disinfection19
 - B.5 Self-monitoring, self-reporting, isolation, and quarantine19
 - B.6 Other personal preventive practices.....20

- Measurements on specific settings 21**
 - *General guidelines*23

- Provide and maintain adequate ventilation by:.....23**
 - *Specific measures: point of entry*28
 - *Specific measures: ports*.....31

- Provide and maintain adequate ventilation by:.....32**
 - *Specific measures: public transports*.....32

- Provide and maintain adequate ventilation by:.....32**

- Maintain cleaning and disinfection by:.....32**
 - *Public transport*33
 - *Specific measures: mice*35

Provide and maintain adequate ventilation by:	37
● Increase outdoor air flow by opening windows and doors. Maintain openings throughout the day, if possible, to provide a steady flow of fresh air into the room.....	37
● keep systems running longer hours, if possible 24/7, to enhance the two actions above.....	37
● consider portable room air cleaners with hepa filters.....	37
■ <i>Specific measures: grocery store</i>	<i>39</i>
Provide and maintain adequate ventilation by:	39
Maintain cleaning and disinfection by:	39
■ <i>Shopping centres</i>	<i>41</i>
■ <i>Specific measures: beauty and hair care facility</i>	<i>43</i>
Provide and maintain adequate ventilation by:	43
Provide and maintain adequate ventilation by:	43
● combining natural and mechanic ventilation, if possible.....	44
■ <i>Specific measures: restaurants</i>	<i>48</i>
■ <i>Specific measures: hotel, lodging, and homestays</i>	<i>50</i>
■ <i>Specific measures: sport facilities</i>	<i>52</i>
■ <i>Specific measures: religious places</i>	<i>54</i>
■ <i>Specific measures: tourism sites.....</i>	<i>56</i>
Provide and maintain adequate ventilation by:	56
Monitoring and evaluation framework for the asean covid-19 health protocol ...	58
Annex operational definition	64
Bibliography.....	68

Introduction

ASEAN Member States (AMS) have continued to respond rapidly to the outbreak of the novel coronavirus SARS-CoV-2 (COVID-19), declared by World Health Organisation (WHO) as a Public Health Emergency of International Concern¹, since January 2020. ASEAN has recognised early that the severity of the pandemic impact among AMS would be varied and is dependent on the capacity of public health systems, the size of the informal sector, the initial government containment measures and the economic stimulus response.² Guided by the spirit of the Charter³ and the nature of how ASEAN carried out initiatives, ASEAN has understood that addressing the pandemic crisis requires a coordinated action in the region to overcome the pandemic that is proactive, all-encompassing (whole-of-community), flexible and agile⁴. This has driven the planning and implementation of (1) ASEAN Rapid Assessment: The Impact of COVID-19 on Livelihoods across ASEAN, which findings led to the development and endorsement of (2) The ASEAN Comprehensive Recovery Framework (ACRF), and (3) The ACRF Implementation Plan.

The ASEAN Comprehensive Recovery Framework, known as ACRF, is ASEAN consolidated exit strategy from the pandemic crisis by (1) focusing on key sectors and vulnerable groups that are most affected by the pandemic and (2) identifying measures for a comprehensive recovery in line with sectoral and regional priorities. This is implemented through five key priorities: “Enhancing Health Systems”, “Strengthening Human Security”, “Maximizing the Potential of Intra-ASEAN Market and Broader Economic Integration”, “Accelerating Inclusive Digital Transformation”, and “Advancing towards a More Sustainable and Resilient Future”.⁴ The framework aims to build a more resilient, inclusive, and sustainable recovery in line with the ASEAN Community Vision 2025 and beyond. The ACRF Implementation Plan outlines the detailed activities to accelerate and mobilise actions of the ACRF strategy.

Developing Health Protocol in Public Places is one of the key priorities and deliverables that ASEAN articulates under the Board Strategy 1 of Strengthen Health System. This is planned to be achieved by strengthening prevention and preparedness, detection, and response and resilience to emerging/re-emerging infectious diseases, public health emergencies and pandemics; and strengthening relevant regional coordination mechanisms including development of health protocols or frameworks during recovery phase⁴. Health Protocol is viewed as one of the key elements to a comprehensive and integrated health measure towards safe re-opening of ASEAN while enabling effective and efficient coordination of risk mitigation among the Member States.

The ASEAN Health Protocol for Pandemic Preventive Measures in Public Places has the purpose to provide guidance and measurements in preventing and controlling transmission of COVID-19 in the ASEAN community, specifically in public settings stated in this document.

Embedded to the Health Protocol is the Operationalising Guidelines that serves as a supporting document to the Health Protocol. The Operationalising Guidelines provides explanatory material to detail the Health Protocol to assist stakeholders in applying the Health Protocol. The material in the Operationalising Guidelines should be viewed as a supplement to the health protocol.

The Health Protocol and the Operationalising Guidelines should be used on a voluntary basis in accordance to the context and regulation in each ASEAN Member State due to the notable difference in pandemic status across ASEAN Member States, among others.

SARS-CoV-2 and the COVID-19 Pandemic

Coronavirus Disease 2019 or COVID-19 is an infectious disease caused by the Severe Acute Respiratory Syndrome Coronavirus 2 ('SARS-CoV-2' or 'the coronavirus'). This novel coronavirus has never been identified in human before 2019. On 31 December 2019, WHO China Country Office reported a case of pneumonia of unknown etiology found in the city of Wuhan, Hubei Province, China followed by subsequent cases across the province, which later confirmed as being caused by a new coronavirus species on 7 January 2020.

By 30 January 2020, the World Health Organization (WHO) declared the COVID-19 outbreak as a Public Health Emergency of International Concern (PHEIC) due the rapid infectious nature of the disease. This status escalated into a pandemic by 11 March 2020 less than three months from its identification.

The coronavirus was believed to be zoonotic in origin (spread from an animal to human). Initially, it has an average incubation period of 5 to 6 days, which ranges between 1 and 14 days. Transmission risk is higher in the earlier days of the clinical period due to the high viral load in the secretions, such as saliva or respiratory droplets. Transmission from infected patients can occur as early as 48 hours before the clinical period (pre-symptomatic patients) and up to 14 days after the onset of the symptoms.

The latest epidemiological report by WHO stated that as per 13 March 2022, COVID-19 has claimed more than 6 million deaths with over 455 million confirmed cases worldwide.^{5,6} In ASEAN, there were over 29 million confirmed cases with over 342,000 deaths.⁷

COVID-19 Transmission⁸⁻¹⁴

Current epidemiological and virology studies suggest that the coronavirus is mainly transmitted through close contact via droplets.

SARS-CoV-2 is mostly transmitted through infected respiratory droplets. It replicates in the respiratory tract, with the maximum viral load occurring soon before symptom onset or within the first 3-5 days of symptoms. Asymptomatic infection can also result in transmission.

Infection occurs when respiratory droplets come into direct or indirect contact with the skin. The majority of transmission happens through close contact:

1. Individuals who are physically close to (within 1 metre) or have direct contact with a person who has COVID-19 are at a higher risk of infection than those who remain more than 1 metre away from cases. Transmission studies indicate that household members are most at risk

2. Infections are spread mostly through contact with respiratory droplets from someone who has COVID-19. Breathing, talking, coughing, sneezing, and behaviours such as singing and shouting, produce respiratory droplets of varied sizes
3. Via respiratory droplets, which cause infection through three principal ways:
 - a. Inhalation of very fine respiratory droplets and aerosol particles
 - b. Deposition of respiratory droplets and particles on exposed mucous membranes in the mouth, nose, or eye by direct splashes and sprays; and
 - c. Touching mucous membranes with hands that have been soiled either directly by virus-containing respiratory fluids or indirectly by touching surfaces with virus on them.

Pathogens that are mostly transmitted through close contact can occasionally be disseminated by aerosols. The following circumstances appear to have resulted in airborne transmission of SARS-CoV-2:

- a. Enclosed spaces in which an infectious person exposed susceptible people concurrently or shortly after the infectious person left the space
- b. Increased exposure to respiratory particles, which are frequently generated during expiratory exertion (e.g., shouting, singing, exercising) and thus increase the concentration of suspended respiratory droplets in the air space
- c. Inadequate ventilation or air handling that did not adequately remove suspended respiratory droplets.

It is critical to identify pre-symptomatic individuals in order to prevent transmission. Pre-symptomatic individuals account for around 12.6% of transmission.¹⁵ Therefore, understanding the pre-symptomatic period is important to identify possible cluster of transmission.

Reproductive number of coronaviruses

The reproductive number of coronaviruses provides insight into the potential for disease transmission. The basic reproductive number (R_0) of SARS-CoV-2 is estimated to be between 2-4, with R_0 for confined settings. R_0 for the Delta version is expected to be between 2 and 4 while for Omicron, the R_0 is four times greater than Delta variant.

Estimates of the effective reproductive number vary across places and at different time points. These are influenced by a variety of factors, including public health interventions such as isolation, quarantine, and physical separation to prevent close contact between people¹⁵. Recent identification of SARS-CoV-2 variations indicates that some strains have a dramatically greater risk of transmission, which is related with increased viral load.

Incubation, infectious period, symptoms, and complications¹⁶⁻¹⁸

The incubation period is the time interval between virus exposure and the start of symptoms. According to the World Health Organization (WHO), the incubation time for COVID-19 is now estimated to be between 1 and 14 days, with a median of 5 to 6 days and for Omicron, it only takes about 3 days of incubation period. Certain case series indicate that the incubation period can last up to 17 days. The majority of persons develop symptoms between 5 and 6 days after coming into touch with another infected person, however symptoms can last up to 14 days. Around 1% of COVID-19 cases will present with symptoms more than 14 days after infection. The recommendation recommends a maximum of 14 days for public health interventions such as quarantine and isolation.

Epidemiological evidence to date indicates that most transmission occurs through symptomatic individuals. COVID-19 appears to be infectious for 1-3 days prior to the development of symptoms, with most of the subsequent transmission occurring early after infection.

Clinical manifestation from COVID-19 tend occurred in phases.

Table 1. List of COVID-19 Symptoms

Source: Coronavirus, WHO¹⁶

Most common symptoms	Less common symptoms	Serious symptoms
Fever or chills	Sore throat	Difficulty breathing, shortness of breath
Cough	Headache	Loss of speech or mobility or confusion
Tiredness	Muscle aches and pains	Chest pain
Loss of taste or smell	Diarrhea or gastroabdominal pain	
	A rash on skin, or discoloration of fingers or toes	
	Red or irritated eyes	

Data from countries affected by the outbreak suggested that among the infected people, around 40% will develop mild symptoms, 40% will develop moderate symptoms including pneumonia, 15% will develop severe symptoms, and 5% will be critically ill. Mild cases will typically recover in one week. However, severe cases may develop acute respiratory distress syndrome (ARDS), sepsis, septic shock, multi-organ failure such as acute kidney injury and acute heart failure, and ultimately, death. Older people and people with previous chronic conditions are at higher risk to develop severe symptoms.

Molecular examination is viewed by WHO as the standard test to be performed for all people with suspected exposure to the virus. The current recommended method is using nucleic acid amplification test (NAAT), such as RT-PCR (reverse transcription polymerase chain reaction).

New variants of the virus that causes COVID-19¹⁹⁻²⁰

By nature, viruses constantly evolves through mutation, and with COVID-19, viral variants are expected to emerge over time. Between January-February 2020, a strain of SARS-CoV-2 with a D614G mutation in the gene encoding the spike protein appeared. The strain with D614G mutation gradually displaced the initial SARS-CoV-2 strain found in China and become the virus's predominant form circulating globally by June 2020. This mutation has improved infectivity and transmission compared to the initial viral strain.

The development of variants associated with an increased risk to global public health led to the classification of specific Variants of Interest (VOIs) and Variants of Concern (VOCs), and eventually influenced the ongoing response to the COVID-19 pandemic.

Variants of Interest (VOIs)

- A variant with distinct genetic markers linked with altered receptor binding, decreased neutralisation by antibodies developed against past infection or vaccination, decreased treatment efficacy, potential diagnostic impact, or projected increase in transmissibility or disease severity.
- At the time of publishing the Health Protocol, there are two known VOIs:
 - Lambda: First documented in Peru, December 2020
 - Mu: This variant emerged in Colombia, January 2021.

Variant of Concern (VOCs)

- A SARS-CoV-2 variation that satisfies the definition of a VOI (see above) and has been shown to be linked with one or more of the following modifications at a level of global public health relevance through comparative analysis:
 - Increase in transmissibility or detrimental change in COVID-19 epidemiology; or
 - Increase virulence or a change in clinical illness presentation; or
 - Decrease in the efficiency of public health and social measures, as well as current diagnostics, vaccines, and therapies.
- At the time of publishing this Health Protocol, reports from international experience indicate that the most common variants of COVID-19 circulating globally are¹⁹⁻²⁰:
 - Alpha: The United Kingdom identified a variant (B.1.1.7), with a large number of mutations in September 2020
 - Beta: This variant emerged in South Africa (B.1.351) independently of B.1.1.7. Originally detected in early May 2020, B.1.351 shares some mutations with B.1.1.7
 - Gamma: This emerged in Brazil (P.1) and was first identified in travellers from Brazil who were tested during routine screening at an airport in Japan in early January 2021. It contains a set of additional mutations that may affect its ability to be recognised by antibodies. The earliest documented samples of this variant are from November 2020

- Delta: First detected in October 2020 in India (B.1.617.2)
- Omicron: First reported in November 2021 from South Africa (B.1.1.529).

Variant of High Consequence (VOHC)

- A variant of high consequence has conclusive evidence that preventative or therapeutic interventions are much less effective than previously circulating versions.
- A variant of high consequence needs notice to WHO in accordance with International Health Regulations, reporting to the CDC, the announcement of methods for preventing or containing transmission, and recommendations for updating treatments and immunizations.
- At the time of publication to the Health Protocol, no SARS-CoV-2 mutations of high importance have been found.

Implications for preventing transmission

From available information and studies, it is evident that restricting intimate contact between sick people and others is critical for breaking COVID-19 virus transmission chains. Therefore, it is critical to understand how, when, and in which contexts infected people transmit the virus in order to develop and execute control methods that interrupt transmission chains. Transmission can be prevented most effectively by rapidly detecting suspect cases, testing them, and isolating infectious individuals. Additionally, it is necessary to identify all close contacts of sick individuals and isolate them to prevent further spread and break transmission chains. By quarantining close contacts, prospective secondary cases will be isolated from others before they develop symptoms or begin shedding virus, so limiting further forwards dissemination.

Preventive measures have been the main intervention to control the progression of the pandemic. In the community, core public health measures (PHM) include educating the community on personal preventive practices while also providing the necessary public facilities and policies that support these measures. These measurements are elaborated in section Strategies to break COVID-19 infection.

Transition from pandemic to endemic

As of end of January 2022, few of ASEAN Member States have covered 75% of their population with at least two-dose of COVID-19 vaccination. These achievements have changed the states' approaches to COVID-19 from pandemic to endemic, which views COVID-19 will always be present in a population within a specific location at regular and predictable levels. This means that it is not viewed as a one-time threat but as a part of everyday existence. Transmission can occur anywhere people congregate, necessitating consideration of how to facilitate safe interaction.

A proposed approach to COVID-19 management of endemic involved four interwoven elements²¹: Defining the new normal, tracking the progress, limiting illness and death, and slowing transmission.

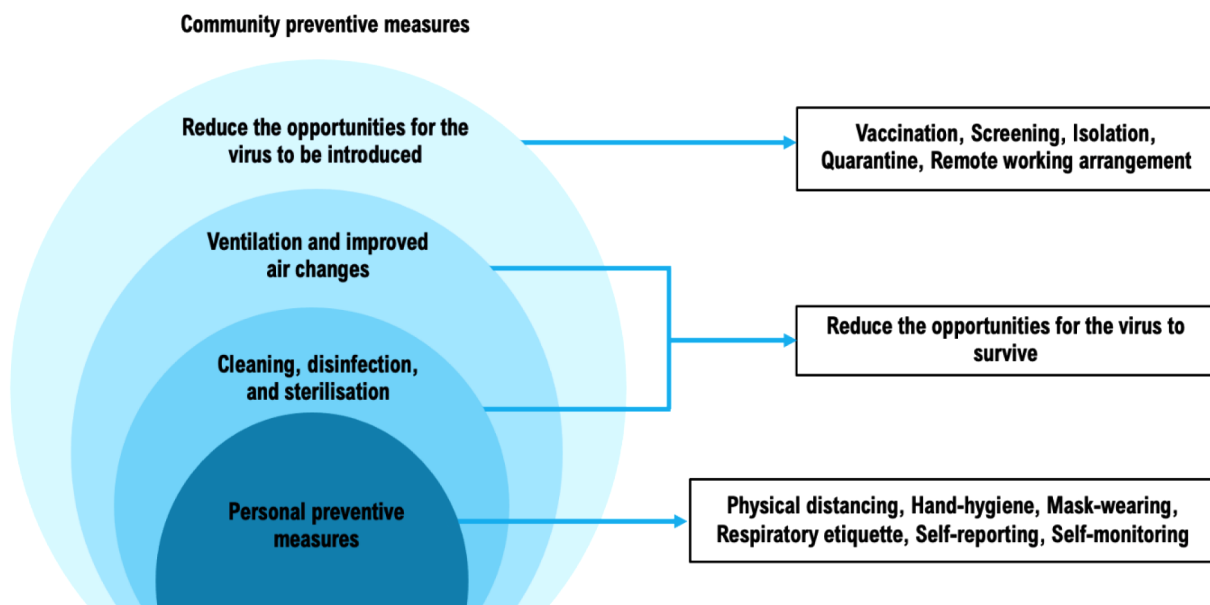
1. Defining the new normal is setting goals and target in term of disease burden relative to other condition. Local demographic, people sentiment, economic resilient, and vaccination status should inform the goals. This should be *realistic and balance the different needs of society and recognise the “whole of society” impact of COVID-19.*
2. Tracking progress involves monitoring progress against the established goals. This process can be achieved through disease surveillance such as hospitalisation and deaths, tracking non-health burden across society, and response monitoring. In addition, ongoing sequencing to track emerging SARS-CoV-2 variants is critical to manage endemic disease. Another measurement is ensure that public health measures are correctly deployed, and framework and threshold to activate or tighten public health policies, e.g., lockdown, masking mandates and travel restriction, are defined accordingly.
3. To establish a new normal in which continual COVID-19 transmission is recognised as a normal part of daily life, community must effectively reduce acute illness, the prevalence and persistence of long-term illnesses and COVID-19-related fatalities. All of these are necessary to minimise disruptions to human well-being, society well-being, and economic productivity. The coming challenge related in limiting illness and death will be on four fronts: vaccine research and administration, scaling up successful therapies, preparing health systems, and meeting the unique requirements of vulnerable communities.
4. Lastly, slowing transmission reduces the direct health impact of COVID-19, reduces the possibility of novel variations arising, and lessens the likelihood of epidemic outbreaks causing societal disruption in an endemic state. Four techniques are likely to become ingrained in this new normal: ubiquitous testing; safer contacts in workplaces, schools, and recreation and entertainment venues; and rapid reaction to transmission hotspots. As such, it should be anticipated that a widespread readily available rapid testing, a safer interaction in public places, workplaces, schools, and recreation, adequate coordination across jurisdictions and a rapid response to transmission hotspot are regular elements to daily life in the new normal.

Strategies to break COVID-19 infection

COVID-19 preventive measures are developed by modelling the hierarchy of controls which is commonly used to achieve practical and effective controls of workplace hazards²². The preventive measures are established through layers of protection between community preventive measures and personal preventive measures. Depicted within the multiple circle layers below the more adequate controls are on the outer circle whereas the least effective controls are on the inner circle. The multiple layers can be implemented at the same time and/or following on from each other. The multiple layers of COVID-19 preventive measures consist of:

- Any measure to reduce the opportunities for the virus to be introduced. This includes screening of individuals to prevent community exposures to active COVID-19 cases, vaccination, isolation, quarantine, and remote working arrangement
- Any measure to reduce the opportunities for the virus to survive. This includes ventilation and improved air circulation, surface cleaning, disinfection, and sterilisation, and physical distancing
- Any measures to reduce the opportunities for the virus to contact with human. This includes all personal preventive practices.

Figure 1. Public Health Measures Strategy



Community-based preventive measures

Community-based measures are Public Health Measure/PHM that apply to settings where the public gathers, such as businesses and workplaces, community gatherings and events, outdoor recreational spaces, and public transportation. These measures mainly adopt personal preventive practices but are applied at a public level, to ensure compliance of individuals. In addition, these measures will form the foundation for the health protocol. The core PHM that applies all community settings consists of measures consist of^{f23-25,32}:

- **Screening of individuals to prevent community exposures to active COVID-19 cases**
- **Providing vaccination roll-out**
- **Proper ventilation**
- **Enhanced cleaning and disinfection at the community setting**
- **Physical distancing measures such as limiting the capacity of mass gatherings**
- **Promoting personal preventive measure.**

A.1 Screening of individuals to prevent community exposures to active COVID-19 cases

The purpose of this measurement is to minimise virus transmission from an active case to the community. There are various methods for screening, ranging from sign and symptoms check up to the use of rapid test tools. The appropriate methods should consider the risk assessment of the current level of active cases and the settings of the public place. Moreover, screening could also be divided into passive and active screening. Passive screening involves individuals' awareness to self-monitor and self-report. In the community setting, this should be reinforced by placing signage to remind individuals to monitor any symptoms, to not enter the settings when they develop symptoms, and to provide information and assistance for suspected active cases to seek care or self-isolate. During this pandemic, passive screening measures should be maintained regardless of virus activity.

In contrast, active screening measures will vary depending on the virus activity and the community settings. Active screening should be prioritised in settings where physical distancing is not possible, such as in hospitality and hair care facilities, or when people are confined indoor for a prolonged period, such as during travel, meeting, or training. In active screening, individuals are asked or assessed whether they are at risk of transmitting the virus. These measures may consist of self-assessment forms, directly asking the questions, or performing tests such as temperature check or rapid testing. When active screening is done in person, it is also necessary to ensure that the screening site is safe from exposure risk and that all the workers involved are protected from transmission

Border screening

As countries gradually resume or readjust non-essential international travel, the introduction of risk mitigation measures aiming to reduce travel-associated exportation, importation, and onward transmission of SARS-CoV-2 should be based on risk assessments which is related to the country strategy for

controlling COVID-19^{26,27}. Community transmission, public health infrastructure in both of the origin and destination countries and their ability to appropriately detect cases and implement isolation and quarantine is an important factor in reduction of COVID-19 transmission²⁸.

This guideline provides a mitigation consideration and the appropriate degree of security against importation of COVID-19 cases through international travel by introducing restriction based on several variables. The epidemiological situation, vaccination status, pre-departure and on arrival testing, and strict quarantine are the variable to be approached to minimise the risk of SARS-CoV-2 transmission. Therefore, a mitigation consideration were developed through the below steps. These are adopted from OECD initiative for safe international mobility during the COVID-19 pandemic²⁹ (p.14-16):

1. *Adopt country's epidemiological criteria to define risk levels*

- *The common adopted epidemiological criteria for COVID19 includes²⁹:*
 - **Notification rate**
This is defined as a total number of newly notified COVID19 cases per 100 000 population in the previous 14 days at national, or as appropriate, sub-national level
 - **Test positivity rate**
This is defined as the percentage of positive tests among all tests for COVID19 infection carried out during the previous week
 - **Testing rate**
This is defined as the number of tests for COVID19 infection per 100 000 population carried out during the last week.
- *Define green, orange, red, and dark red categories of risk according to the severity of community spread of the SARSCoV2 virus in each country or region, calculated every two weeks, as indicated below:*
 - a. **Green**, *if the notification rate is less than 25 and the test positivity rate is less than 4%*
 - b. **Orange**, *if the notification rate is less than 50 but the test positivity rate is 4% or more, or, if the notification rate ranges from 25 to 150 but the test positivity rate is less than 4%*
 - c. **Red**, *if the notification rate is 50 or more and the test positivity rate is 4% or more, or if the notification rate is more than 150*
 - d. **Dark red**, *if the notification rate is 500, or if there is high prevalence of new variants of concern*
 - e. **Grey**, *if not sufficient information is available or if the testing rate is 300 or less.*

2. *Collect travellers' status of vaccination*

In line with national regulations, travellers should provide proof of vaccination that will lead to a different tests and quarantine requirements.

3. Determine travel protocols: Unvaccinated/Partially Vaccinated AND Fully Vaccinated

- **Requirements for Unvaccinated or Partially Vaccinated Travellers**

- **Level 1 requirements, to be applied when country of departure is coded green**
Evidence of a negative RT-PCR test conducted up to 48 hours from departure will be requested from travellers, who will be recommended to self-isolate between test and departure. Travellers will be requested to have a second RT-PCR test on arrival and 7 days of quarantine. Travellers may leave quarantine starting from day 7 if post-entry RT-PCR/RDT-Ag test take in the day 6 is negative.
- **Level 2 requirements, to be applied when country of departure is coded orange:**
Evidence of a negative RT-PCR test conducted up to 48 hours from departure will be requested from travellers, who will be recommended to self-isolate between test and departure. Travellers will be requested to have a second RT-PCR test on arrival and 7-10 days of quarantine. Travellers may leave quarantine starting from day 7 (where allowed) if post-entry RT-PCR/RDT-Ag test take in the day 6 is negative.
- **Level 3 requirements, to be applied when country of departure is coded red:**
Evidence of a negative RT-PCR test conducted up to 48 hours from departure will be requested from travellers, who will be recommended to self-isolate between test and departure. Travellers will be requested to have a second RT-PCR test on arrival and 10 days of quarantine. Travellers may leave quarantine starting from day 10 if post-entry RT-PCR/RDT-Ag test take in the day 9 is negative.
- **Level 4 requirements, to be applied when country of departure is coded grey:**
Travel will only be allowed for travellers with an essential function or for the return of citizens or permanent residents. All other requirements in Level 3 apply.

- **Requirements for Fully Vaccinated Travellers**

- **Level 1 requirements, to be applied when country of departure is coded green:**
Evidence of a negative RT-PCR 72 hours from departure or RDT Antigen 48 hours from departure will be requested from travellers, who will be recommended to self-isolate between test and departure. Travellers will be requested to have a second RT-PCR or RDT-Antigen test on arrival and no quarantine to 7 days of quarantine (according to the destination country policy). Traveller may leave quarantine earlier if they receive negative results of COVID-19 testing starting from arrival date until day 7 if post-entry RT-PCR/RDT-Ag test take in the day before is negative.
- **Level 2 requirements, to be applied when country of departure is coded orange:**
Evidence of a negative RT-PCR 72 hours from departure or RDT Antigen 48 hours from departure will be requested from travellers, who will be recommended to self-isolate between test and departure. Travellers will be requested to have a second RT-PCR or RDT-Antigen test on arrival and no

quarantine to 7 days of quarantine (according to the destination country policy). Traveller may leave quarantine earlier if they receive negative results of COVID-19 testing starting from arrival date until day 7 if post-entry RT-PCR/RDT-Ag test take in the day before is negative.

- o **Level 3 requirements, to be applied when country of departure is coded red:**
Evidence of a negative RT-PCR 72 hours before departure or RDT Antigen 48 hours from departure will be requested from travellers, who will be recommended to self-isolate between test and departure. Travellers will be requested to have a second RT-PCR or RDT-Antigen test on arrival and 7 to 10 days of quarantine (according to the destination country policy). Travellers may leave quarantine starting from day 7 if post-entry RT-PCR/RDT-Ag test take in the day 6 is negative.
- o **Level 4 requirements, to be applied when country of departure is coded grey:**
Travel will only be allowed for travellers with an essential function or for the return of citizens or permanent residents. All other requirements in Level 3 apply.

Table 1. Epidemiological situation risk-based travel protocol

Source: OECD, 2021²⁹ with adjustment

Epidemiological situation risk-based travel protocol					
Risk levels	Category of risk		Testing required		Length of required quarantine
	Departure country	Vaccination Status	Pre departure	Entry	
1	Green	Unvaccinated /partial vaccinated	RT-PCR, 48 hours from departure	RT-PCR on arrival. Traveller may leave quarantine starting from day 7 if post-entry RT-PCR/RDT-Ag test is negative.	7 days
2	Orange		RT-PCR, 48 hours from departure	RT-PCR on arrival. Traveller may leave quarantine starting from day 7 if post-entry RT-PCR/RDT-Ag test is negative.	7-10 days
3	Red		RT-PCR, 48 hours from departure	RT-PCR on arrival. Traveller may leave quarantine starting from day 10 if post-entry RT-PCR/RDT-Ag test is negative.	10 days
4	Dark red		Essential travel or citizen/resident return only. Other Level 3 requirements apply.		
1	Green	Fully vaccinated	RT-PCR 72 hours from departure or RDT Antigen 48 hours from departure	RT-PCR/ RDT-Ag on arrival. Traveller may leave quarantine starting from day 7 if post-entry RT-PCR/RDT-Ag test is negative.	0-7 days
2	Orange		RT-PCR 72 hours from departure or RDT Antigen 48 hours from departure	RT-PCR/ RDT-Ag on arrival. Traveller may leave quarantine starting from day 7 if post-entry RT-PCR/RDT-Ag test is negative.	0-7 days
3	Red		RT-PCR 72 hours from departure or RDT Antigen 48 hours from departure	RT-PCR/ RDT-Ag on arrival. Traveller may leave quarantine starting from day 7 if post-entry RT-PCR/RDT-Ag test is negative.	7-10 days
4	Dark red		Essential travel or citizen/resident return only. Other Level 3 requirements apply.		

A.2 Proper ventilation in the community setting³⁶

SARS-CoV-2 transmission is more likely effective in densely populated, confined indoor environments with little or no ventilation where infected people spend extended amounts of time in close proximity. These are the conditions in which the virus appears to propagate most efficiently via respiratory droplets or aerosols. Therefore, a proper ventilation may help lower the chance of contracting COVID-19.

Improving ventilation, airflow, and availability to fresh air all contribute to reducing the risk of SARS-CoV-2 transmission in any indoor environment, including non-residential settings such as offices, commercial spaces, retail outlets, and any other public area. Ventilation is a critical protective layer in these non-residential contexts. Whenever possible, activities should be moved outdoors or conducted remotely. This is dependent on the status of vaccinations and infection in the community. Populations should be kept to a minimum to avoid the accumulation of potentially infectious droplets and aerosols in the air (e.g., occupancy limits, kerb side pickup, etc.).

A.3 Enhanced cleaning and disinfection in the community setting

In all settings, high touch areas, surfaces, and objects that are often touched with hands are the most prone to be contaminated. Money/cash, doorknobs, handrails, elevator buttons, light switches, cabinet handles, faucet handles, tables, worktops, and electronics are all examples of these surfaces. Such surfaces may also include toys and play/sports equipment in kid and adolescent environments.

Apart from basic cleaning and disinfection, high-touch surfaces and communal areas such as kitchens and bathrooms should be cleaned and disinfected more frequently. Remove any items that cannot be easily cleaned (e.g., newspapers, magazines, stuffed animals). Additionally, fully qualified cleaners should be on prepared to guarantee that cleaning is carried out properly, with the requisite personal protective equipment and disinfection substances. This is further elaborated in the operational guidelines.

A.4 Physical distancing measures in the community setting

Maintaining physical distance, or also known as physical distancing have also been the concern during this pandemic. This includes the act of minimising in-person interactions as much as possible among people from different households. This was done by making sure that interactions are as brief as possible, and whenever possible, a distance of 1 m is maintained among each person at all times. In addition, direct contact such as hugging, touching, shaking hands, and kissing should be avoided. In policy level, this practice leads to limiting capacity in indoor and outdoor settings based on the size of the area.

As mentioned before, physical distancing can reduce the risk of transmitting COVID-19 in community settings. Since transmission of COVID-19 is airborne through droplets, close interactions have a greater risk of transmission than interactions at a distance. Physical distance can be impracticable or unpredictable in some situations and may not be maintained over time in others. As a result, it is critical to layer with other mitigation strategies. Measures that could be considered that reduce the risk of transmission through contact include curb side pickup, contactless delivery, the use of virtual work arrangements. Virtual work arrangements may include work-from-home schemes or alternating work-from-office schedules. Furthermore, to protect vulnerable populations such as the elderly, designated shopping hours can be considered.

A.5 Promotion of personal preventive practices

In the community, compliance to personal preventive practices needs to be continuously informed. These include reminding and/or mandating the use of masks, maintaining physical distancing, promotion of hand hygiene and respiratory etiquette including providing the necessary facilities such as hand sanitising stations and waste containers. In addition, this promotion should also include information or policies to require individuals to stay at home when they develop symptoms and to get tested as soon as possible and enable work to be continued from home to ensure rapid isolation and management.

Personal preventive measures

Personal preventive practices are preventive measures employed by individuals to protect themselves from getting infected to infectious diseases. The strategies are standard precautions to basic infection prevention and control long before COVID-19. Hand hygiene, personal protection equipment, cleaning, and proper handling and disposal of sharps are the primary strategies for infection prevention and control in health care organisations, and they are consistently used as a critical method for limiting the spread of illnesses. There are at least six measurements to Personal Preventive Measures (PPM) define in this document^{24,25,30-32}:

- Vaccination
- Hand hygiene, respiratory etiquette, physical distancing and wearing masks
- Ventilation
- Cleaning and disinfection
- Self-monitoring, self-reporting, isolation, and quarantine
- Other personal preventive practices

B.1 Vaccination

Since its invention, vaccines have protected people from more than 20 life-threatening diseases. Once was deadly, diseases like influenza, measles, diphtheria, tetanus, and pertussis have now can be thwarted by vaccines. Because it works by exposing immune system to a harmless version of the virus, the body memorised this introduction by triggering a defense mechanism. This mechanism then protects the person to the real pathogen when exposed. For COVID-19, vaccines become a fundamental component to the prevention and control of this infectious outbreaks. The available vaccines have proven to significantly decrease COVID-19 disease and its associated deaths as well as prevent worsen outcome and further hospitalisation taking place³³.

B.2 Hand hygiene, respiratory etiquette, and wearing masks

Among the first basic preventive practices that were recommended early in the pandemic were hand hygiene and respiratory etiquette. Hand hygiene represents the action of regularly and thoroughly cleaning hands with disinfectants, such as alcohol rub or soap. The recommendation was to do this after being in contact with regularly touched surfaces, such as door handles, faucets, and phone screens.

Additionally, since the airborne nature of the disease has been identified early, coughing etiquette was also extensively informed. This is done by covering the mouth and nose when coughing or sneezing, with tissue or with the shirt sleeves while bending the elbows.

Adding to the layers of basic hygiene and respiratory etiquette, the use of masks has been mandated by almost all countries throughout the pandemic. Despite the controversies, there is ample evidence showing wearing masks help reduce transmission when used widely, appropriately, and in conjunction with physical distancing³⁴. The general guideline to appropriate wearing of masks includes masks that cover nose, mouth, and chin. Additionally, masks with valve are not recommended. This is because these valves do not block the particles of exhaled air, thus do not contain the virus if worn by infected people. Moreover, hand hygiene routine works in conjunction with wearing masks. For example, cleaning hands is recommended when putting on mask, taking it off, and when touching it at any time. In terms of the masks itself, a well fitted masks made of appropriate materials need to be standardised to ensure effective protection³⁵.

B.3 Ventilation³⁶

In all settings, public place activities should maximise the use of outdoor venues. However, when this is not possible, an appropriate ventilation system should be in place. Ventilation allows the introduction of fresh air into a room while removing stale air. Ventilation brings outside air into a structure or room and distributes it throughout the structure or room. If local outdoor conditions dictate, for example, a high particulate matter (PM) content, outdoor air may need to be treated prior to being introduced into the structure. Ventilation in buildings is generally used to guarantee that the air within is safe to breathe. This is usually accomplished mostly by diluting pollutants generated within the building with clean air and by providing an airflow rate sufficient to modify the air at a constant pace, thereby eliminating the pollutants. Ventilation is also used to regulate odours, confinement, and is frequently integrated with climate control (temperature and relative humidity). Even momentarily opening windows and doors (e.g., recess, lunch break) may benefit fresh air and ventilation.

B.4 Cleaning and disinfection

Cleaning and disinfection refer to the routine cleaning and disinfecting of frequently used surfaces and objects to help prevent the transmission of SARS-CoV-2 through self-inoculation.

B.5 Self-monitoring, self-reporting, isolation, and quarantine

All individuals should self-monitor for symptoms compatible with COVID-19 (fever, cough, shortness of breath, or other symptoms (please refer to section *Incubation, infectious period, symptoms, and complications* p.8-9). If symptoms develop, instructions on how to self-isolate should be provided. This should include on how to report the authority if they are in public places, when to seek medical attention, what appropriate facilities to isolate in depending on severity symptoms, and when to be tested.

- **Isolation:** the indications, instructions, and requirements to isolate vary among countries. Instruction to isolate might be indicated for suspected individuals developing symptoms, in close contact with a positive case, was in an area of exposure, or for confirmed individuals who tested positive on PCR or Antigen examination. Typically, these individuals are required to have a PCR or Antigen examination taken and asked to isolate until they receive a negative result. Current policies may also require individuals undergoing isolation until they completed the incubation period, and may exit isolation as long as they do not develop symptoms or tested negative on exit PCR or Antigen examination. If they develop aggravated symptoms, another test might be mandated, or individuals might be urged to seek medical help through their primary health care centres or private physicians.
- **Quarantine:** quarantine refers to the act of isolating individuals regardless of their infection status or symptoms. In this document, quarantine specifically refers to the mandated isolation due to travelling from different locations, ranging from different countries in ASEAN up to different regions in each country. The quarantine can be done in government-designated facilities or at home.

B.6 Other personal preventive practices

Other personal preventive practices include staying at home, staying informed with, and following the latest public health advice, and avoiding all non-essential travel. Appropriate lifestyle changes in regard to nutrition, exercise, sleep, smoking and alcohol intake may help in reducing risk of infection and aid in preventing severe COVID-19 diseases³⁷.

Measurements on specific settings

Some settings have additional considerations, and this requires a tailored approach that is based on the likelihood of individuals entering the setting, the vulnerability of people in a setting to experience COVID-19, and setting characteristic involves the degree to which individuals interact, as well as the type of interaction (remote or close), the duration of interaction (short or protracted), and the quantity of contacts (few or many). The frequency of interactions with potentially infectious high-touch surfaces and objects, and the environmental characteristics of the setting (e.g., ability to ventilate an indoor setting) are also important considerations²³.

Assessing risk and identifying risk mitigation measures to break the COVID-19 are integral to a safe operation on public health measurement within community settings This includes understanding the risk factors associated with COVID-19 transmission. Adopted from Jones et al study, Figure 2 presents a guide to how transmission risk may vary with setting, occupancy level, contact time, and whether face coverings are worn³⁸. The knowledge on level of risk of transmission can enable authority and ASEAN community to mitigate the risk of COVID-19 transmission.

According to Figure 2, preventive measures should be placed in the highest level of consideration when the settings are in the highest risk situations such as in indoor environments with poor ventilation, high levels of occupancy, prolonged contact time, and no face coverings. COVID-19 screening before entering the settings, minimising occupancy time, practicing physical distancing and other measures should be considered. Less stringent measures are likely to be adequate in low risk scenarios.

To provide the highest protection level for ASEAN community from COVID-19 transmission in a specific setting, this guideline present preventive measures for specific settings, which includes:

- Points of Entry
- Ports
- Meeting venues: Convention centre and others
- Public transportation
- Administrative offices
- Beauty and hair care facilities/premises
- Creative economy
- Shopping centre
- Traditional market
- Restaurants; Hotels, lodging and homestay
- Tourism sites
- Religious places
- Sport facilities

Figure 2. Risk of SARS-CoV-2 transmission³

Type and level of group activity	Low occupancy			High occupancy		
	Outdoors and well ventilated	Indoors and well ventilated	Poorly ventilated	Outdoors and well ventilated	Indoors and well ventilated	Poorly ventilated
Wearing face covering, contact for short time						
Silent Silent	Green	Green	Green	Green	Green	Yellow
Speaking	Green	Green	Green	Green	Green	Yellow
Shouting,singing	Green	Green	Yellow	Yellow	Yellow	Red
Wearing face covering, contact for prolong time						
Silent Silent	Green	Green	Yellow	Green	Yellow	Red
Speaking	Green	Green	Yellow	Yellow	Yellow	Red
Shouting,singing	Green	Yellow		Yellow	Red	Red
No face covering, contact for short time						
Silent Silent	Green	Green	Yellow	Yellow	Yellow	Red
Speaking	Green	Yellow	Yellow	Yellow	Red	Red
Shouting,singing	Yellow	Yellow	Red	Red	Red	Red
No face covering, contact for prolong time						
Silent Silent	Green	Yellow	Red	Yellow	Red	Red
Speaking	Yellow	Yellow	Red	Red	Red	Red
Shouting,singing	Yellow	Red	Red	Red	Red	Red
Risk of transmission			* Borderline case that highly dependent on quantitative definitions of distancing, number of individual, and time of exposure			
Low	Green					
Medium	Yellow					
High	Red					

General Guidelines

Target: Management/Policy Maker/Owner/Employer of Public Places

Control SARS-CoV-2 transfers by:

- Staying updated and comply with the local, national, regional, and international regulations for implementation of necessary COVID-19 health measures at the Point of Entry
- Training workers, staff, and other stakeholders on COVID-19 health protocol implementation and compliance and ensuring the protocols are practised at work
- Requiring health declaration of visitor, attendees, travellers, staff, workers, and other stakeholders before entering specific settings and validating the health declaration by providing mobile app validation facility to validate, if applicable. The health declaration includes:
 - Proof of negative COVID-19 using PCR or Antigen testing/no positive COVID-19 testing recognition
 - And/or proof of COVID-19 vaccination
 - And/or proof of recovery status (proof of recovery can replace both proof of negative COVID-19 and proof of vaccination for 90 days)
 - And/or free from COVID-19-related symptoms (self-assessment).
- Checking temperature and oversee ill visitor, attendees, travellers, staff, workers, and other stakeholders with signs or symptoms suggestive of COVID-19. Anybody with body temperature $>37.5^{\circ}\text{C}$ or ill are referred for further treatment based In Contingency Plan in Response to the Finding of Suspected or COVID-19 Cases in Public Places.

Provide and maintain adequate ventilation by:

- Regularly maintaining the air conditioning and ventilation system
- In addition to mechanical ventilation, whenever possible, leaving windows and doors open for 20 minutes every one hour and striving to keep the room well ventilated
- Ensuring adequate ventilation system in enclosed area such as toilet
- Finding further guidance contained in Maintaining and Improving Ventilation in The Context of COVID-19.

Undertake adequate cleaning and disinfection by:

- Ensuring adequate supplies to support cleaning and disinfection which includes soap, water, hand sanitiser, hand drying options, tissues, and disinfection wipes
- Cleaning high-touch surfaces (counters, tables, doorknobs, light switches, handles, stair rails, elevator buttons, desks, keyboards, phones, toilets, faucets, and sinks) for at least twice a day
- Cleaning and disinfecting aisle and common areas each day where necessary
- Setting clear use and cleaning guidance for toilets to ensure they are kept clean
- Finding further guidance contained in Cleaning and Disinfecting Procedures to Prevent COVID-19 Transmission.

General Guidelines

Target: Management/Policy Maker/Owner/Employer of Public Places

Promote community and workers to implement Personal Preventive Measure by:

- Providing regular information about the risk of COVID-19 and the preventive measures through signs, posters, verbal announcement, and others
- Facilitating vaccination and booster doses for staff, workers, and other stakeholders
- Requiring visitor, attendees, travellers, staff, workers, and other stakeholders to wear a well-fitted mask in indoors, poorly ventilated, or crowded area
- Providing appropriate hand wash facility or hand sanitiser in entrance, strategic locations, and exit of public places
- Supporting visitor, attendees, travellers, front desk officers, staff, workers, and other stakeholders to practicing respiratory etiquette and hand hygiene.

Support the practical of physical distancing by:

- Limiting capacity of areas where people gather according to local or national policies
- Marking safe distance of at least 1 meter
- Encouraging visitor, attendees, travellers, staff, workers, and other stakeholders to avoid direct physical contact e.g., shaking hands, hugging, kissing.

Handle potentially infectious waste by:

- Providing different waste compartment for potential infectious waste such as tissue papers, mask, and gloves
- Providing no-touch trash cans, if possible
- Keeping infectious (contaminated) waste at source and dispose of at designated collection service
- Further guidance is contained in ECDC guidance in Cleaning and Disinfecting Procedures to Prevent COVID-19 Transmission.

Provide contingency plan to manage ill or suspected COVID-19 cases by:

- Establishing a COVID-19 response team
- Coordinating with local healthcare facilities to manage suspected case
- Finding further guidance contained in Contingency Plan in Response to the Finding of Suspected or COVID-19 Cases in Public Places.

General Guidelines

Target: Visitors, Attendees, Participants, and Other Asean Community in Public Places

Control SARS-CoV-2 transfers by:

- Staying informed to the current COVID-19 activity and regulations
- Getting vaccinated
- Do not involve in public places (around 7-10 days) before ensuring COVID-19 free if you:
 - are waiting for a COVID-19 test result
 - feel unwell, whether if confirmed of having COVID-19 or not
 - have a household member who are a confirmed COVID-19 case
 - interact closely or spent a long time with someone who is a confirmed COVID-19 case.
- Providing the health declaration before entering public places, which consist of:
 - Proof of negative COVID 19 using **PCR or Antigen testing** /no positive COVID-19 testing recognition
 - And/or proof of COVID-19 vaccination
 - And/or proof of recovery status (proof of recovery can replace both proof of negative COVID-19 and proof of vaccination for 90 days)
 - And/or free from COVID-19-related symptom (self-assessment).
- If applicable, downloading, activating, and registering the COVID-19 country mobile app provided to digitalise the health declaration.

Stay in good ventilation area by:

Avoiding poorly ventilated indoors area or crowded area.

Practice cleaning and disinfection by:

- Cleaning and disinfecting hands after touching frequently touching surfaces. Find more information about mask in [Cleaning and Disinfecting Procedures to Prevent COVID-19 Transmission](#)
- Avoid touching public entertainment media such as magazine, newspaper, and others.

Practice personal preventive measure by:

- Wearing well-fitted mask in closed, poorly ventilated, or crowded areas. Find more information about mask in [Wearing mask technical guidance](#)
- Practice hand hygiene with good handwashing technique as well as avoid touching your face and cough or sneeze into tissue which is binned safely or into your upper sleeve or elbow, if a tissue is not available. Find more information about hand hygiene in [Hand hygiene technical guidance](#).

Practice physical distancing by:

- Minimising contact with others and maintaining at least 1m distance
- If applicable, following any directions related to maintaining physical distancing, including unidirectional markers or separate entry and exit point to prevent foot traffic
- Using non-contact greeting (wave, bow, or nod) and avoiding direct physical contact e.g., shaking hands, hugging, kissing
- Avoid large gatherings or crowded areas (e.g., crowded stores, long food pickup lines, parties).

General Guidelines

Target: Visitors, Attendees, Participants, and Other Asean Community in Public Places

Handle potentially infectious waste properly by:

- Disposing potentially infectious waste (such as used masks, tissues, gloves, and used cleaning wipes) into designated infectious bin provided
- Further guidance is contained in Cleaning and Disinfecting Procedures to Prevent COVID-19 Transmission.

Provide personal contingency plan by:

- Following all the role or instruction provided by public places authority
- Listing the essential things needed to support on daily basis such as personal care, meals, drink, and medication
- Getting routine prescription and medication supplies, including reserve supplies and rescue medication
- Reporting immediately when feeling unwell to health care authority
- Finding further guidance contained in Contingency Plan.

General Guidelines

Target: Workers, Service Providers, Staff, other Stakeholders in Public Places

Workers and service providers are advised to perform all preventive measure as the ASEAN community with additional to do the following:

- Do not come to work (7-14 days) before ensuring COVID-19 free if you:
 - Are waiting for the COVID-19 test
 - feel unwell either you confirm of having COVID-19 or not
 - have someone in your house have COVID-19
 - interact closely or spent a long time with someone who has COVID-19.
- Receive COVID-19 health protocol training and able to practice the protocol at work
- If applicable, get routinely screened for COVID-19 using NAAT (RT-PCR) or RDT Antigen
- Wear well-fitted masks covering nose and mouth (surgical mask) during working
- Report immediately when feeling unwell at work.

Specific Measures

Setting: Point of Entry
Target: Management/Employers

In addition to the General Guideline for the Managements/Stakeholders, management of point of entry should implement these specific measures.

Control SARS-CoV-2 transfers by:

- Conducting regular COVID-19 test to front desk officers, staff, and other stakeholders
- Having an entry screening area and screening procedure for travellers, front desk officers, and other stakeholders
- Validating health declaration by providing mobile app validation facility to validate
 - Proof of negative COVID 19 using PRC or Antigen testing /no positive COVID-19 testing recognition
 - And/or proof of COVID-19 vaccination
 - And/or proof of recovery status (proof of recovery can replace both of proof of negative COVID-19 and proof of vaccination for 90 days)
 - And/or free from COVID-19-related symptom (self-assessment).
- Providing no touch facilities such as auto clearance immigration to prevent cross contamination
- Performing COVID-19 testing on arrival to all travellers at designated points of entry
- Following quarantine procedure for travellers, staff, crews, and other stakeholders
- If applicable, separating/staggering immigration process among passengers from different vehicles.

Promote travellers, staff, crews, and other stakeholders to implement Personal preventive measure by:

- Providing any facilities necessary for all staff and other stakeholders to practice personal preventive measures such as medical mask, hand sanitisers, gloves, and others
- Developing physical barriers between front liners and travellers, particularly in the counters or areas that talking is needed to protect cross contamination.

Support the practical of physical distancing by:

- Limiting the capacity of the room for persons gathering indoor and posting a sign stating the capacity limitations in a prominent position visible to the public
- Practicing staggering to avoid crowd in potential areas such as when queueing in the screening area or immigration process
- Developing physical barrier or marker to ensure physical distancing
- Setting mobility flow for travellers, staff, crews, and other stakeholders to move around point of entry.

Specific Measures

Setting: Point of Entry
Target: Management/Employers (cont.)

Handle potentially infectious waste by:

- Providing signs and direction to handle the potentially infectious waste.

Have Contingency Plan by:

- Providing health facilities, if applicable
- Providing temporary quarantine and isolation room, if applicable.

Specific Measures

Setting: Point of Entry
Target: Travellers

In addition to the General Guideline for the ASEAN Community, travellers at point of entry should implement these specific measures.

Control SARS-CoV-2 transfers by:

- Staying informed to the current immigration requirement of the destination country
- Downloading, activating, and registering the country specific app of the destination
- Filling in and submitting the health declaration form in the country specific app. The health declaration consists of the following information that must be provided:
 - Proof of negative COVID 19 using PCR or Antigen testing/no positive COVID-19 testing recognition
 - And/or proof of COVID-19 vaccination
 - And/or proof of recovery status (proof of recovery can replace both of proof of negative COVID-19 and proof of vaccination for 90 days)
 - And/or free from COVID-19-related symptom (self-assessment).
- Complying with the ASEAN quarantine procedure on across border travels
- Complying with the destination country regulations.

Provide personal contingency plan by:

- Reporting immediately when feeling unwell to point of entry authority.
- Having COVID insurance
- Having travel itinerary if applicable.

Specific Measures

Setting: Point of Entry

Target: Front Liners, Staff, and other Stakeholder at Point of Entry

In addition to the General Guideline for service providers or workers, front liners, staff, and other stakeholders at point of entry should implement these specific measures.

- Willing to be routinely screened for COVID-19 using NAAT (RT-PCR) or RDT Antigen
- More frequently performing hand hygiene
- Wear well-fitted masks covering nose and mouth (surgical mask).

Specific Measures

Setting: Ports

Target: Management/Employers

In addition to the General Guideline for the Managements/Stakeholders, PORTS management should implement these specific measures.

Control SARS-CoV-2 transfer by:

- Providing no touch facilities such as auto clearance check in, no touch screen, physical barriers to prevent projection of droplets
- Separating administration lane for travellers crossing the border
- Providing screening area for passengers in international ports or intercity ports, if applicable.

Provide and maintain adequate ventilation by:

- Changing indoors activities that can be conducted outdoors.

Undertake adequate cleaning and disinfection by:

- If applicable, provide additional luggage disinfection facilities, such as using UV or ozone.

Promote community and workers to implement personal preventive measure by:

- Providing signs, posters, and verbal announcement to remain passengers, workers, and other stakeholders aware of COVID-19 transmission and its preventive measures.

Support the practical of physical distancing by:

- Encouraging maximum two people sent off passengers during departure
- Encouraging members of the public not to pick up or greet passengers upon arrival
- Providing open spaces or area for sending off or picking up passengers
- Staggering the schedule of departure and arrival of vehicles to avoid crowded at the ports.

Provide contingency plan by:

- Providing quarantine and isolation area for suspected COVID-19 cases, if applicable
- Providing health post, if applicable
- Coordinating with other stakeholder in handling COVID-19 positive cases among travellers and crews
- Ensuring operational support and logistics available.

Specific Measures

Setting: Ports
Target: Passengers/Travellers

In addition to the General Guideline for the ASEAN Community, travellers or passengers at PORTS should implement these specific measures.

- Complying with ports and public transport COVID-19 requirement and regulation
- Answering the health-related questions that may be asked at check-in
- Adhering to terminal staff and crew instructions while in port, boarding and disembarking
- Where possible using on-line check-in and electronic boarding passes; and electronic payment methods
- Following the carrier's advice concerning the expected duration of time required to be at the port before departures
- Being aware that only passengers intending to travel or travelling should enter the terminal buildings
- Wearing a face mask inside the terminal building or closed area at all times
- During the journey, face masks may be taken off in each passenger private cabin or in well ventilated areas such as open-air decks.
- Please bring enough face coverings for the duration of your journey
- Pay attention to and listen to all announcements and safety demonstrations; be aware that for onboard services such as restrooms and disembarkation, new procedures requiring the following of specific routes and social separation will be implemented
- Where appropriate, collect your bags and leave the terminal building as soon as possible.

Specific Measures

Setting: Ports
Target: Workers/Staff

Workers or staff at Ports are advised to perform all preventive measure as the visitors/passengers at the Port with additional to do the general guideline of workers, service providers, staff, other stakeholders in public places

Specific Measures

Setting: Public Transports Target: Management/Employers

In addition to the General Guideline for the Managements/Stakeholders, public transport management should implement these specific measures.

Control SARS-CoV-2 transfer by:

- Training all staff and other stakeholders on COVID-19 health protocol implementation and compliance
- Facilitating online ticketing/payment/interaction
- Avoid using curtain inside vehicles.

Provide and maintain adequate ventilation by:

- Switch ventilation systems on while people are in the vehicle – set to drawing fresh air in, not recirculating air
- For vehicles that transport several passengers, such as taxis, removing the air between passengers or at the journey's conclusion to ensure the vehicle is properly aired before the next passenger enters
- Opening doors where it is safe to do so will help to change the air quickly – opening windows fully can also help to clear the air in the vehicle.

Maintain cleaning and disinfection by:

- Cleaning and disinfecting the inner surface of public transport after each transport
- The frequency of cleaning and disinfecting surfaces with high frequency of contact should be increased
- Seat covers and other textiles should be kept clean, washed, and disinfected regularly
- If there is vomit, it should be completely covered with disinfectant or dry disinfection towel and removed once finishing disinfection. The surface should then be subjected to conventional treatment.

Specific Measures

Setting: Public Transports
Target: Management/Employers

Promote passengers and staffs to maintain personal preventive measure by:

- Providing sign or poster in regard of COVID-19 preventive measure inside the vehicles, if possible
- Requiring all passenger and workers wearing fitted three layer or surgical or FFP 2 mask
- Encouraging all passengers to not talking on the phone or with other passengers
- Encouraging all passengers to not eating or drinking except inside the vehicle equipped with good ventilation system such as HEPA filter
- Providing hand sanitiser inside the vehicles, if possible.

Support passenger and workers to practicing physical distancing by:

- Imposing a reduced maximum capacity for each journey e.g., 50% of current capacity according to local government policies
- Practicing staggering to avoid crowd during boarding and disembarking
- Informing customers/passengers on the occupancy of the transport using mobile application.

Have contingency plan manage ill or suspected COVID-19 cases by:

- Designating the last 3 seat rows of the cabin for emergency quarantine. If possible, the ill traveller should be seated in the right window seat. (For aircraft, trains, and other id possible)
- Designating the right rear lavatory for quarantine purpose
- Assigning specific crew members to provide necessary in-flight service for quarantine areas, and the crew members should minimise close contacts
- Requiring crew to notify the management at port of disembarkation about information regarding passenger or crew who is ill or suspected to be affected from COVID- 19.

Specific Measures

Setting: Public Transports

Target: Passengers

In addition to the General Guideline for the ASEAN Community, passengers at public transport should implement these specific measures.

- Follow all preventive measures provided by the transport management
- Wearing a mask onboard the ship/train/airplane is strongly recommended at all times apart from inside a personal cabin, eating or drinking
- Avoid touching surfaces such as doorknobs, handles, ladder handle
- Follow mobility direction in the mode of transport
- For motorcycle passenger, equip yourself with your own helmet.

Specific Measures

Setting: Public Transport

Target: Crews/Drivers

In addition to the General Guideline for service providers or workers, crews/drivers of public transport should implement these specific measures.

- Follow Guidance for Crew Health Precautions During Pandemic
- Perform personal preventive measures tightly such as by wearing a standard surgical mask or FFP 2 mask.

Specific Measures

Setting: MICE (Meetings, Incentives, Conferences, and Exhibitions)

Target: Event Organisers

In addition to the General Guideline for the Managements/Stakeholders, event organiser at MICE should implement these specific measures

Control transmission in MICE events by:

- Requiring International participants to follow all the local and the national COVID-19 policy
- In big event with more than 300 participants, coordinating with local authority to ensure the event adhere to the local COVID-19 preventive measures
- Avoid the passing out by hand the pamphlets, leaflets, and questionnaires
- The digitalisation of paper media and Q&A methods.

Promote visitor and staff to maintain personal preventive measure by:

- Communicating to public about COVID-19 preventive measures taken within the area of MICE.

Specific Measures

Setting: MICE (Meetings, Incentives, Conferences, and Exhibitions)

Target: Event Organisers

Support visitor and worker to practicing physical distancing by:

- Limiting visitor capacity in the building according to the local government policy
- Separate the entrance and exit door
- Setting flow for visitor to move around the building
- Restricting the number of people who can enter the room at one time
- Consider the use of acrylic panels and transparent vinyl curtains to shield participants and staffs from each other
- Managing use of high traffic areas including corridors, lifts turnstiles and walkways to maintain physical distancing
- Facilitating practice of physical distancing by putting distancing alert e.g., place 1m apart signs, tape marks, or other visual cues such as decals or colored tape on the floor to show where to stand or to sit, as below condition:
 - Entrance queue and exit queue
 - During registration process
 - At crowded times
 - Audience seating layout
 - Distance between speakers
 - distance between speakers and participant
 - distance between participants in the event of standing buffet
 - distance between exhibitor and participant
 - during meals
- Staggering starting/finish time when several rooms are used
- Request the cooperation of exhibitors in placing restrictions on the number of staff providing explanations per booth.
- Consider establishing outdoor resting places

Handle suspected Cases and Contingency plan by:

- If needed, providing health post in a special/big event
- Store the list of participants.

Specific Measures

Setting: MICE (Meetings, Incentives, Conferences, and Exhibitions)

Target: Building Management

In addition to the General Guideline for the Managements/Stakeholders, building management at MICE should implement these specific measures.

Provide and maintain adequate ventilation by:

- Increase outdoor air flow by opening windows and doors. Maintain openings throughout the day, if possible, to provide a steady flow of fresh air into the room.
- Keep systems running longer hours, if possible 24/7, to enhance the two actions above.
- Consider portable room air cleaners with HEPA filters

Undertake adequate cleaning and disinfection by:

- Routine cleaning and disinfection. Special focus for routine cleaning include:
 - Public spaces: Tables, chairs, elevator buttons, escalator handrails, other handrails, toilets etc.
 - Session rooms: Doors, tables, chairs, podiums, microphones, laptops, simultaneous interpretation receivers, etc.
 - Party/social gathering rooms: Doors, tables, chairs, tongs, cutlery, glasses, etc.
 - Exhibition rooms: Exhibit booth stands, exhibit materials, explanatory material provided by exhibitor, etc.
- Sterilising in advance Items lent to participants such as simultaneous interpretation receivers
- Disinfecting each day the aisle and common areas, during the exhibition period where necessary
- With regards to jointly used items and equipment such as microphone, making sure to disinfect after each use

Handle potential infectious waste by:

- Train staff to safely handling the waste
- Ensuring workers handling the waste to comply with safety and health regulation
- Waste workers should continue to wear standard PPE (such as puncture resistance gloves).
- Coordinating safe waste pulling and transportation

Specific Measures

Setting: MICE (Meetings, Incentives, Conferences, and Exhibitions)

Target: Participants/Attendees

In addition to the General Guideline for the ASEAN Community participants/attendees at MICE should implement these specific measures.

- Follow all preventive measures provided by the MICE and event management
- Be aware of shared equipment or tool and make sure they are disinfected before another use
- Follow mobility direction in the building
- During eating, maintain at least 1m distance and avoid talking with other people in close proximity

Specific Measures

Setting: MICE (Meetings, Incentives, Conferences, and Exhibitions)

Target: Security Guard, Front Desk Officers, Staffs, Other Stakeholders

Workers or staff at MICE are advised to perform all preventive measure as the visitors at the MICE with additional to do the general guideline of workers, service providers, staff, other stakeholders in public places

Specific Measures

Setting: Grocery Store

Target: Grocery Store Management

In addition to the General Guideline for the Managements/Stakeholders, groceries store management should implement these specific measures.

Control transmission in grocery stores by:

- Communicating to public about preventive measures taken within the area of grocery store
- Facilitating cashless payment or touchless interaction, if possible
- Avoid special events or other promotions that lead to a crowd

Provide and maintain adequate ventilation by:

- Providing adequate ventilation, natural or mechanical ventilation, depending on the setting.
- Applying of air filtering in indoor area, if possible

Maintain cleaning and disinfection by:

- Cleaning more frequently or choose to disinfect in addition to cleaning in shared spaces in grocery store

Promote personal preventive measure by:

- Requiring all visitor and workers/staffs to wear a fitted mask in all area of grocery store

Support visitor and worker to practice physical distancing by:

- Setting mobility flow for visitor to move around the grocery store
- Maintain an adequate distance between vendors. If possible, merchants should be spaced at least two metres apart; if this is not practicable, vendors should operate on a rotational/ staggered schedule to avoid crowding.
- Extend opening hours to be able to stagger customer visits in order to avoid overcrowding.

Specific Measures

Setting: Grocery Store
Target: Visitors/Customers

In addition to the General Guideline for the ASEAN Community, participants/attendees at grocery store should implement these specific measures

- Follow all preventive measures provided by the grocery store management

Specific Measures

Setting: Grocery Store
Target: Workers, Staffs

Workers or staff at grocery store are advised to perform all preventive measure as the visitors/ customers at grocery store with additional to do the general guideline of workers, service providers, staff, other stakeholders in public places

Specific Measures

Setting: Shopping Center
Target: Shopping Center Management

In addition to the General Guideline for the Managements/Stakeholders, shopping center management should implement these specific measures.

Control transmission in shopping centre by:

- Communicating to public about preventive measures taken within the area of shopping centre
- Promoting stay home for people with COVID-19 related symptom, suspected, probable, or confirmed cases.
- Facilitating cashless payment and touchless interaction

Undertake adequate ventilation by:

- Combining natural and mechanical ventilation to let fresh air circulate in shopping centre area

Maintain cleaning and disinfection by:

- Disinfecting each day the aisle and common area

Promote personal preventive measure by:

- Requiring all visitor and workers/staffs to wear a well-fitted mask in all area of shopping center

Support visitor and worker to practicing physical distancing by:

- Limiting capacity of visitor according to local government policy
- Providing signs to limit elevator and escalator capacity
- Setting mobility flow for visitor to move around the building e.g., flow in department store, etc
- Avoid special events or other promotions.

Specific Measures

Setting: Shopping Center
Target: Visitors or Other Stakeholders

In addition to the General Guideline for the ASEAN Community, participants/attendees at shopping center should implement these specific measures

- Follow all preventive measures provided by the shopping center management
- Wear fitted mask covered nose and mouth in all shopping center area

Specific Measures

Setting: Shopping Center
Target: Staffs, Security Guards, Front Desk Officers

Workers or staff at shopping center are advised to perform all preventive measure as the visitors/customers at shopping center with additional to do the general guideline of workers, service providers, staff, other stakeholders in public places

Specific Measures

Setting: Beauty and Hair Care Facility
Target: Beauty and Hair Care Facility Management

In addition to the General Guideline for the Managements/Stakeholders, Beauty and Hair Care Facility management should implement these specific measures.

Control transmission in beauty and hair care facility by:

- Promoting stay home for people with COVID-19 related symptom, suspected, probable or confirmed cases.
- Establishing staffs who are responsible to serve visitors directly and providing any necessary training of COVID-19 preventive measures.
- Facilitating cashless payment and touchless interaction and communication system
- Providing additional PPE such as face shield and gloves for worker who works closely with the customer e.g., touching hair, doing nails, etc.
- Mandating visitor to wash hand before entering the facility
- Declining to serve customers who appear unwell and have respiratory symptoms

Provide and maintain adequate ventilation by:

- Combining natural and mechanical ventilation to let fresh air circulate in shopping centre area

Undertake adequate cleaning and disinfection by:

- Cleaning and disinfecting beauty tools, nail tools, beauty counters, comb and scissor, after each use
- Not providing shared equipment

Promote personal preventive measure by:

- Communicating to public about preventive measures taken within the area of beauty and hair care facility
- Requiring all visitor and workers/staffs to wear a fitted mask covered nose and mouth
- Providing sign, poster, verbal announcement to maintain personal preventive measures

Support visitor and worker to practicing physical distancing by:

- Setting mobility flow for visitor to move around the facility
- Stagger customer appointment
- Ensuring that the seats are arranged at least 1 meter apart

Specific Measures

Setting: Beauty and Hair Care Facility

Target: Visitors

In addition to the General Guideline for the ASEAN Community, customers at Beauty and Hair Care Facility should implement these specific measures

- Follow all preventive measures provided by the beauty and hair care facility management

Specific Measures

Setting: Beauty And Hair Care Facility

Target: Workers, Staffs

Workers or staff at Beauty and Hair Care Facility are advised to perform all preventive measure as the visitors/customers at Beauty and Hair Care Facility with additional to do the general guideline of workers, service providers, staff, other stakeholders in public places

Specific Measures

Setting: Administrative Office

Target: Management /Employer at Administrative Office

In addition to the General Guideline for the Managements/Stakeholders, management/employers at Administrative Office should implement these specific measures

Control transmission in administrative office by:

- Establishing staffs who are responsible to serve visitors directly and providing any necessary training of COVID-19 preventive measures.
- Facilitating touchless interaction and communication system
- Retaining the usage of security access devices, such as keypads or passes, and changing entry/exit procedures to minimise the danger of transmission
- Coordinating and working collaboratively with landlords and other tenants in multi-tenant sites, for example, shared working spaces on managing COVID-19 preventive measures

Provide and maintain adequate ventilation by:

- Combining natural and mechanic ventilation, if possible

Undertake adequate cleaning and disinfection by:

- Routine cleaning and disinfection. Special focus for routine cleaning includes:
 - Public spaces: tables, chairs, elevator buttons, escalator handrails, other handrails, toilets etc.
 - Office rooms: doors, tables, chairs, laptops, etc.
 - Waiting rooms: doors, tables, chairs, etc.
 - Disinfecting each day, the aisle and common are
- Not providing shared equipment such as pen or provide hand sanitiser around

Promote visitors and staff to maintain personal preventive measure by:

- Communicating to public about COVID-19 preventive measures taken within the area of the office

Specific Measures

Setting: Administrative Office

Target: Management /Employer at Administrative Office

Support visitor and worker to practicing physical distancing by:

- Limiting visitor capacity inside the building by :
 - Encouraging visits via remote connection/working where this is an option.
 - Limiting the number of visitors at any one time
 - Limiting visitor times to a specific time window and restricting access to required visitors only.
- Creating a mobility flow for visitors to navigate the building, for example, through the use of markings and the introduction of one-way flow at entry and exit locations.
- Requesting booking and staggering arrival and departure times of visitors to reduce crowding into and out of the workplace
- Managing use of high traffic areas including corridors, lifts turnstiles and walkways to maintain physical distancing
- Limit activity time involved as short as possible
- Using back-to-back or side-to-side working (rather than face- to-face) whenever possible. ((Review layouts and processes to enable employees to work more independently of one another)
- Reducing the number of people each person has contact with by using 'fixed teams or partnering' (so each person works with only a few others)
- Reducing congestion, for example, by having more entry points to the workplace.
- Staggering break times to reduce pressure on the staff break rooms or places to eat and ensuring social distancing is maintained in staff break rooms
- Facilitating barrier at the public service counter

Have contingency plan by:

- Maintaining a record of all visitors if this is practical. Making lists of scheduled visits for each day

Specific Measures

Setting: Administrative Office

Target: Visitors

In addition to the General Guideline for the ASEAN Community, visitor at administrative office should implement these specific measures

- Make sure you are registered to visit the administration office before visiting it. If there is a specific scheduled visiting time, come on time
- Follow all preventive measures provided by the administrative office management
- Avoid sharing pens, documents, and other objects.
- Follow mobility direction in the building

Specific Measures

Setting: Administrative Office

Target: Staff, Security Guard, Front Desk Officers

Workers or staff at administrative office are advised to perform all preventive measure as the visitors at administrative office with additional to do the general guideline of workers, service providers, staff, other stakeholders in public places

Specific Measures

Setting: Restaurants

Target: Management of Restaurants

Control transmission in restaurants by:

- Staying updated and complying with the local and national legislative requirement for implementation of necessary COVID-19 health measures
- Complying with food hygiene requirement.
- Facilitating cashless transactions
- Providing additional PPE such as face shield and gloves for worker who works process the meals
- Mandating visitor to wash hand before entering the facility

Promote personal preventive measure by:

- Requiring all visitor and workers/staffs to wear a fitted mask covered nose and mouth when not eating
- Providing hand sanitiser, disposable hand towel and appropriate hand wash facility

Support visitor and worker to practicing physical distancing by:

- Limiting visitor capacity inside the facility
- Setting mobility flow for visitor to move around the facility
- Facilitating physical distancing by placing distance alerts on the floor, for example, by placing 1m apart signs, tape marks, or other visual clues such as decals or coloured tape to indicate where to stand or sit.
- Serve take away

Maintain cleaning, disinfecting, and ventilation:

- Clean and disinfect tools after every use

Specific Measures

Setting: Restaurants

Target: Visitors/Guests of Restaurants

In addition to the General Guideline for the ASEAN community, customers at restaurant should implement these specific measures

- Follow all preventive measures provided by the restaurants management
- Wear well fitted mask covered nose and mouth when not eating

Specific Measures

Setting: Restaurants

Target: Staffs, Food Handlers, House Keeping, Other Workers of Restaurants

Workers or staff at restaurants are advised to perform all preventive measure as the visitors at the restaurants with additional to do the general guideline of workers, service providers, staff, other stakeholders in public places

Specific Measures

Setting: Hotel, Lodging, and Homestays

Target: Management of Hotel, Lodging, and Homestays

In addition to the General Guideline for the Managements/Stakeholders, management hotel, lodging, and homestay should implement these specific measures

Control transmission in hotels, lodgings, and homestays by:

- Staying updated and complying with the local and national legislative requirement for implementation of necessary COVID-19 health measures at hotel. Lodging, and homestay
- Facilitating cashless transactions
- Mandating visitor to wash hand before entering the facility

Undertake adequate cleaning and disinfection by:

- Routine cleaning and disinfection. Special focus for routine cleaning include:
 - Public spaces: tables, chairs, elevator buttons, escalator handrails, other handrails, toilets etc.
 - Bedrooms: doors, tables, chairs, beds, bathrooms, etc.
 - Waiting rooms: doors, tables, chairs, etc.
- Disinfecting each day the aisle and common are
- Not providing shared equipment such as pen or provide hand sanitiser around
- Setting clear use and cleaning guidance for toilets to ensure they are kept clean

Promote personal preventive measure by:

- Communicating to public about preventive measures taken within the area of hotel, lodgings, or homestays
- Requiring all visitors and workers/staffs to wear a fitted mask covered nose and mouth when they are outside their designated room or are coming from different households.
- Providing appropriate hand wash facility or hand sanitisers in entrance, common areas, and exit
- Encouraging not to have direct physical contact e.g., shaking hands, hugging, kissing hands

Support visitors and workers to practicing physical distancing by:

- Limiting visitor capacity inside the facility
- Separate the entrance and exit door
- Creating a mobility flow for visitors to navigate the building, for example, through the use of markings and the introduction of one-way flow at entry and exit locations.
- Ensure staggering when there is risk of crowding, such as during breakfast time or check out time.

Have contingency plan by:

Coordinating with local healthcare facilities to manage suspected case

- Maintaining a record of all visitors.

Specific Measures

Setting: Hotel, Lodging, and Homestays

Target: Visitors/Guests of Hotel, Lodging, and Homestays

In addition to the General Guideline for the ASEAN community, visitors/guests of hotel, Lodging, and homestays should implement these specific measures

Visitors should:

- Follow all preventive measures provided by the Hotel/lodging/homestay management
- Wear well fitted mask covered nose and mouth when not eating
- Frequently wash your hands and use hand sanitiser including after exchanging objects such as money or credit cards and before going into dining halls, restaurants or bars.
- Follow mobility direction in the building

Specific Measures

Setting: Hotel, Lodging, and Homestays

Target: Staff/Workers of Hotel, Lodging, and Homestays

Workers or staff at hotel, lodging, or homestays are advised to perform all preventive measure as the visitors at the hotel, lodging, or homestays with additional to do the general guideline of workers, service providers, staff, other stakeholders in public places

Specific Measures

Setting: Sport Facilities

Target: Management of Sport Facilities

In addition to the General Guideline for the Managements/Stakeholders, management of sport facilities should implement these specific measures

Control transmission in sport facilities by:

- o Communicating to public about preventive measures taken within the area of sport facilities
- o Facilitating cashless transactions

Promote personal preventive measure by:

- o Encouraging visitors to wear well-fitted masks except when engaging in high intensity activities

Support visitor and worker to practicing physical distancing by:

- o Limiting visitor capacity inside the facility
- o Separating the entrance and exit door
- o Creating a mobility flow for visitors to navigate the building, for example, through the use of markings and the introduction of one-way flow at entry and exit locations.
- o Ensure staggering when there is risk of crowding, such as during breakfast time or check out time.
- o Non-contact sports are permitted. Contact sports are allowed for skills training only. Sporting matches are not permitted.

Maintain cleaning, disinfecting

- o Provide cleaning and disinfecting wipes for facility users to clean equipment before and after using

Specific Measures

Setting: Sport Facilities

Target: Visitors

In addition to the General Guideline for the ASEAN community, visitors of sport facilities should implement these specific measures:

- Follow all preventive measures provided by the sport facility management
- Wear well fitted mask covered nose and mouth when not exercising
- Clean and disinfect tools after every use
- Follow mobility direction in the building

Specific Measures

Setting: Sport Facilities

Target: Workers/Staff

Workers or staff at sport facilities are advised to perform all preventive measure as the visitors at the sport facilities with additional to do the general guideline of workers, service providers, staff, other stakeholders in public places, if applicable

Specific Measures

Setting: Religious Places

Target: Management of Religious Places

In addition to the General Guideline for the Managements/Stakeholders, management of religious places should implement these specific measures

Control transmission during worship and other ceremonials by:

- Staying updated and complying with the local and national legislative requirement for implementation of necessary COVID-19 health measures at religious places.
- Promoting stay home for people with COVID-19 related symptom, suspected, probable or confirmed cases.
- Training all staff and other stakeholders on COVID-19 health protocol implementation and ensuring the compliant of them as far as reasonably practicable
- Encouraging the worship carried out in their respective neighborhoods
- Providing virtual services/ceremonials/worships if available

Undertake adequate cleaning and disinfection by:

- Routine cleaning and disinfection. Special focus for routine cleaning include:
 - Common areas: tables, chairs, handrails, toilets, etc
 - Ablution rooms
- Removing the prayer rugs or any rugs inside the worship area
- With regards to jointly used items and equipment such as microphone, making sure to disinfect after each use
- Setting clear use and cleaning guidance for toilets to ensure they are kept clean

Promote attendees and staff to maintain personal preventive measures by:

- Communicating to public about preventive measures taken within the area of worship
- Requiring all attendees and staff wearing fitted mask covered nose and mouth.
- Encouraging attendees to bring their own worship's necessities e.g., bible, praying clothes, prayer rug
- Advising attendees to perform ablution at home, if possible (for moslem)
- Do not provide worship necessities or cutlery e.g., prayer clothes, prayer rug, etc. for public use

Support attendees and staffs to practicing physical distancing by:

- Shortening worship time without reducing the essence of worship
- Staggering worship time for specific ceremonials e.g., eid, christmas, etc. A number of people from the same household may enter the building for worship at the same time.
- Facilitating physical distancing by placing distance alerts on the floor, for example, by placing 1m apart signs, tape marks, or other visual clues such as decals or coloured tape to indicate where to stand or sit.
 - Entrance queue and exit queue
 - During registration process
 - At crowded times
 - Attendees seating layout
 - distance between religious leaders who deliver sermon and attendees

Specific Measures

Setting: Religious Places
Target: Attendees at Religious Places

In addition to the General Guideline for the ASEAN Community, travellers at point of entry should implement these specific measures.

- Stay informed of the COVID-19 local transmission and preventive measures.
- Wear fitted mask covered nose and mouth and do not open the mask when speaking within 1m with other people. Avoid opening the mask during singing/reciting/chanting together in groups
- Bring your own worship necessities e.g., bible, prayer clothes, prayer rug
- Avoid direct physical contact e.g., shaking hands, hugging, kissing hands
- Conduct Ablution at home for Moslem if possible
- Follow all preventive measures provided by the worship place
- Do not use public praying clothes
- Avoid touching surfaces such as doorknobs, tables, handles, light switches, ladder handle

Follow movement direction, if available

Specific Measures

Setting: Religious Places
Target: Staff / Workers at Religious Places

Workers or staff at religious places are advised to perform all preventive measure as the attendees of religious places with additional to do the general guideline of workers, service providers, staff, other stakeholders in public places, if applicable

Specific Measures

Setting: Tourism Sites

Target: Management of Tourism Sites

In addition to the General Guideline for the Managements/Stakeholders, management of tourism site should implement these specific measures.

Control transmission in tourism sites by:

- Promoting stay home for people with COVID-19 related symptom, suspected, probable or confirmed cases.
- Facilitating touchless interaction and on-line ticketing to avoid cross contamination
- Facilitating cashless payment in every counter in the tourism sites
- Requiring International visitors to follow all the local and the national COVID-19 policy

Provide and maintain adequate ventilation by:

- Regularly maintaining the air conditioning and ventilation system in indoor settings of tourism sites

Undertake adequate cleaning and disinfection by:

- Routine cleaning and disinfection. Special focus for routine cleaning includes tables, chairs, elevator buttons, escalator handrails, other handrails, toilets etc.
- Disinfecting shared tool or equipment after it uses

Promote personal preventive measure by:

- Communicating to public about COVID-19 preventive measures taken within the area of Tourism
- Requiring all visitor and workers/staffs to wear a well-fitted mask in indoor and outdoor area

Support visitor and worker to practicing physical distancing by:

- Posting a sign in a conspicuous location visible to the public that states the capacity limits
- Separating the entrance and exit door
- Setting flow for visitor to move around the tourism area
- Managing use of high traffic areas and putting distancing alert e.g., place 1m apart signs, tape marks, or other visual cues on the floor to show where to stand or sit, as below condition:
 - Entrance queue and exit queue
 - During ticketing process
 - At crowded times
 - Queue layout
 - corridors, lifts turnstiles
 - in rest room

Handle suspected cases and contingency plan by:

- If needed, providing health post in big tourism areas

Specific Measures

Setting: Tourism Sites
Target: Visitors of Tourism Sites

In addition to the General Guideline for the ASEAN Community, visitors at tourism site should implement these specific measures.

- Stay informed to all the updated COVID-19 related situation and regulations from the government in the tourism site area
- Use cashless transaction in every counter at tourism site, if applicable
- Wear well-fitted mask covered nose and mouth in all locations of tourism area and do not open the mask when speaking within 1m with other people
- Follow all preventive measures provided by the tourism site's management
- Avoid touching surfaces such as handles, ladder handle, elevator buttons and frequently apply hand sanitiser if needed
- Follow mobility direction in the building or in any site of the tourism area

Recommended Elements on Digitalisation of Health Protocols

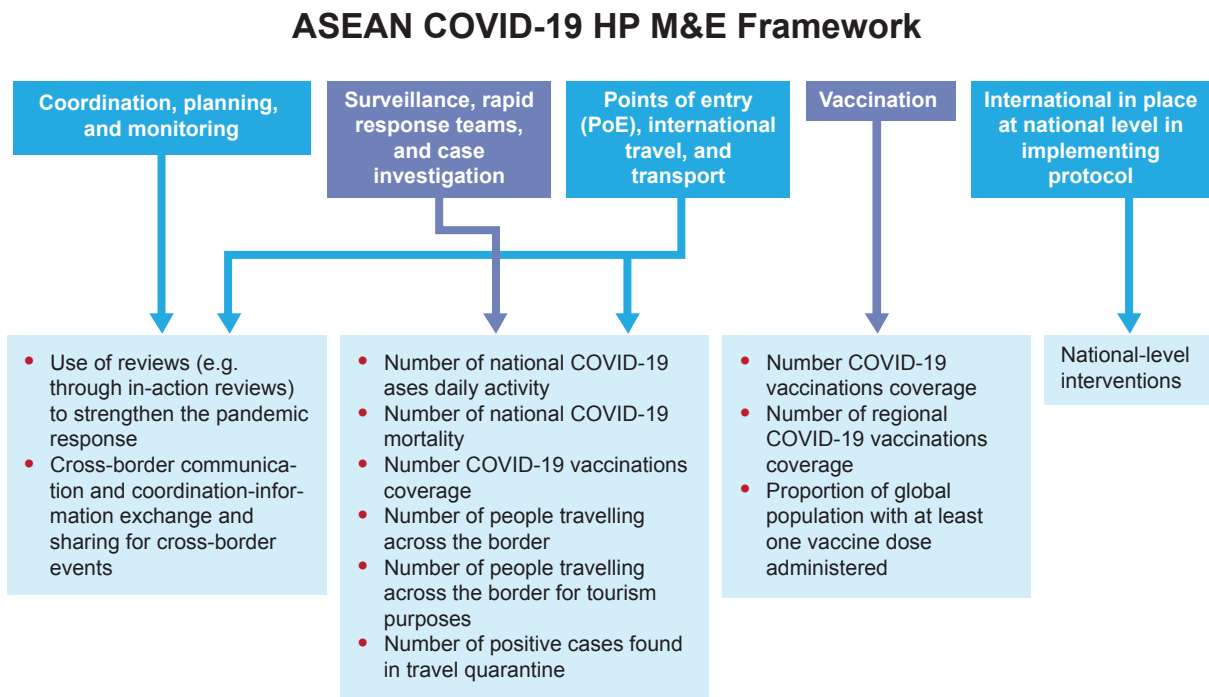
These following recommended elements would be further discussed by AMS once a regional digitalisation takes place, firstly through the ASEAN Single QR Code Verification Portal:

- A COVID-19 test results
- A COVID-19 vaccination certificate
- A COVID-19 recovery certificates

Monitoring and Evaluation Framework for the ASEAN COVID-19 Health Protocol

The Monitoring & Evaluation Framework (M&E) sets in the ASEAN COVID-19 Health Protocol is developed to provide high-level information and indicator to policymakers and implementers supporting the regional efforts of COVID-19 responses. It models and adopts key pillars laid in the WHO COVID-19 Strategic Preparedness and Response Monitoring and Evaluation Framework and the interim guidance June 2020 of the Monitoring and Evaluation Framework for COVID-19 response activities in the EU/EEA and the UK^{39,40}. ASEAN Member States have been proactively collecting and reporting WHO key indicators of COVID-19 Strategic Preparedness Response Plan through a network of M&E focal points from WHO regional officers and headquarters. In the principle of non-duplication and streamlining approach with established efforts, the ASEAN COVID-19 Health Protocol proposes potential monitoring indicators **at the level of region**.

Fig 1. ASEAN COVID-19 Health Protocol M&E Framework^{39,40}



The ASEAN COVID-19 Health Protocol is developed at a period where COVID-19 is still classed as a global pandemic. At the current state, biological and statistical benchmarks across the region are still highly varied to be classified as endemic, i.e., the gap in mortality rate and vaccination coverage, with few AMS have achieve higher community immunity against current variant of COVID-19 with Singapore globally pivoted to an endemic COVID-19 strategy and other labours to shift their COVID-19 statistics^{21,41,42}. As such, the approach to M&E ASEAN COVID-19 Health Protocol is within this transition and allow to future adjustment based to the development of the global status of COVID-19.

Methods for data collection

The proposed M&E framework has at least two proposed methods for collecting information:

1. Indicators from most of the key pillars can be drawn from existing available resources as identified and listed in the Table 1
2. Indicators under **Pillars: Coordination, planning and monitoring** will be carried out once the Regional Coordination Mechanism* is well-established. This is because the purpose of this key pillars is to *monitor and evaluate the regional coordination, planning, and monitoring in implementing the Health Protocol*. The current indicators are developed to encourage the use of evidence/case review to strengthen the pandemic response. These indicators are aligned with:
 - a. The implementation of ASEAN Strategic Framework for Public Health Emergencies.
 - b. ASEAN Comprehensive Recovery Framework (ACRF), Broad Strategy 1:
 - i. **Key Priorities 1a.** *Building and sustaining current health gains and measures on Initiative and Program 3. Strengthening essential regional capacities to prevent, detect and respond to diverse range of biological threats, whether naturally occurring, accidental or deliberate*
 - ii. **Key Priorities 1d.** *Enhancing capacity of human resources for health on Initiative and Program 1. Exchange of experiences and trainings of health professionals for pandemic handling, including mental health and Initiative and Program 2. Capacity building on communicable diseases, emerging/re-emerging infectious diseases including public health emergencies and pandemics.*

* *Regional Coordination Mechanism is an ASEAN body within the ACPHEED and the Emergency Operations Centre (EOC) Network (for the health sector), and the ASEAN Coordinating Council Working Group on Public Health Emergencies (for agencies outside the health sector), which are responsible for coordination of AMS response.*

In this stage, the above initiatives and programmes when implemented can be served as key activities to the achievements of parameter: “Use of reviews (e.g. through in-action reviews) to strengthen the pandemic response”.

It should be acknowledged that the Health Protocol is not a standalone document and is strongly interlinked with other ASEAN Public Health Emergencies-related initiatives. The success of monitoring and evaluation activity to the ASEAN Health Protocol is critically dependent to the establishment of key implementer/lead to public health emergencies-related structure.

Once ACPHEED (ASEAN Centre for Public Health Emergencies and Emerging Diseases) is operationalised, with cooperation and support of the ASEAN EOC Network for Public Health Emergencies, more specific activities under Key Pillar 1 can be further developed and tailored to the most recent situation.

The establishment of such structure in line with the ASEAN Strategic Framework for Public Health Emergencies as well as the ASEAN Comprehensive Recovery Framework (ACRF) **Key priorities 1e. Strengthening prevention and preparedness, detection, and response and resilience to emerging/ re-emerging infectious diseases, public health emergencies and pandemics; and strengthening relevant regional coordination mechanisms including development of health protocols or frameworks during recovery phase on Initiative and program 3.** Development of coordination mechanisms for public health emergencies and future health threats **with the first output** in Development of the framework and structure of the ASEAN Public Health Emergency Coordination System.

Table 1. The Proposed Keys Pillars of ASEAN COVID-19 Health Protocol M&E

Key pillars	Parameters	Monitoring Level	Frequency of data collection	Source	Key Lead
Coordination, planning, and monitoring Points of entry (PoE), international travel, and transport	Use of reviews (e.g. through in-action reviews, best practice review) to strengthen the pandemic response	ASEAN Level	<p>This parameter is delivered when a review/s related to public health emergencies is/are carried out.</p> <p>The frequency of data collection to this parameter is determined by the number of reviews (in the forms of report/publication) carried out over a certain period upon the agreement by AMS.</p>	Publication of the report/review that may be resulted from ASEAN EOC Network, APT FETN, and JMOIR.	ASEAN Health Cluster 2 (ASEAN EOC Network)/ ACPHCED
	Cross-border communication and coordination - information exchange and sharing for cross- border events	ASEAN Level	<p>This parameter requires an established mechanism in cross-border communication and coordination that will allow information exchange and sharing cross-border events.</p> <p>The frequency of data collection to this parameter is then determined by the number of cross-border events over a certain period upon the agreement by AMS.</p>	Once key lead/implementer (ASEAN EOC Network/TF-ATCAF) manages to oversee regional contact tracing and travel corridor that specifically develop mechanism to border communication and information exchange	

Key pillars	Parameters	Monitoring Level	Frequency of data collection	Source	Key Lead
Surveillance, rapid response teams, and case investigation Points of entry (PoE), international travel, and transport	Number of national COVID-19 cases daily activity	ASEAN Level	Fortnightly	<ul style="list-style-type: none"> National report data collection Secondary from WHO ABVC Report 	ASEAN Health Cluster 2 (ASEAN EOC Network)/ ACPHEED
	Number of national COVID-19 mortality	ASEAN Level	Fortnightly	<ul style="list-style-type: none"> National report data collection Secondary from WHO ABVC Report 	
	Number of people travelling across the border	ASEAN Level	Fortnightly	<ul style="list-style-type: none"> ABVC Report National Data TF-ATCAF 	
	Number of people traveling across the border for tourism purposes	ASEAN Level	Fortnightly	<ul style="list-style-type: none"> ABVC Report National Data TF-ATCAF 	
	Number of positive cases found in travel quarantine	ASEAN Level	Fortnightly	<ul style="list-style-type: none"> National Data Cross-border Contact Tracing Form (ongoing development) 	
	Vaccination				

Key pillars	Parameters	Monitoring Level	Frequency of data collection	Source	Key Lead
	Number of national COVID-19 vaccinations coverage	ASEAN Level	Fortnightly	<ul style="list-style-type: none"> National report data collection Secondary from WHO ABVC Report 	
	Number of regional COVID-19 vaccinations coverage	ASEAN Level	Fortnightly	<ul style="list-style-type: none"> Primarily calculate from AMS data ABVC Report 	
	Proportion of national population with at least one vaccine dose administered	ASEAN Level	Fortnightly	<ul style="list-style-type: none"> National report data collection Secondary from WHO ABVC Report 	
	Proportion of regional population with at least one vaccine dose administered	ASEAN Level	Fortnightly	<ul style="list-style-type: none"> Primarily calculate from AMS data ABVC Report 	
	National-level interventions	<p>a. National level</p> <p>b. ASEAN level</p>	<p>To be set by each AMS</p> <p>This parameter is delivered when a monitoring/evaluation related to interventions in place at national level in implementing protocol is/are carried out.</p> <p>The frequency of data collection to this parameter is then determined over a certain period upon the agreement by AMS.</p>	<ul style="list-style-type: none"> National Data (to be set by each AMS) ASEAN evaluation report <p>For example purpose only: Data/information on health protocol-related policy issued by National/local Government.</p> <p>General/specific measures of health protocol in various settings, including contingency plan to manage ill or suspected COVID-19 cases.</p>	
Interventions in place at national level in implementing protocol	National-level interventions	<p>a. National level</p> <p>b. ASEAN level</p>	<p>To be set by each AMS</p> <p>This parameter is delivered when a monitoring/evaluation related to interventions in place at national level in implementing protocol is/are carried out.</p> <p>The frequency of data collection to this parameter is then determined over a certain period upon the agreement by AMS.</p>	<ul style="list-style-type: none"> National Data (to be set by each AMS) ASEAN evaluation report <p>For example purpose only: Data/information on health protocol-related policy issued by National/local Government.</p> <p>General/specific measures of health protocol in various settings, including contingency plan to manage ill or suspected COVID-19 cases.</p>	<p>Country-level</p> <p>ASEAN Health Cluster 2</p>

Annex Operational Definition

Operational definition			
Settings	Point of Entry	Point of entry is defined a passage (airports, land ports, seaports, or other facilities) that allow lawful access to a country by travellers, baggage, cargo, containers, conveyances, goods and postal parcels, as well as agencies and areas ⁴³ .	
	Target:	Community	Travellers for any purpose, flight crew, sea crew, and other crew
		Worker	Front desk officers, security guards, house-keeping officers, management
	Airport, land port, seaport	This category regulates airport, land port, and seaport as a public facility. This includes area within the ports where both travellers and non-travellers can visit and interact, such as the terminals, ticketing area, check in facilities, etc. Other hospitality aspects such as restaurant and shops are included in different settings.	
	Target:	Community	ASEAN community
		Worker	Front desk officers, security guards, house-keeping officers, management
	Meeting venues, incentive travel, conference, and exhibition (MICE)	MICE is defined as arranged events and venues, indoors and outdoors, that provide space for large gathering of business-related events ⁴⁴ . The venues include halls, convention centres, exhibition centres, park, hotel meeting rooms, and auditoriums. The events include work meetings, exhibitions, conventions, festivals, and concerts.	
	Target:	Community	ASEAN community
		Worker	Front desk officers, security guards, house-keeping officers, management
	Public transportation	This is defined as all modes of public transportation, such as airplanes, train, bus, ferry, and ridesharing services using cars or motorbikes. The concerns in these settings are interactions within the public transportation. Interactions within the ports are regulated elsewhere.	
	Target:	Community	ASEAN community
		Worker	Drivers, flight crew, sea crew, management
	Workplaces and administrative facilities	This category regulates all facilities, both public and private, that provides record keeping and record retention services. This includes facilities such as civil registries, immigration offices, tax office, banks, post office, and other service providers.	
	Target:	Community	ASEAN community
		Worker	Front desk officers, security guards, house-keeping officers, management
	Tourism sites	Tourism is defined as a social, cultural, and economic phenomenon which entails the movement of people to countries or places outside their usual environment for personal or business/professional purposes ⁴⁵ .	

Operational definition			
Settings	Target:	Community	ASEAN community
		Worker	Front desk officers, security guards, house-keeping officers, management
	Beauty and hair care facilities	This setting includes hair care facilities such as beauty salon and barber. This includes facilities offering nail treatment, skin and body care treatments, hair removal facilities, and massage.	
Target:	Community	ASEAN community	
		Worker	Front desk officers, beautician, security guards, house-keeping officers, management
	Creative economy	Movie industry, museums, art exhibitions, TV show, news production.	
Target:	Community	ASEAN community	
		Worker	Front desk officers, creative workers, security guards, house-keeping officers, management
	Shopping centres and traditional markets	This setting includes all establishment where trades for goods occur. This includes establishment providing trades for daily necessities such as grocery store, supermarket, and traditional markets, as well as department stores and retail stores ⁴⁶ .	
Target:	Community	ASEAN community	
		Worker	Shopkeepers, servers, security guards, house-keeping officers, management
	Restaurants	Restaurants are defined as all commercial establishment that serves food, both outdoors and indoors. It includes both establishments that offers dining areas and takeaway only.	
Target:	Community	ASEAN community	
		Worker	Front desk officers, food handlers, servers, security guards, house-keeping officers, management
	Hotel, lodging, and homestay	This setting regulates all facilities that provide temporary accommodation for the community. This includes hotels, motels, lodgings, homestays, bed and breakfast, and other establishments.	
Target:	Community	ASEAN community	
		Worker	Front desk officers, security guards, house-keeping officers, management
	Religious places	Religious place means a building or a defined or enclosed place where public worship is or religious ceremony are performed either regulatory or occasionally, such as a church, chapel, mosque, temple or other place ⁴⁷ .	
Target:	Community	ASEAN community	
		Worker	Front desk officers, security guards, house-keeping officers, management
	Sport facilities	This setting regulates facilities, both outdoors and indoors, that provide equipment and tools to support exercise, such as gym and swimming pools.	
Target:	Community	ASEAN community	
		Worker	Front desk officers, security guards, house-keeping officers, management

Operational definition			
Settings	Healthcare facilities	This setting regulates the public aspect of healthcare, such as the clinic, waiting areas, registration areas, labs, pharmacists, testing facilities. However, it will not regulate areas that is regulated in healthcare protocol, such as ward or operating theatres. In addition, this Health Protocol will not regulate healthcare workers.	
	Target:	Community	ASEAN community
		Worker	Front desk officers, security guards, house-keeping officers, management
Risk assessment		COVID-19 transmission risk assessment is defined as the combined effort of identifying and analysing potential COVID-19 transmission and risk factors that help organisation to provide risk mitigation measures to reduce the impact of the COVID-19 transmission ²⁷ .	
Certificate of COVID-19 recovery status/Proof of COVID-19 recovery		A COVID-19 recovery certificate, or Proof of COVID-19 recovery, is obtained by having diagnosed with COVID-19 within 90 days, proven using a nucleic acid amplification test (NAAT) such as RT-PCR. WHO have approved this test result as an alternative to vaccination certificate to exempt individuals from COVID-19 testing or quarantine requirement ^{27,48} .	
Confirmed case		The definition of confirmed case follows the WHO COVID-19 Case Definition. Confirmed case SARS-COV-2 infection is an individual who are positive PCR test, or a positive SARS-CoV-2 Antigen-RDT test and meeting either the probable case or suspect case, or an asymptomatic person with a positive-SARS-CoV Antigen-RDT who is a contact of a probable or confirmed case ⁵⁵ .	
Fully vaccinated person		A fully vaccinated person is defined as someone who has received the necessary doses of COVID-19 vaccine for at least 2 weeks after the second dose for 2-dose series vaccines (such as Moderna, Pfizer, or AstraZeneca) or the single dose vaccines (such as Johnson and Johnson's Janssen) ^{49,50} . Approved vaccines are listed in the WHO emergency use listing (EUL) ⁵¹ .	
Quarantine		In COVID-19 context, quarantine is defined as the restriction of activities and the separation of persons who are not ill, but maybe exposed to transmission of SARS-CoV-2. The objective of quarantine is to prevent onwards transmission and ensure early detection of the suspected persons ⁵² .	
Self-assessment screening tools		Self-assessment screening tools are defined as a screening method that uses individuals' COVID-19 related documentations and self-symptom checkers to determine their eligibility to enter public places.	
International Maritime Organization (IMO) protocols		IMO has published protocols to ensure seafarers are treated as keyworkers, to address concerns regarding the safety of seafarers and shipping ⁵³ .	
Health post		Permanent or temporary health post provided in public places. Services available may include basic first aid treatments or specific COVID-19 testing.	
Special ventilation and maintenance procedure		Specialised ventilation standards implemented to ensure airflow and filter the virus particle, such as air ventilation filter with MERV-13 standard. Also includes cleaning and maintenance procedure.	
Handling suspected cases		Management of probable or suspected cases, when found. Includes testing, temporary isolating, and transportation to permanent isolating facilities. When necessary, includes procedure to provide appropriate treatments.	

Operational definition	
Waste management	Management of non-hazardous, recyclable, and hazardous materials. In terms of COVID-19, includes appropriate measures to prevent cross-contamination.
Routine cleaning	Additional disinfection procedure to prevent COVID-19 indirect surface transmission ⁵⁴ .
Contingency plan	Any additional procedures to manage unexpected incidents, such as breach in the health protocol.

Bibliography

1. COVID-19 Public Health Emergency of International Concern (PHEIC) Global research and innovation forum. Accessed November 13, 2021. [https://www.who.int/publications/m/item/covid-19-public-health-emergency-of-international-concern-\(pheic\)-global-research-and-innovation-forum](https://www.who.int/publications/m/item/covid-19-public-health-emergency-of-international-concern-(pheic)-global-research-and-innovation-forum)
2. ASEAN Rapid Assessment: The Impact of COVID-19 on Livelihoods across ASEAN. ASEAN. Accessed November 13, 2021. <https://asean.org/book/asean-rapid-assessment-the-impact-of-covid-19-on-livelihoods-across-asean/>
3. ASEAN Secretariat, 'Charter of the Association of Southeast Asian Nations - ASEAN | ONE VISION ONE IDENTITY ONE COMMUNITY', 2008 <<https://asean.org/asean/asean-charter/charter-of-the-association-of-southeast-asian-nations/>> [accessed 3 December 2020]. - Google Search. Accessed November 13, 2021. <https://asean.org/about-asean/asean-charter/>
4. ASEAN Comprehensive Recovery Framework. ASEAN. Accessed November 13, 2021. <https://asean.org/book/asean-comprehensive-recovery-framework/>
5. WHO Coronavirus (COVID-19) Dashboard. Accessed January 29, 2022. <https://covid19.who.int>
6. Weekly epidemiological update on COVID-19 - 25 January 2022. Accessed January 29, 2022. <https://www.who.int/publications/m/item/weekly-epidemiological-update-on-covid-19---25-january-2022>
7. ASEAN Biodiaspora. COVID-19 Situational Report in the ASEAN Region-April 2022. ASEAN Biodiaspora Virtual Center (ABVC). Published online April 2022.
8. Byambasuren, O., Cardona, M., Bell, K., Clark, J., McLaws, M. L., & Glasziou, P. (2020). Estimating the extent of asymptomatic COVID-19 and its potential for community transmission: Systematic review and meta-analysis. MedRxiv. <https://doi.org/10.1101/2020.05.10.20097543>
9. Jayaweera, M., Perera, H., Gunawardana, B., & Manatunge, J. (2020). Transmission of COVID-19 virus by droplets and aerosols: A critical review on the unresolved dichotomy. Environmental Research, 188, 109819. <https://doi.org/10.1016/j.envres.2020.109819>
10. Koh, W. C., Naing, L., Rosledzana, M. A., Alikhan, M. F., Chaw, L., Griffith, M., Pastore, R., & Wong, J. (2020). What do we know about SARS-CoV-2 transmission? A systematic review and meta-analysis of the secondary attack rate, serial interval, and asymptomatic infection. MedRxiv. <https://doi.org/10.1101/2020.05.21.20108746>
11. Luo, L., Liu, D., Liao, X. L., Wu, X. B., Jing, Q. L., Zheng, J. Z., Liu, F. H., Yang, S. G., Bi, B., Li, Z. H., Liu, J. P., Song, W. Q., Zhu, W., Wang, Z. H., Zhang, X. R., Chen, P. L., Liu, H. M., Cheng, X., Cai, M. C., ... Mao, C. (2020). Modes of contact and risk of transmission in COVID-19 among close contacts. MedRxiv. <https://doi.org/10.1101/2020.03.24.20042606>

12. Sakurai, A., Sasaki, T., Kato, S., Hayashi, M., Tsuzuki, S., Ishihara, T., Iwata, M., Morise, Z., & Doi, Y. (2020). Natural History of Asymptomatic SARS-CoV-2 Infection. *New England Journal of Medicine*, 383(9), 885–886. <https://doi.org/10.1056/NEJMC2013020>
13. Santarpia, J. L., Rivera, D. N., Herrera, V. L., Morwitzer, M. J., Creager, H. M., Santarpia, G. W., Crown, K. K., Brett-Major, D. M., Schnaubelt, E. R., Broadhurst, M. J., Lawler, J. V., Reid, S. P., & Lowe, J. J. (2020). Aerosol and surface transmission potential of SARS-CoV-2. *MedRxiv*. <https://doi.org/10.1101/2020.03.23.20039446>
14. Transmission of SARS-CoV-2: implications for infection prevention precautions. (n.d.). Retrieved February 21, 2022, from <https://www.who.int/news-room/commentaries/detail/transmission-of-sars-cov-2-implications-for-infection-prevention-precautions>
15. Wu Z, McGoogan JM. Characteristics of and Important Lessons From the Coronavirus Disease 2019 (COVID-19) Outbreak in China: Summary of a Report of 72 314 Cases From the Chinese Center for Disease Control and Prevention. *JAMA*. 2020;323(13):1239-1242. doi:10.1001/jama.2020.2648
16. WHO. Coronavirus. Published 2021. Accessed November 14, 2021. https://www.who.int/health-topics/coronavirus#tab=tab_3
17. Elias, C., Sekri, A., Leblanc, P., Cucherat, M., & Vanhems, P. (2021). The incubation period of COVID-19: A meta-analysis. *International Journal of Infectious Diseases*, 104, 708–710. <https://doi.org/https://doi.org/10.1016/j.ijid.2021.01.069>
18. McAloon, C., Collins, Á., Hunt, K., Barber, A., Byrne, A. W., Butler, F., Casey, M., Griffin, J., Lane, E., McEvoy, D., Wall, P., Green, M., O'Grady, L., & More, S. J. (2020). Incubation period of COVID-19: a rapid systematic review and meta-analysis of observational research. *BMJ Open*, 10(8), e039652. <https://doi.org/10.1136/bmjopen-2020-039652>
19. CDC. (2021). SARS-CoV-2 Variant Classifications and Definitions. <https://www.cdc.gov/coronavirus/2019-ncov/variants/variant-classifications.html>
20. World Health Organization. (2022). Tracking SARS-CoV-2 variants. <https://www.who.int/en/activities/tracking-SARS-CoV-2-variants/>
21. Pandemic to endemic: How the world can learn to live with COVID-19 | McKinsey. Accessed January 29, 2022. <https://www.mckinsey.com/industries/healthcare-systems-and-services/our-insights/pandemic-to-endemic-how-the-world-can-learn-to-live-with-covid-19>
22. Sehgal NJ, Milton DK. Applying the Hierarchy of Controls: What Occupational Safety Can Teach us About Safely Navigating the Next Phase of the Global COVID-19 Pandemic. *Frontiers in Public Health*. 2021;9. Accessed January 24, 2022. <https://www.frontiersin.org/article/10.3389/fpubh.2021.747894>
23. Canada PHA of. Individual and community-based measures to mitigate the spread of COVID-19 in Canada. Published October 5, 2020. Accessed October 11, 2021. <https://www.canada.ca/en/public-health/services/diseases/2019-novel-coronavirus-infection/health-professionals/public-health-measures-mitigate-covid-19.html>

24. Ayouni, I., Maatoug, J., Dhouib, W., Zammit, N., Fredj, S. Ben, Ghammam, R., & Ghannem, H. (2021). Effective public health measures to mitigate the spread of COVID-19: a systematic review. *BMC Public Health*, 21(1), 1–14. <https://doi.org/10.1186/s12889-021-11111-1>
25. Glasziou, P. P., Michie, S., & Fretheim, A. (2021). Public health measures for covid-19. *BMJ*, 375. <https://doi.org/10.1136/bmj.n2729>
26. Kim DY, Shinde SK, Lone S, Palem RR, Ghodake GS. COVID-19 Pandemic: Public Health Risk Assessment and Risk Mitigation Strategies. *J Pers Med*. 2021;11(12):1243. doi:10.3390/jpm11121243
27. World Health Organization. Technical considerations for implementing a risk-based approach to international travel in the context of COVID-19: Interim guidance, 2 July 2021. Accessed December 5, 2021. <https://www.who.int/publications-detail-redirect/WHO-2019-nCoV-Risk-based-international-travel-2021.1>
28. Tufnell MLA, Kause J, Iley S. Pre-travel risk assessment for international business travellers during the COVID-19 pandemic. *Travel Med Infect Dis*. 2021;44:102162. doi:10.1016/j.tmaid.2021.102162
29. OECD initiative for safe international mobility during the COVID-19 pandemic (including blueprint) - OECD. Accessed January 12, 2022. https://read.oecd-ilibrary.org/view/?ref=1095_1095916-dq6euk2mq6&title=OECD-initiative-for-safe-international-mobility-during-the-COVID-19-pandemic-including-blueprint
30. Guidance on Personal Protective Equipment (PPE) | Personal Protective Equipment (PPE) | Public Health Planners | Ebola (Ebola Virus Disease) | CDC. (n.d.). Retrieved February 21, 2022, from <https://www.cdc.gov/vhf/ebola/healthcare-us/ppe/guidance.html>
31. Infection prevention and control systems | Australian Commission on Safety and Quality in Health Care. (n.d.). Retrieved February 21, 2022, from <https://www.safetyandquality.gov.au/standards/nsqhs-standards/preventing-and-controlling-healthcare-associated-infection-standard/infection-prevention-and-control-systems>
32. Talic, S., Shah, S., Wild, H., Gasevic, D., Maharaj, A., Ademi, Z., Li, X., Xu, W., Mesa-Eguiagaray, I., Rostron, J., Theodoratou, E., Zhang, X., Motee, A., Liew, D., & Ilic, D. (2021). Effectiveness of public health measures in reducing the incidence of covid-19, SARS-CoV-2 transmission, and covid-19 mortality: systematic review and meta-analysis. *BMJ*, 375. <https://doi.org/10.1136/BMJ-2021-068302>
33. Bok K, Sitar S, Graham BS, Mascola JR. Accelerated COVID-19 vaccine development: milestones, lessons, and prospects. *Immunity*. 2021;54(8):1636-1651. doi:10.1016/j.immuni.2021.07.017
34. Darby S, Chulliyallipalil K, Przyjalowski M, et al. COVID-19: mask efficacy is dependent on both fabric and fit. *Future Microbiol.*:10.2217/fmb-2020-0292. doi:10.2217/fmb-2020-0292
35. Eikenberry SE, Mancuso M, Iboi E, et al. To mask or not to mask: Modeling the potential for face mask use by the general public to curtail the COVID-19 pandemic. *Infectious Disease Modelling*. 2020;5:293-308. doi:10.1016/j.idm.2020.04.001
36. World Health Organization. (2021). Roadmap to improve and ensure good indoor ventilation in the context of COVID-19.

37. Lange KW, Nakamura Y. Lifestyle factors in the prevention of COVID-19. *Global Health Journal*. 2020;4(4):146-152. doi:10.1016/j.glohj.2020.11.002
38. Jones NR, Qureshi ZU, Temple RJ, Larwood JPJ, Greenhalgh T, Bourouiba L. Two metres or one: what is the evidence for physical distancing in covid-19? *BMJ*. 2020;370:m3223. doi:10.1136/bmj.m3223
39. World Health Organization, 'COVID-19 Strategic Preparedness and Response Plan: Monitoring and Evaluation Framework', May, 2021 <<https://apps.who.int/iris/bitstream/handle/10665/341576/WHO-WHE-2021.07-eng.pdf?sequence=1>>.
40. ECDC, 'Monitoring and Evaluation Framework for COVID-19 Response Activities in the EU/EEA and the UK Background Monitoring and Evaluation Framework for COVID-19 Response Activities in the EU/EEA and the UK Contents', June, 2020, 92.
41. Ingrid Torjesen, 'Covid-19 Will Become Endemic but with Decreased Potency over Time, Scientists Believe', *BMJ*, 372 (2021) <<https://doi.org/10.1136/bmj.n494>>.
42. Li Feng Tan and Min Feng Tan, 'Pandemic to Endemic: New Strategies Needed to Limit the Impact of COVID-19 in Long-Term Care Facilities (LTCFs)', *Journal of the American Geriatrics Society*, 70.1 (2022), 72–73 <<https://doi.org/https://doi.org/10.1111/jgs.17556>>.
43. World Health Organization. *International Health Regulations (2005)*. World Health Organization; 2008.
44. Safe Management Measures for MICE Events | STB. Accessed November 26, 2021. <https://www.stb.gov.sg/content/stb/en/home-pages/advisory-for-MICE.html>
45. Glossary of tourism terms | UNWTO. Accessed November 26, 2021. <https://www.unwto.org/glossary-tourism-terms>
46. Guideline of Arrangement And Development of Traditional Market, Shopping Centre, And Modern Market | Leks&Co Lawyers – Law Firm Jakarta, Lawyer Indonesia, Indonesia Law Office, Jakarta Lawyer, Law Firm Indonesia. Accessed November 26, 2021. <https://www.lekslawyer.com/guideline-of-arrangement-and-development-of-traditional-market-shopping-centre-and-modern-market/>
47. Religious Places Definition. Law Insider. Accessed November 26, 2021. <https://www.lawinsider.com/dictionary/religious-places>
48. World Health Organization. Living guidance for clinical management of COVID-19. Accessed December 5, 2021. <https://www.who.int/publications-detail-redirect/WHO-2019-nCoV-clinical-2021-2>
49. World Health Organization. Coronavirus disease (COVID-19): Vaccines. Accessed December 5, 2021. [https://www.who.int/news-room/questions-and-answers/item/coronavirus-disease-\(covid-19\)-vaccines](https://www.who.int/news-room/questions-and-answers/item/coronavirus-disease-(covid-19)-vaccines)
50. CDC. COVID-19 Vaccination. Centers for Disease Control and Prevention. Published February 11, 2020. Accessed December 5, 2021. <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/fully-vaccinated.html>

51. World Health Organization. WHO issues emergency use listing for eighth COVID-19 vaccine. Accessed December 5, 2021. <https://www.who.int/news/item/03-11-2021-who-issues-emergency-use-listing-for-eighth-covid-19-vaccine>
52. World Health Organization. Considerations for quarantine of contacts of COVID-19 cases: interim guidance, 25 June 2021. Accessed December 5, 2021. <http://apps.who.int/iris/handle/10665/342004>
53. International Maritime Organization. Coronavirus disease (COVID-19) Pandemic. Accessed December 5, 2021. <https://www.imo.org/en/MediaCentre/HotTopics/Pages/Coronavirus.aspx>
54. World Health Organization. Transmission of SARS-CoV-2: implications for infection prevention precautions. Accessed November 13, 2021. <https://www.who.int/news-room/commentaries/detail/transmission-of-sars-cov-2-implications-for-infection-prevention-precautions>
55. World Health Organization. (2020). WHO COVID-19 Case definition. Updated in Public Health Surveillance for COVID-19, December 16, 1. https://www.who.int/publications/i/item/WHO-2019-nCoV-Surveillance_Case_Definition-2020.2



MINISTRY OF HEALTH
REPUBLIC OF INDONESIA



Implemented by
giz Deutsche Gesellschaft
für Internationale
Zusammenarbeit (GIZ) GmbH



ASEAN HEALTH PROTOCOL FOR PANDEMIC PREVENTIVE MEASURES IN PUBLIC PLACES

Operationalising Guidelines

Table of Content

Glossary	4
Section A: Introduction	5
A.1 Overview	5
A.2 Terms	5
A.3 Target of the operationalising guideline	5
Section B: Guidelines on operationalising the protocols on promoting community preventive measures in public places.....	8
B.1 Prerequisite steps.....	8
B.2 Risk assessment.....	8
B.3 Pre-entry screening	8
B.4 Protocols on promoting the implementation of personal preventive measures to the community	9
B.4.1 Promoting the implementation of wearing masks, hand hygiene, and respiratory etiquette.....	9
B.4.2 Supporting physical distancing measures in public places	10
B.4.3 Providing and maintaining adequate ventilation.....	10
B.4.4 Perform routine adequate cleaning and disinfecting procedures to prevent COVID-19 transmission.....	10
B.4.5 Handling potentially infectious waste	10
B.5 Prepare workers for COVID-19 related health protocol	10
B.6 Additional supporting facilities	11
Section C: Guidelines on operationalising the protocols on preventive measures in specific settings	12
C.1 Point of Entry	12
C.2 Ports: Airports, Land Ports, Seaports.	13
C.3 Transportation.....	13
C.4 MICE.....	13
C.5 Grocery store	14
C.6 Shopping centre.....	14
C.7 Beauty and hair care facilities	14
C.8 Administrative office	14
C.9 Restaurants	14
C.10 Hotel, lodgings, and homestays.....	14
C.11 Sport facilities	14
C.12 Religious place	14
C.13 Tourism sites.....	15

Section D: Technical guidelines on operationalising community preventive measure.....	16
D.1 Wearing mask.....	16
D.2 Hand hygiene	18
D.3 Respiratory etiquette	19
D.4 Physical distancing	20
D.5 Maintaining and Improving Ventilation in The Context of COVID-19 Preventive Measure	21
D.6 Procedures for Cleaning and Disinfecting to Prevent COVID-19 Transmission.....	24
D.7 Potential COVID-19 Infectious Waste Management.....	30
D. 8 Contingency Plan in Response to the Finding of Suspected or COVID-19 Cases in Public Places	32
References	36

Glossary

Beauty and hair care facilities	This setting includes hair care facilities such as beauty salon and barber. This includes facilities offering nail treatment, skin and body care treatments, hair removal facilities, and massage.
Creative economy	Movie industry, museums, art exhibitions, TV show, news production.
Shopping centre	Any establishment that provides trade for non-grocery items.
Healthcare facilities	This setting regulates the public aspect of healthcare, such as the clinic, waiting areas, registration areas, labs, pharmacists, testing facilities. However, it will not regulate areas that is regulated in healthcare protocol, such as ward or operating theatres. In addition, this Health Protocol will not regulate healthcare workers.
Hotel, lodging, and homestay	This setting regulates all facilities that provide temporary accommodation for the community. This includes hotels, motels, lodgings, homestays, bed and breakfast, and other establishments.
Point of entry	Any ports that provide access to travel across the country border. Therefore, enabling travellers from outside the country to enter.
Ports	Any facilities that provide access to transportation, either air, land, or sea transportation. In this guideline, ports refer specifically to the facilities that enable boarding, alighting, and other supporting administrative areas such as check-in counters, immigration, and others. Other facilities are regulated in other setting.
Restaurants	Restaurants are defined as all commercial establishment that serves food, both outdoors and indoors. It includes both establishments that offers dining areas and takeaway only.
Religious places	Religious place means a building or a defined or enclosed place where public worship is or religious ceremony are performed either regulatory or occasionally, such as a church, chapel, mosque, temple or other place ¹ .
Risk assessment	COVID-19 transmission risk assessment is defined as the combined effort of identifying and analysing potential COVID-19 transmission and risk factors that help organisation to provide risk mitigation measures to reduce the impact of the COVID-19 transmission. For example, the countries categorisation based on the COVID-19 transmission risk into low, medium, or high risk. This category might be used to assess travellers' eligibility to enter the ASEAN countries based on their originating country ² .
Grocery store	This setting includes all establishment where trades for goods occur. This includes establishment providing trades for daily necessities such as grocery store, supermarket, and traditional markets, as well as department stores and retail stores ³ .

Sport facilities	This setting regulates facilities, both outdoors and indoors, that provide equipment and tools to support exercise, such as gym and swimming pools.
Tourism sites	Tourism is defined as a social, cultural, and economic phenomenon which entails the movement of people to countries or places outside their usual environment for personal or business/professional purposes ⁴ .
Administrative facilities	This category regulates all facilities, both public and private, that provides record keeping and record retention services. This includes facilities such as civil registries, immigration offices, tax office, banks, post office, and other service providers.

Section A: Introduction

A.1 Overview

This operationalising guidelines serve as the Health Protocol supporting document to assist stakeholders and the community in understanding and applying the ASEAN Health Protocol for Pandemic Prevention in Public Places (The Health Protocol). This document provides explanatory information to prevent misinterpretation on the guidelines provided in the Health Protocol. The information provided in this document should be treated as a complement to the health protocol, without adding, subtracting, or modifying it. The Health Protocol and this Operationalising Guidelines should be used on a voluntary basis in accordance to the context and regulation in each ASEAN Member State. User of the Health Protocol should select, calibrate, and implement elements of the Health Protocol according to the current assessment of COVID-19 activity.

A.2 Terms

In addition to the glossary in the section above and to prevent misunderstanding while navigating this document, clarifications of selected terms can be found below.

1. The word 'consider' means it is necessary to think about but can be excluded, whereas 'take into account' means it is necessary to think about but cannot be excluded
2. The words 'appropriate' and 'applicable' are not interchangeable. 'Appropriate' means suitable (for, to) and implies some degree of freedom, while 'applicable' means relevant or possible to apply and implies that if it can be done, it shall be done
3. This document uses the term 'interested party'; the term 'stakeholder' is a synonym as it represents the same concept
4. The word 'ensure' means the responsibility can be delegated, but not the accountability to make sure that an action is performed
5. The word 'requirement' or 'require' refers to the mandatory action the community, workers, or interested parties should take as considered by the stakeholders. In the context of the health protocol and the operationalising guideline, these words should be considered as a recommendation for the related stakeholders
6. The word 'ASEAN community' or 'the community' refers to citizens of ASEAN MEMBER STATES and foreigners who currently reside and participate in the ASEAN region.

A.3 Target of the operationalising guideline

This operationalising guidelines are intended to be used by primary stakeholders and policymakers of all ASEAN Member States. User of the Health Protocol should apply the appropriate health protocol in accordance with the local regulation. In addition, this operationalising guidelines may be used by interested parties, such as those who manage settings considered as public place in this document to provide the necessary preventive measures. Example of these prospective parties can be found in each target area in the health protocol.

Section B: Guidelines

on operationalising the protocols on promoting community preventive measures in public places

B.1 Prerequisite steps

In preparing the health protocol in public places, stakeholders should ensure the following:

1. Staying updated to the current COVID-19 activities at global, regional, national, and local level. In addition, staying updated to relevant COVID-19 regulations, especially related to activities in public places
2. Identify the authorities in charge in each setting. This may differ among each ASEAN Member States
3. Establish a communication network with other stakeholders and interested parties. In addition, circulate current regulations and circumstances that may affect other stakeholders and interested parties
4. Ensure all setting management to be aware of and comply with the current health protocol before reopening their business.

B.2 Risk assessment

Stakeholders should ensure that public places that are open have been assessed for risk. The risk assessment tools in the health protocol can be used to determine if an activity is safe for reopening under several considerations. Stakeholders should ensure that appropriate regulations are in place before reopening public places. In addition, stakeholders should ensure that in the case increasing activities, public places can be immediately closed to prevent escalation.

B.3 Pre-entry screening

To prevent exposure in public places, stakeholders should take into account the following:

1. Determine the requirement for the community to enter the public place settings that they manage. These may include:
 - a. Proof of negative COVID-19 testing/no positive COVID-19 testing recognition

- b. And/or proof of COVID-19 vaccination
 - c. And/or proof of recovery status (proof of recovery can replace both of proof of negative COVID-19 and proof of vaccination for 90 days)
 - d. And/or free from COVID 19-related symptom (self-assessment)
2. When applicable, provide the necessary verification tools to ensure the validity of the COVID-19 screening documents. These may include a standardised health declaration form, a designated mobile app, or access to interoperable verification for COVID-19 documents across ASEAN Member States
 3. When appropriate, provide temperature checking tools
 4. Ensure a dedicated area or lane is available for performing screening upon entry
 5. Determine the standard for screening procedure, based on the level of risk
 6. Screening for children should be age appropriate. In cases where children are not eligible for certain preventive measures, then their eligibility depends on the parents.

B.4 Protocols on promoting the implementation of personal preventive measures to the community

Personal preventive measures serve as the backbone to the Health Protocol. Individuals are responsible to comply with these measures. Therefore, stakeholders are expected to provide supports to promote the implementation of personal preventive measures in the community including the necessary facilities. Detailed guidance on personal preventive measures can be seen in **Section D**. Guidelines on operationalising the health protocol on personal preventive measures can be found below.

B.4.1 Promoting the implementation of wearing masks, hand hygiene, and respiratory etiquette

In addition to the guidelines in Section B, stakeholders should:

1. Determine a standardised personal preventive measure strategy that should be complied by the community. Stakeholders may refer to the technical guidance provided in **Section D**
2. Ensure public health messages are delivered to the community to comply with personal preventive measures. In addition, information regarding personal preventive measures should be available publicly through an official channel
3. Ensure public health messages are delivered in public places to remind the community and workers to comply with the community preventive measures
4. Ensure appropriate facilities are provided in the public places to support personal preventive measures. This may include handwashing facilities or masks for workers. Additional reference can be found in the technical guidance provided in **Section D**.

B.4.2 Supporting physical distancing measures in public places

To support the implementation of appropriate physical distancing, stakeholders should consider the following:

1. Determine the maximum occupancy capacity in each area to ensure a minimum distance of 1 meter per person could be maintained
2. Determine areas where staggering mechanism may be necessary to prevent crowding
3. Ensure distance are marked in areas where crowding might happen, such as in queues
4. Provide physical barrier when close contact is inevitable between the community and workers
5. Separation of entry and exit points especially in high traffic areas
6. See **Section D.4.**

B.4.3 Providing and maintaining adequate ventilation

Stakeholders should maximise the use of open air venues for public place activities. In the event where this is not applicable, stakeholders should ensure the provision of adequate ventilation filter, see **Section D.5.**

B.4.4 Perform routine adequate cleaning and disinfecting procedures to prevent COVID-19 transmission.

Routinely clean and disinfect surfaces to prevent indirect transmission. See **Section D.6.**

B.4.5 Handling potentially infectious waste

Prevent transmission through waste. See **Section D.7.**

B.5 Prepare workers for COVID-19 related health protocol

Stakeholders should ensure all workers in public places are trained with the health protocol. This could be achieved by the following:

1. Determine an appropriate health protocol depending on each setting
2. Ensure all workers in the point of entry are trained with the health protocol
3. Inform and allow workers to stay at home when developing symptoms, went to area of exposure, or are close contacts with a case
4. Train workers in putting on masks correctly, performing fit tests, donning and doffing of additional PPEs when necessary, practicing hand hygiene, regularly cleaning surfaces, and aware of the contingency plan
5. Consider working with health professionals who can provide necessary technical assistance, such as for COVID-19 testing, examining travellers with symptoms, and provide necessary judgment when needed

6. Consider hiring additional staff to ensure the safety of the process and prevent breaches. These may include the police, the military, or other security services
7. Arrange regular testing for workers. This could be done periodically depending on current COVID-19 activity.

B.6 Additional supporting facilities

Stakeholders should consider:

1. When applicable, providing contactless options for administration, transaction, and access to minimise physical contact
2. When appropriate, providing pick-up options for administration and transaction to minimise contact duration.

Section C: Guidelines on operationalising the protocols on preventive measures in specific settings

In addition to the guidelines on operationalising the protocols on promoting community preventive measures in public places (**Section B**), the following are specific guidelines on operationalising the protocols in specific settings. Only setting specific guidelines will be included in this section. Unless otherwise stated, all guidelines in **Section B** should be considered by the stakeholders in each setting.

C.1 Point of Entry

Pre-travel screening

*In addition to the guidelines in **Section B**, stakeholders should:*

1. Ensure all travellers coming into their country to be aware of the protocol to enter the country
2. Provide information on the requirement to enter the country publicly.
3. Communicate with embassies
4. Ensure all transportation carriers that provide access to their country to be informed and updated of the current protocol on entering the country
5. If required, ensure the local country app to be accessible globally.

On arrival arrangement

*In addition to the guidelines in **Section B**, stakeholders should:*

1. Provide a dedicated lane for travellers crossing the border
2. Provide the tools to verify the documents required to enter the country. These include COVID-19 related documents, such as COVID-19 testing result and COVID-19 vaccination status
3. Provide the necessary on-arrival COVID-19 testing for specified travellers
4. Inform travellers to comply with personal preventive measures by wearing masks, maintaining physical distancing, and practicing hand hygiene.

5. Ensure a dedicated transportation service to the quarantine area. The transportation service should be sterile from other parties that may causes breach in the point of entry.

C.2 Ports: Airports, Land Ports, Seaports.

Pre-entry screening

*In addition to the guidelines in **Section B**, stakeholders should:*

1. Ensure all travellers to be aware of the travelling protocol
2. Provide information on the requirement to travel publicly
3. Ensure all transportation carriers that provide access to their country to be informed and updated of the current protocol on traveling and entering the country.

Travel arrangement

*In addition to the guidelines in **Section B**, stakeholders should:*

1. Provide a dedicated lane for travellers if the port also serves as point of entry
2. Provide the tools to verify travel documents. These include COVID-19 related documents, such as COVID-19 testing result and COVID-19 vaccination status
3. Inform travellers to comply with personal preventive measures by wearing masks, maintaining physical distancing, and practicing hand hygiene.

Quarantine facilities

*In addition to the guidelines in **Section B**, stakeholders should:*

1. In ports that serve as point of entry, stakeholders should ensure reporting and coordination mechanism with the leading party that manages quarantine
2. Stakeholders should ensure access between ports and quarantine area to be available
3. Stakeholders should ensure a protocol to mobilise travellers between ports and quarantine area is in place
4. In the event of a breach, stakeholders should immediately activate contingency plan. See **Section D.8**.

C.3 Transportation

See **Section B**.

C.4 MICE

See **Section B**.

C.5 Grocery store

See **Section B**.

C.6 Shopping centre

See **Section B**.

C.7 Beauty and hair care facilities

Additional arrangement:

*In addition to the guidelines in **Section B**, stakeholders should:*

1. If applicable, stakeholders should consider making booking for appointment available online to ensure appropriate physical distancing and minimise contact duration
2. If applicable, queuing space should be provided outdoors with appropriate physical distancing
3. Stakeholders should consider providing workers with additional PPE such as face shield, due to the close contact nature between workers and the community.

C.8 Administrative office

See **Section B**.

C.9 Restaurants

See **Section B**.

C.10 Hotel, lodgings, and homestays

See **Section B**.

C.11 Sport facilities

See **Section B**.

C.12 Religious place

Additional arrangement:

*In addition to the guidelines in **Section B**, stakeholders should:*

1. Communicate with religious leaders to help promoting the health protocol and ensure religious activities are conducted under the appropriate health protocol

2. Discuss with religious leaders to provide alternatives to mass religious gatherings, such as by adding more worship sessions to ensure appropriate physical distancing can be implemented.

C.13 Tourism sites

See *Section B*.

Section D: Technical guidelines on operationalising community preventive measure

D.1 Wearing mask

Since SARS-CoV-2 is transmitted through droplets and airborne, wearing masks provide primary protection against SARS-CoV-2 and COVID-19. It is necessary to understand that despite its essential role in preventing the spread of the disease, wearing masks should be implemented together with other preventive measures, as no single intervention is 100% effective in preventing the disease. Masks should be worn by everyone, not only to prevent inhalation of the virus but also spread of the virus by asymptomatic cases. Therefore, wearing masks should be considered normal procedure going forward⁵⁻⁹.

When you should put on mask?

You should put on your mask when:

1. You are 2 years or older
2. You are in public places, either indoor or outdoor, regardless of physical distancing
3. You are in public transportation
4. You are around people outside the members of your household
5. Inside your home if you are living with someone who is a suspected or confirmed COVID-19 case, until they are tested negative.

Choosing your mask

The following are masks that you should consider wearing in public places:

1. Surgical masks
2. Filtering facepiece mask (FFP): N95, KN95, KF94, and others
3. Three layered fabrics.

You should avoid the following:

1. Masks that do not fit you well (too loose or too tight)
2. Masks that are made from single layer materials
3. Masks that are made from hard-to-breathe materials

4. Masks with valve
5. Touching your face even with masks on
6. Touching your masks
7. Wear masks in high intensity physical activity, resort to maintaining adequate distance instead.

Guide on putting on and taking off masks.

1. Clean your hands before taking the masks out of the packaging. *For further details on hand hygiene, refer to the Hand Hygiene document in Section D.2*
2. Put on the mask by holding the loop, make sure it covers your mouth and nose
3. Adjust the nose piece to ensure seal
4. Throughout wearing, minimise touching the mask with your hand or adjusting the mask when not needed
5. Replace the mask if it has been worn for more than 8 hours, or is wet, or if visible dirt is observed
6. Take off the mask by using one finger through the loop on both ears
7. Dispose it if it is a disposable mask. If it is a fabric mask, ensure thorough cleaning.

Guide on putting on filtering facepiece masks (FFP).

The following steps on wearing FFP is similar to wearing other disposable masks or surgical masks. The key difference lies on the FFP ability to create a seal.

1. Clean your hands before taking the masks out of the packaging. *For further details on hand hygiene, refer to the Hand Hygiene document in Section D.2.*
2. Put on the mask by holding the loop, make sure it covers your mouth and nose. Adjust the loop using one finger in each side
3. Adjust the nose piece to ensure seal
4. Perform seal test, blow through the mask while feeling the edges with your hands. A leak is identified when air flow can be felt around the edges. If you are wearing glasses, the glasses may become foggy
5. If a leak is identified, readjust the seal by adjusting the loop or the nose piece.
6. If a seal cannot be ensured, maybe the mask is too large for you
7. Throughout wearing, minimise touching the mask with your hand or adjusting the mask when not needed
8. Replace the mask if it has been worn for more than 8 hours, or is wet, or if visible dirt is observed
9. Take off the mask by using one finger through the loop
10. Unless there is shortage in supply, it is recommended that you dispose the masks after each use

11. In critical circumstances where shortage of masks happen, stakeholders should consider recommending reuse of FFPs. It is recommended that used FFP masks to be stored in a breathable paper bag for at least five (5) days before reuse. Hence, each person will require only five FFP masks. However, these masks should be considered contaminated and should not be used in sterile setting¹⁰.

D.2 Hand hygiene

Hand hygiene refer to both handwashing and the use of hand sanitiser such as alcohol-based hand rubs. Hand washing is the act of cleaning one's hands with soap and water to remove viruses/bacteria/microorganisms, dirt, grease, or other harmful and unwanted substances stuck to the hands. Drying of the washed hands is part of the process. The use of hand sanitiser is less effective when hands are visibly dirty or soiled with body fluid or food.

Procedure

When to perform hand hygiene

1. *Stakeholders should provide educational materials on hand washing moments. The community is recommended to wash hands in any of these moments:*
 - a. Before and after touching the face, such as when eating, putting on and taking off masks, touching the eyes, nose, or mouth
 - b. After touching body fluids or surfaces that might be contaminated by body fluids. This includes after using the toilet, changing diapers, sneezing, coughing, or blowing noses, or taking care of a sick person at home
 - c. Before and after touching high contact surface area in public.
2. Stakeholders should recommend hand washing with running water and soap after every 5-6 hand sanitising using alcohol-based rubs. This is to prevent damage to the skin which compromise the barrier and made the hands more vulnerable to infection. In addition, running and soap should be used when visible dirt is observed.

How to use perform hand-hygiene

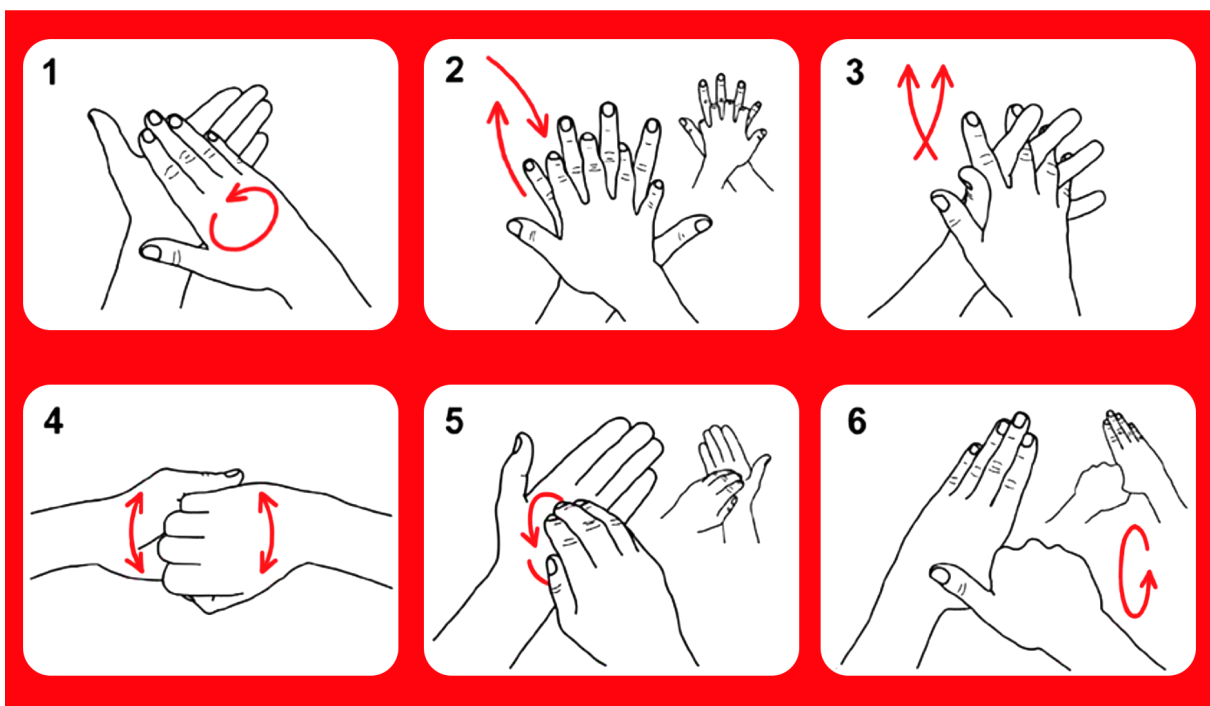
Stakeholders should provide education on basic hand hygiene technique that have been used in the medical field:

1. If you are using alcohol-based rub, apply the product to one of your hands generously
2. If you are using soap, wet the hands up to the wrist with running water. Then apply the soap to both hands
3. Follow the hand hygiene procedure in six steps:
 - a. Wash the palm of the hands
 - b. Wash the back of the hands

- c. Interlock fingers and rub them together
 - d. Interlock the knuckles and rub them together, while using the thumbs to rub the side of the hand
 - e. Clean both thumbs using the other hand
 - f. Clean the nails by rubbing them to the other palm.
4. Hand hygiene using alcohol-based products should take at least 20 seconds, while using soap and running water should take at least 40 seconds
 5. Hands should be dry after performing proper hand sanitising. When using running water and soap, use paper towel to dry hands

Figure 1 The six steps on hand hygiene

Source: WHO, 2009¹¹.



D.3 Respiratory etiquette

Respiratory hygiene and cough etiquette are terms used to describe infection prevention measures to prevent droplet or airborne route transmission of respiratory pathogens (e.g., COVID-19, influenza and cold viruses). The procedure is used to minimise the spread of droplets and airborne particles. Stakeholders should educate the importance of respiratory etiquette. However, just as any other prevention procedures, it is only effective when used in conjunction with other procedures.

Procedure

Stakeholders should educate the community to perform the following when coughing or sneezing:

1. If you are in public place or enclosed space, do not cough or sneeze openly
2. Cover the mouth and nose using tissue or handkerchief. If tissues are used, dispose it immediately to the closest available garbage bin. Otherwise, store it in pockets or paper/plastic bag separate from any other belongings
3. If tissues/handkerchiefs are not available, cough or sneeze to the upper sleeve of the arms by lifting the elbow
4. Wash hands after sneezing or blowing the nose.

D.4 Physical distancing

Physical distancing is defined by the action of maintaining a 1 m distance to other individuals who are not a member of the household. Stakeholders should also provide measures to ensure this practice.

Procedure

1. Stakeholders should provide educational material on physical distancing. The following should be considered:
 - a. If symptoms are observed, individuals should stay at home and refrain from non-essential travels or any activities in the public place
 - b. Depending on COVID-19 activities, individuals might be recommended to get tested when developing symptoms before being allowed to leave their home
 - c. Stakeholders should take into consideration the promotion of non-contact greetings such as waving, bowing, or nodding
 - d. If persons are required to communicate with people who are not direct family members, the interactions should be as follows: as few and as brief as possible and from the greatest physical distance possible.
2. Public places should have limits on maximum occupants to ensure physical distancing can be practiced. The maximum occupancy of enclosed public places should adhere to the numbers set by the national guidelines
3. Stakeholders and interested parties should consider the use of marking or staggering in areas where potential crowding may happen, such as in queueing areas
4. Stakeholders should support business owners to provide non-contact delivery methods or non-contact transactions
5. Stakeholders should utilise means of digital communication whenever possible as a part of physical distancing strategies.

D.5 Maintaining and Improving Ventilation in The Context of COVID-19 Preventive Measure

Ventilation is defined as the process of exchanging stale air in a room with fresh air. This process help reduce the concentration of SARS-CoV-2 in a room, reducing risk of transmission and improving rate of elimination¹². In the context of public places, requirements for ventilation will varies depending on the setting. There are three basic methods to ventilation: natural (such as vents and windows), mechanical (such as fans or air conditioning), and hybrid. This guideline will provide general overview of the current available options for ventilation.

Stakeholders should set a standardised requirement for ventilation for managers of public places. Stakeholders should take into accounts the availability of tools and the feasibility of the policy based on current national and international regulatory bodies¹³.

Building ventilation has three basic elements¹²:

1. Ventilation rate (m³/hr, l/s or ACH) – the volume of outdoor air that is provided into the space
2. Airflow direction – the overall airflow direction in a building and spaces, which should be from clean zones to dirty zones
3. Air distribution or airflow pattern – External air should be able to circulate effectively and efficiently to each area of the space, and the airborne contaminants generated in each area of the space should likewise be removed effectively and efficiently.

Recommendations for Non-Residential Building Ventilation

Stakeholders should consider the following methods to recommend a standardised requirement for each setting:

1. Natural ventilation

If there is no risk on safety and health, open windows, doors, and vents whenever possible. A constant flow of air could be achieved by opening them throughout the day. In addition, stakeholders should ensure that there is no mould build up that may pose safety and health risk.

2. Mechanical ventilation

The use of fans may help improve air circulation through natural ventilation. Ensure placement of fans do not promote the flow of contaminated air. This could be achieved by using window fans, gable fans, and roof ventilators.

3. Heating, Ventilation, and Air Conditioning system (HVAC)

For facilities with HVAC, stakeholders should consider the following recommendations:

- a. Managers of public places should consider increasing outdoor air ventilation, taking into account the pollution level of the area. With a smaller population in the building, the effective dilution ventilation per person is increased

- b. Managers of public places should consider disabling demand-controlled ventilation (DCV). Air dampers should be set at the minimum of 100%, preventing recirculation
- c. Improve central air filtration to MERV-13 or a higher level compatible with the filter rack, and seal the filter's edges to prevent bypass
- d. Keep systems running longer hours, if possible 24/7, to enhance the two actions above.
- e. Consider portable room air cleaners with HEPA filters.

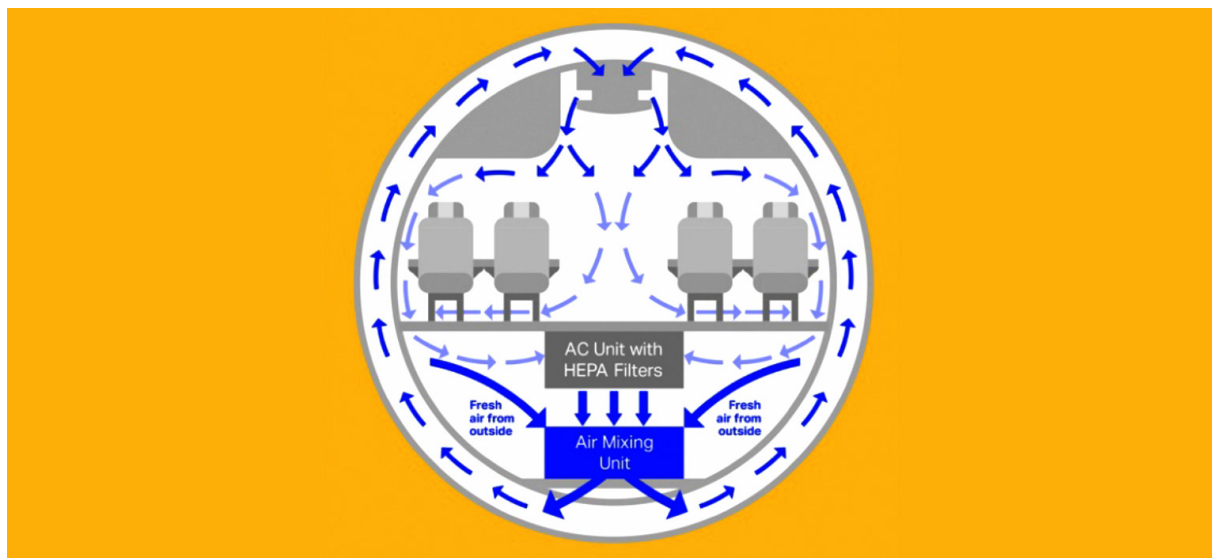
Recommendations for ventilation in vehicles

Since reopening public places will increase mobility, ensuring appropriate ventilation in public transportation vehicles is essential¹⁴. Stakeholders should consider the following methods to recommend a standardised requirement for each setting:

1. When operating or travelling in vehicles:
 - a. Turn on ventilation system when a passenger is inside. Allow fresh air to enter instead of recirculating inside air
 - b. Consider opening windows when no risk to safety and health is present
 - c. For public transportation with high take over, consider clearing the air between passengers before exchanging passengers. This could be achieved by opening doors and fully opening windows, where it is safe to do so.
2. In airplanes:

Ensure that most commercial flights have equipped the airplane cabin with the appropriate ventilation system. Generally, High-Efficiency Particulate Air (**HEPA**) filters are available for airplanes which ensure sterile and particle-free air supply¹⁵. Stakeholders should ensure cabin air is refreshed 20-30 times an hour¹⁶.

Figure 2. The use of HEPA filters and airplane cabin.



Maintenance and cleaning of ventilation systems

In addition to standardising ventilation requirement in each setting, stakeholders should also recommend a standardised maintenance and cleaning of ventilation systems. Through proper maintenance and cleaning, HVAC systems used for various indoor environments can perform at their maximum efficiency. Before cleaning, multiple checks should be completed to ensure the HVAC system is operating at its maximum capacity. Some of the checks that can be done include:

1. Check the outdoor air intakes to assure that they are clean, open, and not blocked by bushes, defective louvers, and so on.
2. Check system filters:
 - a. Are they clean?
 - b. Are they rated at the highest efficiency the system is capable of handling?
 - c. Is there a schedule for filter changes?
3. Check and clean air supply and return louvers and registers regularly.
4. Check to be sure there are no water leaks or standing water in the building or near the HVAC system, including in the HVAC air inlet plenum.
5. Make sure there are no sources of contamination near the air intakes. Reattainment of exhausted effluents is a common problem that may require engineering changes.

HVAC system cleaning is normally performed by a qualified cleaning company. The work to be done involves removing dirt, slime, mould, debris, and other materials found in either the ductwork or the air handling equipment components (e.g. fans, heating and cooling coils, drain pans, filters, terminal boxes, return air plenums, outdoor air intakes, air mixing locations, etc.) through washing, brushing, vibrating, and vacuum cleaning. The cleaning process should follow recognised good practices, which would protect

building occupants if they must be present during cleaning. However, if individuals are doing the work themselves, then they must be mindful when replacing a dirty filter, as it is better to assume that the filter has viable biologic particles that may include moulds, bacteria, and viruses. Stakeholders and policy makers should ensure that individuals tasked to performed the routine cleaning are appropriately trained and equipped with adequate personal preventive measures.

D.6 Procedures for Cleaning and Disinfecting to Prevent COVID-19 Transmission

SARS-CoV-2 droplets can land and remain active on different types of surfaces. Indirect transmission is possible for people if they touch those surfaces and then touch their nose, mouth, or eyes¹⁷. Despite the low risk for indirect transmission, this technical guidelines support the Health Protocol to further minimise the risk of transmission and prevent and control the disease^{18,19}the etiologic agent of coronavirus disease 2019 (COVID-19. In addition to this guideline on cleaning and disinfecting surfaces, stakeholders should also consider promoting hand hygiene as the most reliable way to prevent infection from surfaces²⁰.

Cleaning and disinfecting are the process of removing microorganisms through mechanical and chemical methods. Through this process, microbial load should be significantly reduced, therefore reducing the risk of transmission despite not fully eliminating the germs from most high touch surface²¹reports from China of the incidence of pneumonia with unknown etiology were sent to the World Health Organization (WHO. Current studies recommend the use of several agents, such as 70% alcohol, detergent, detergent containing iodine, household bleach, sodium hypochlorite, hydrogen peroxide, chlorine dioxide, glutaraldehyde, ultraviolet irradiation and plasma air purifier^{22,23,24}sewage, and personal protective equipment (PPE. Table 1 provide detailed recommendation on cleaning and disinfecting agents.

*Cleaners, sanitisers, and disinfectant*²⁵

Cleaning involves the physical removal of contaminant, such as dirt, debris, dust, body fluids, and other organic materials, from a surface. This could be achieved using surfactants (such as soaps and detergents), abrasive cleaners, and water. This should be the pre-emptive procedure for most surfaces to ensure better adherence of sanitising and disinfecting products

Sanitisers are substances that reduce microorganisms by at least 99.9%, although not eliminating them. Stakeholders should consider working with specialised department to determine the available sanitising product in their country. Food grade sanitisers should be considered in applicable food contact surfaces. These sanitisers typically are standardised to remove *Escherichia coli* and *Salmonella aureus* within 30 seconds.

Disinfectants are products that have greater ability than sanitisers to eliminate microorganisms and include bactericides, fungicides, virucides, mycobactericides, tuberculocides, sporicides, and sterilants. Stakeholders should determine the standard products allowed for use, taking into account the availability, safety, and ease of use.

The type of cleanser and disinfectant used is determined by the purpose, frequency of contact, and type of surface. Whenever feasible, avoid accidental exposure to dangerous chemicals by using pre-mixed disinfecting cleaner products rather than combining individual products. Ammonia or acid products should

never be mixes, as this can result in the formation of deadly chlorine gas and other hazardous by products. Never use hot water with bleach, as chlorine gas can be generated when the two are combined.

Important precautions when using disinfectants^{20,25,26}

Stakeholders should ensure safety of interested parties in using disinfectant products by considering the following precautions:

1. Check what Personal Protective Equipment (such as gloves, mask, glasses, or goggles) is required to use the disinfectant product. This is usually available in the product label
2. Use the amount as recommended in the label
3. Unless otherwise stated, use room temperature water to dilute the products
4. Always add concentrated bleach products to water, not the other way around. This is to prevent splashes of irritative substances
5. When disinfecting a surface or an area, make sure the area is well ventilated.
6. Always follow the manufacturer's directions for use as specified on the product label
7. Avoid the mixing of products or chemicals
8. Avoid ingesting, drinking, inhaling, or injecting cleaning and disinfection products into your body or directly into your skin
9. Ensure that the cleanser and disinfectant are compatible with the surface's finish and material
10. Before using, verify the product's expiration date
11. Consider utilising spray bottles for cleaners, sanitisers, and disinfectants; avoid dipping cloths in solutions twice
12. Avoid replenishing cleaning and disinfecting solutions
13. Consider single-use cleaning supplies like paper towels or wipes. After usage, clean mops and cloths with laundry soap and hot water and disinfect with a weak bleach solution (1000 ppm)
14. All disinfectant solutions should be stored in opaque containers in a well-ventilated, enclosed place that is not exposed to direct sunlight and, ideally, prepared daily
15. Maintain adequate ventilation
16. Dispose of any disinfection products according to the manufacturer's directions.

General Cleaning and Disinfecting Procedures^{20,25-27}

1. Cleaning using water and soap should be performed first before using sanitisers or disinfectants. Without cleaning, the procedure will be ineffective since the presence of dirt or rubbish may inactivates the disinfectant

2. Stakeholder should ensure that cleaning and disinfection do not cross contaminate the surface areas by following these orders: from low-touch to high-touch surfaces, cleaner area to dirtier area, and from top to bottom.
3. Stakeholders should recommend the use of cloth or wipe to clean and disinfect surfaces on indoor spaces, as opposed to spraying
4. Stakeholders should discourage large-scale spraying or fumigation in outdoor spaces, such as streets or open marketplaces for the COVID-19 virus or other pathogens is not recommended. There is little benefit since these areas are not considered as potential route of transmission for the virus
5. Stakeholders should discourage spraying cleaning or disinfection products to individuals. This practice has no available evidence and poses safety and health risk to the individuals
6. Stakeholders should determine the frequency of cleaning and disinfecting based on the traffic of the public places
7. If no confirmed case or suspected exposure is identified, cleaning once a day should suffice
8. Currently, no evidence supports the argument that SARS-CoV-2 can be transmitted through food. However, appropriate packaging should be considered to prevent droplet to stick to food
9. If a confirmed case is present at the premise, stakeholders should consider cleaning and disinfection within 24 hours of exposure. If the exposure already passes 24 hours, cleaning should be sufficient. If more than 3 days have passed, no additional cleaning is needed
10. Ensure cleaning staff are trained on proper use of cleaning and disinfecting products
11. Special considerations should be made for people with asthma. Some cleaning and disinfection products can trigger asthma.

Clean and Disinfect Specific Types of Surfaces^{25,27,28}

1. Soft surfaces such as carpet, rugs, and drapes
 - a. Clean the surface using a product containing soap, detergent, or other type of cleaner appropriate for use on these surfaces
 - b. Launder items according to the manufacturer's instructions. Use the warmest appropriate water setting and dry items completely
 - c. If you need to disinfect, use a product EPA List N²⁹ approved for use on soft surfaces
 - d. Vacuum as usual.
2. Laundry such as clothing, towels, and linens
 - a. Use the warmest appropriate water setting and dry items completely

- b. It is safe to wash dirty laundry from a person who is sick with other people's items
 - c. If handling dirty laundry from a person who is sick, wear gloves and a mask
 - d. Clean clothes hampers or laundry baskets according to guidance for surfaces
 - e. Wash hands after handling dirty laundry.
3. Electronics such as tablets, touch screens, keyboards, remote controls, and ATM machines
- a. Consider putting a wipeable cover on electronics, which makes cleaning and disinfecting easier
 - b. Follow the manufacturer's instructions and recommendations for cleaning the electronic device
 - c. When disinfecting electronic surfaces, use a product that complies with the manufacturer's instructions.
4. Toys and playrooms
- Stakeholders should consider the following information to promote cleaning and disinfecting to toys and playrooms, both for individuals and at shared facilities in public places:
- a. Prior to cleaning, carefully clean toys with hot soapy water with a brush for hard-to-reach spots; rinse well
 - b. Disinfect toys for the required amount of time with an approved disinfectant that is child-safe. Adhere to the manufacturer's directions. If you're going to use bleach, use a 500-ppm solution. Allow at least two minutes for the surface to remain moist before rinsing with potable water. Calculate the proper amount of bleach and water using the bleach calculator. After rinsing, allow to air dry
 - c. Dishwasher-safe, hard plastic toys can be washed and sanitised using a sanitizer or a hot rinse cycle
 - d. Toy bins, play mats, and other high-touch play surfaces should also be cleaned with a cleaning product prior to disinfecting with a child-safe disinfectant
 - e. Plush toys should be washed in hot water and dried on a hot cycle in the dryer.
5. Outdoor areas
- a. Stakeholders should consider regular cleaning of high-touch surfaces made of plastic or metal, such as grab bars, play structures, and railings
 - b. Spraying cleaning agents or disinfectants in outdoor spaces – such as sidewalks, roadways, or groundcover – is unnecessary
 - c. Cleaning and disinfecting wooden surfaces (such as play structures, benches, and tables) or groundcovers is not recommended (such as mulch and sand).

6. Passenger terminals and public transport vehicles

These areas should be kept clean and tidy. In addition, stakeholders should consider the use of wet cleaning to prevent re-suspension of dust. Recommendation for treatment on specific surfaces can be found below:

- a. Daily cleaning and disinfection of passenger terminals, waiting rooms, and public facilities is recommended
- b. After each transport, the inner surface of public transport needs to be cleaned and disinfected. The inner surface can be disinfected by spraying or wiping with 250-500 mg/L of chlorine-containing disinfectant or wiping with an effective disinfecting wipe
- c. The frequency of cleaning and disinfecting surfaces with high frequency of contact should be increased
- d. Seat covers and other textiles should be kept clean, washed and disinfected regularly
- e. If there is vomit, it should be completely covered with disinfectant or dry disinfection towel and removed once finishing disinfection. The surface should then be subjected to conventional treatment.

Facilitating touchless interaction and communication system³⁰

When appropriate, stakeholders and interested parties should consider the use of touchless interaction and communication system. This should enable daily interaction while minimising surface, therefore eliminating the risk for indirect transmission.

Table 1. Recommended products and concentrations

Surface Type	Cleaning Options	Sanitising Options	Disinfecting Options	Frequency
High-touch surfaces (e.g., doorknobs, light switches, toilets, faucet handles, tables, chairs)	<ul style="list-style-type: none"> • Pre-mixed disinfecting cleaner products • Soap/detergent and hot water 	N/A	1000 ppm (1:50) diluted bleach solution; air dry after application	<p>Household with no symptomatic or COVID-19- positive individuals: Once every few days</p> <p>Household with symptomatic or COVID-19-positive individuals: Twice per day</p>
All other surfaces	<ul style="list-style-type: none"> • Pre-mixed disinfecting cleaner products • Soap/detergent and hot water 	N/A	500 ppm (1:100) diluted bleach solution; allow surface to remain wet for 5 minutes, then air dry	<p>Household with no symptomatic or COVID-19- positive individuals: Once per week</p> <p>Household with symptomatic or COVID-19-positive individuals: Daily</p>
Food contact surfaces (e.g., cutting boards, countertops, utensils, pots/ pans, appliances)	<ul style="list-style-type: none"> • Soap/detergent and hot water 	<ul style="list-style-type: none"> • 100–200 ppm diluted bleach solution • 25 ppm iodine or follow manufacturer’s instructions • 200 ppm quats or follow manufacturer’s instructions • Hot water at 77°C or above (dishwasher with a hot rinse cycle is adequate) 	N/A	After each use
Mobile phones and electronics	<ul style="list-style-type: none"> • Wipe off visible dirt or grime 	N/A	<ul style="list-style-type: none"> • Follow manufacturer’s recommendations • Alcohol-based or disinfecting wipes • Sprays with 60–70% alcohol 	Once every few days or when visibly soiled

Surface Type	Cleaning Options	Sanitising Options	Disinfecting Options	Frequency
Toys, toy bins, playmats	<ul style="list-style-type: none"> • Soap/detergent and hot water with a brush 		<ul style="list-style-type: none"> • Approved disinfectant that is safe for children • 500 ppm diluted bleach solution; rinse with potable water after 2 minutes contact time • Dishwasher or launderer with a hot rinse cycle 	High-touch surfaces and toys: Once every few days Toy bins and low-touch surfaces: Once a week or when visibly soiled
Cleaning equipment	<ul style="list-style-type: none"> • Use single-use disposable products • Mops and cloths: laundry detergent with hot water followed by 1000 ppm diluted bleach solution 			

D.7 Potential COVID-19 Infectious Waste Management

Overview

Disposal of infectious material safely and efficiently is a vital component of a holistic response strategy. Daily routine changes have an effect on the volume and kind of garbage generated by households and public areas.³¹ It should be noted that contaminated protective equipment, including masks and gloves, poses infection risks and environmental risks³². This should be carefully considered in regions where PPEs may be scavenged for recyclable materials³³. There is a need to dispose of waste gathered from households and public areas adequately and safely.³¹

Stakeholders should maintain their waste management service, make temporary changes to their waste management operations using existing resources, and find quick-win solutions for ensuring operational continuity and efficiency, and take the lead in mitigating risks to people involved formally and informally in the city's waste management operations and those who benefit from such services³¹.

Household Infectious Waste Management

Household infectious waste management includes the management of waste from COVID-19 patients undergoing quarantine or self-isolation such as masks, tissues, gloves or food scraps and waste generated from healthy behaviour during a pandemic such as used mask wastes. Infectious waste must be wrapped in a container so that it is not scattered, easy to handle and reduces the possibility of transmission to those who handle the waste^{34,35}.

Types of infectious waste and their handling:

1. PPEs like gloves and masks are turned over after use, damaged by cutting and then folding, disinfected by spraying disinfectant or soapy water and placing them in a marked/specially coloured (such as yellow plastic bag) in a closed container.

2. Gauze, tissue, cotton put in a marked/specially coloured (such as yellow plastic bag) in a closed container.
3. Food waste, cardboard/plastic packaged food, put in a marked/specially coloured (such as yellow plastic bag) in a closed container.
4. All infectious waste used for self-isolation patient care carried out by health workers is immediately brought back by health workers.

Procedures for managing infectious waste safely:

1. Prepare a closed trash can and a plastic trash bag that has been marked/specially coloured (such as yellow plastic bag).
2. Keep it in one corner of the room.
3. Separate the infectious waste from other household waste.
4. A maximum of once every 2-3 days or after three-quarters of it is filled, the plastic bag is tied up/sealed.
5. Spray disinfectant before handling it over.
6. Disinfect closed trash cans before refilling them with new trash bags.
7. Wash hands after handling infectious waste with soap or 70% alcohol hand rub.

Organising:

1. Local authority collect information on the location of houses used as quarantine/self-isolation places.
2. Trained cleaning workers using PPE will collect marked infectious waste bags to be taken to the B3 waste landfill as final disposal.
3. If there is no trained cleaning workers, the family can contact the nearest health facility to request the infectious waste bag be taken.
4. If in the area there is a special depot or drop box as a temporary waste storage, residents can put infectious waste bags in that place.
5. Healthy families can continue to sort or reduce waste at home to be transported and disposed to the final processing site by the cleaning workers.

Government role:

1. Delivering information on how to manage infectious waste.
2. The environmental and health official services are obliged to collect and transport waste to be taken to the B3 waste landfill.
3. Ensure that all trained cleaning workers use complete PPE, comply health and safety regulation when handling waste.

4. Provide drop boxes or depots in strategic locations so that people can actively collect waste and provide transportation facilities.
5. Provide training for cleaning workers that handle infectious waste.

Community role:

1. Assist local authority officers in collecting data on families undergoing self-quarantine/isolation.
2. If there is no trained cleaning workers, the community can contact the health care facility.
3. Organise residents to collect marked infectious waste bags and place them in depots.

Family role:

1. Houses with family members affected by COVID-19 collect infectious waste in special bags marked before being transported by trained cleaning workers.
2. Parents must ensure that the waste is not reachable by children.
3. Collect infectious waste to depot or drop box.
4. If there is no trained cleaning workers, contact the community or the COVID-19 task force.
5. Use reusable cloth masks that are washed every 4 hours to reduce the accumulation of infectious waste.
6. Other healthy families continue to secure household waste in accordance with the pillars of community-based total sanitation.

D.8 Contingency Plan in Reponse to the Finding of Suspected or COVID-19 Cases in Public Places

Overview

A contingency plan in response to the finding of suspected or COVID-19 cases in public places is a course of action designed to help public places respond to the discovery of suspected or COVID-19 cases to prevent further spreading and reduce the severity of the cases. Public places should prepare all actions to increase knowledge and capacity to anticipate, respond to and recover from the impact of the COVID-19 cases. The actions include planning, allocating resources, training, exercising, and organising to build, sustain and improve operational capabilities based on risk assessment³⁶.

Stakeholders should consider a multidisciplinary public health approach which includes surveillance, laboratory, and health care systems/networks. This network should be integrated in a more extensive public health emergency response system^{37,38}. Based on the risk of COVID-19 transmission in Public Places and the extent of the pandemic, several strategies should be applied to prevent further spreading and local transmission effectively. This guideline selected five primary needs to respond to the finding of suspected or COVID-19 cases in public places that should be addressed, as below:

1. Having COVID-19 response team. The team member will undergo regular, continual training throughout their membership on the COVID-19 response team and before deploying for conducting the response.

2. Ensure rapid detection. Gaining a health declaration containing COVID-19 test results or reporting ill people and training staff are among the planned responses.
3. Contain viral transmission. COVID-19 preventive measure should be in the first place of containing transmission along with training staff and ensuring appropriate PPE for the COVID-19 response team.
4. Availability of temporary isolation facility, drugs, medical supplies, and equipment. The facility and supply provided should be based on the risk assessment of public places.
5. Referral of cases to hospital or isolation facilities. A memorandum of understanding with related stakeholders should be in place to further manage the cases.
6. Report the cases to the authority. A daily or weekly report is managed according to the local or national authority policy.

Table 2. Preparedness action on COVID-19 transmission in public places

Health risk	Needs	Planned response	Preparedness action
COVID-19 transmission in public places (specific settings)	<p>Having COVID-19 response team</p> <p>Ensure rapid detection.</p> <p>Contain viral transmission</p> <p>Availability of drugs, medical supplies and equipment</p> <p>Availability of temporary isolation facility</p> <p>Referral of cases to hospital or isolation facilities</p> <p>Report the cases to the authority</p>	<p>Build a COVID-19 response team</p> <ul style="list-style-type: none"> - Conduct RT-PCR or RDT Antigen test and activate early warning alert - Encourage self-reporting of people - Train staff - Training staff - PPE supply - Promoting COVID-19 preventive measure <p>Continues drugs and supplies management based on regular need assessment</p> <p>Isolate the cases</p> <p>Referral of cases to hospital or isolation facilities</p> <p>Report the cases to the authority</p>	<ul style="list-style-type: none"> • Establish a COVID-19 response team • Develop a rapid alert system with key actor of COVID-19 management system, from community-based team or RRT to referral hospital or isolation facilities • Train and exercise rapid-response team, procedure and system • Provide isolation procedure and facility • Prepare memorandum of understanding with related stakeholder such as ambulance facilities, hospital, and isolation facilities • Evaluate facility and supply chain capacity • Constant risk communication • Record and report the cases to the authority

Preparedness Actions^{39,40}:

Stakeholders should consider the following:

1. Establish a COVID-19 response team consisting of hired members or staff/workers of the public place/ settings. Provide the team with appropriate Personal protective equipment (PPE). The number of COVID-19 response plan members and the team composition will depend on the typesetting, affected, geographic distribution, and available resources.
2. Develop a rapid alert system with the key actor of the COVID-19 management system, from the COVID-19 response team to referral hospitals or isolation facilities.
3. Train and exercise COVID-19 response team, procedure, and system. The COVID-19 response team training program aims to have the COVID-19 response team members trained and ready to deploy before responding to COVID-19 cases.
4. Develop policies and procedures for immediately isolating COVID-19 cases or people who have signs and symptoms of COVID-19. Move potentially infectious people to a location away from other people. Although most public places do not have specific isolation rooms, designated areas with closable doors may serve as isolation rooms until potentially sick people can be removed from the public places.
5. Ensure supply chain is secured. Any resources should be mapped and when necessary distributed appropriately. For medical and other essential fields, consider the supply chain: stockpiling, storage, security, transportation, and distribution.
6. Develop collaboration and prepare a memorandum of understanding with related stakeholders such as ambulance facilities, hospitals, and isolation facilities. Activate multi-sectoral, multi-partner coordination mechanisms to support preparedness and response.
7. Constant risk communication. Inform and encourage visitors/participants/attendees/travellers, workers/staff/employees to self-monitor and self-report for signs and symptoms of COVID-19 if they suspect possible exposure. Promote disease awareness through various approaches and encourage the general public to adopt personal preventive measures (e.g., regular hand washing, respiratory etiquette, and practicing physical distancing) into daily lives.
8. Record and report the cases to the authority. Reporting systems follow the local or national policies on a regular reporting system.

Training program for the COVID-19 response team

Objectives:

1. Ensures COVID-19 response team members have the same level of essential knowledge and skills.
2. Provides COVID-19 response team members opportunities to learn new skills and practice existing skills.
3. Keeps COVID-19 response team members' skills current with changing methods and science.

4. Allows COVID-19 response team members to engage with their teammates.
5. Translates COVID-19 response team members' subject matter expertise into a field.

Proposed COVID-19 training cycle ^{41,42}.

1. Orientation/Onboarding Training

An initial orientation or onboarding training can be provided to introduce operational concepts COVID-19 cases handling to ensure COVID-19 response team members can rapidly and safely deploy and basic technical content on how to apply their subject matter expertise into a field/emergency setting.

- a. Technical training refers to information and skills COVID-19 response team members need to be effective responders. It is often scientific, public health content, and can be role specific. Technical training should include basic knowledge of COVID-19, viral transmission, signs and symptoms, preventive measures, personal protective equipment, safely handling cases, and the basic duties of other response roles.
- b. Operational training covers topics needed for successful mobilization. This is what members should know regarding deployment processes and necessary for a safe, secure, and efficient deployment.

2. Continuing Education

New content not covered during orientation and onboarding should be distributed through a continuous education scheme.

3. Exercises

Once team members have been rostered, trained, and meet readiness requirements, exercises can be used as an opportunity for COVID-19 response team members to apply and practice their skills.

4. Team Leadership Training

Effective leadership of a team of responders often requires skills beyond technical expertise and training. Field team leaders must understand their responsibility to the team, the mission, and the COVID-19 response team coordination and integration with the emergency coordination unit.

References

1. Religious Places Definition. Law Insider. Accessed November 26, 2021. <https://www.lawinsider.com/dictionary/religious-places>
2. World Health Organization. Technical considerations for implementing a risk-based approach to international travel in the context of COVID-19: Interim guidance, 2 July 2021. Accessed December 5, 2021. <https://www.who.int/publications-detail-redirect/WHO-2019-nCoV-Risk-based-international-travel-2021.1>
3. Guideline of Arrangement And Development of Traditional Market, Shopping Centre, And Modern Market | Leks&Co Lawyers – Law Firm Jakarta, Lawyer Indonesia, Indonesia Law Office, Jakarta Lawyer, Law Firm Indonesia. Accessed November 26, 2021. <https://www.lekslawyer.com/guideline-of-arrangement-and-development-of-traditional-market-shopping-centre-and-modern-market/>
4. Glossary of tourism terms | UNWTO. Accessed November 26, 2021. <https://www.unwto.org/glossary-tourism-terms>
5. Darby S, Chulliyallipalil K, Przyjalowski M, et al. COVID-19: mask efficacy is dependent on both fabric and fit. *Future Microbiology*. 2021;16(1):5-11. doi:10.2217/fmb-2020-0292
6. Eikenberry SE, Mancuso M, Iboi E, et al. To mask or not to mask: Modeling the potential for face mask use by the general public to curtail the COVID-19 pandemic. *Infectious Disease Modelling*. 2020;5:293-308. doi:10.1016/j.idm.2020.04.001
7. Worby CJ, Chang HH. Face mask use in the general population and optimal resource allocation during the COVID-19 pandemic. *Nat Commun*. 2020;11(1):4049. doi:10.1038/s41467-020-17922-x
8. COVID-19: mask efficacy is dependent on both fabric and fit | Future Microbiology. Accessed November 9, 2021. <https://www.futuremedicine.com/doi/full/10.2217/fmb-2020-0292>
9. Media Statement: the role and need of masks during COVID-19 outbreak. Accessed November 29, 2021. <https://www.who.int/indonesia/news/detail/06-03-2020-media-statement-the-role-and-need-of-masks-during-covid-19-outbreak>
10. CDC. Implementing Filtering Facepiece Respirator (FFR) Reuse, Including Reuse after Decontamination, When There Are Known Shortages of N95 Respirators. Centers for Disease Control and Prevention. Published February 11, 2020. Accessed February 16, 2022. <https://www.cdc.gov/coronavirus/2019-ncov/hcp/ppe-strategy/decontamination-reuse-respirators.html>
11. Organization WH. WHO guidelines on hand hygiene in health care. In: *WHO Guidelines on Hand Hygiene in Health Care*. ; 2009:270-270.
12. CDC. Ventilation in Buildings. Centers for Disease Control and Prevention. Published February 11, 2020. Accessed February 16, 2022. <https://www.cdc.gov/coronavirus/2019-ncov/community/ventilation.html>

13. WHO. Roadmap to improve and ensure good indoor ventilation in the context of COVID-19. Accessed February 16, 2022. <https://www.who.int/publications-detail-redirect/9789240021280>
14. UK Health. Ventilation of indoor spaces to stop the spread of coronavirus (COVID-19). GOV.UK. Accessed January 30, 2022. <https://www.gov.uk/government/publications/covid-19-ventilation-of-indoor-spaces-to-stop-the-spread-of-coronavirus/ventilation-of-indoor-spaces-to-stop-the-spread-of-coronavirus-covid-19>
15. Nembhard MD, Burton DJ, Cohen JM. Ventilation use in nonmedical settings during COVID-19: Cleaning protocol, maintenance, and recommendations. *Toxicol Ind Health*. 2020;36(9):644-653. doi:10.1177/0748233720967528
16. Assessment of Risks of SARS-CoV-2 Transmission During Air Travel and Non-Pharmaceutical Interventions to Reduce Risk: Phase One Report: Gate-to-Gate Travel Onboard Aircraft. Published online October 27, 2020. Accessed February 16, 2022. <https://trid.trb.org/view/1752409>
17. WHO. Modes of transmission of virus causing COVID-19: implications for IPC precaution recommendations. Accessed February 16, 2022. <https://www.who.int/news-room/commentaries/detail/modes-of-transmission-of-virus-causing-covid-19-implications-for-ipc-precaution-recommendations>
18. Meyerowitz EA, Richterman A, Gandhi RT, Sax PE. Transmission of SARS-CoV-2: A Review of Viral, Host, and Environmental Factors. *Ann Intern Med*. 2021;174(1):69-79. doi:10.7326/M20-5008
19. Kampf G, Brüggemann Y, Kaba HEJ, et al. Potential sources, modes of transmission and effectiveness of prevention measures against SARS-CoV-2. *J Hosp Infect*. 2020;106(4):678-697. doi:10.1016/j.jhin.2020.09.022
20. Patients | Hand Hygiene | CDC. Published April 12, 2019. Accessed January 29, 2022. <https://www.cdc.gov/handhygiene/patients/index.html>
21. Fathizadeh H, Maroufi P, Momen-Heravi M, et al. Protection and disinfection policies against SARS-CoV-2 (COVID-19). *Infez Med*. 2020;28(2):185-191.
22. Shimabukuro PMS, Duarte ML, Imoto AM, et al. Environmental cleaning to prevent COVID-19 infection. A rapid systematic review. *Sao Paulo Med J*. 2020;138(6):505-514. doi:10.1590/1516-3180.2020.0417.09092020
23. Kampf G, Todt D, Pfaender S, Steinmann E. Persistence of coronaviruses on inanimate surfaces and their inactivation with biocidal agents. *J Hosp Infect*. 2020;104(3):246-251. doi:10.1016/j.jhin.2020.01.022
24. Wang J, Feng H, Zhang S, et al. SARS-CoV-2 RNA detection of hospital isolation wards hygiene monitoring during the Coronavirus Disease 2019 outbreak in a Chinese hospital. *Int J Infect Dis*. 2020;94:103-106. doi:10.1016/j.ijid.2020.04.024
25. Chen T. Reducing COVID-19 transmission through cleaning and disinfecting household surfaces. *Vancouver, BC: National Collaborating Centre for Environmental Health*. Published online 2020.

26. Canada PHA of. Cleaning and disinfecting public spaces during COVID-19. Published October 2, 2020. Accessed February 16, 2022. <https://www.canada.ca/en/public-health/services/publications/diseases-conditions/cleaning-disinfecting-public-spaces.html>
27. WHO. Coronavirus disease (COVID-19): Cleaning and disinfecting surfaces in non-health care settings. Accessed February 16, 2022. <https://www.who.int/news-room/questions-and-answers/item/coronavirus-disease-covid-19-cleaning-and-disinfecting-surfaces-in-non-health-care-settings>
28. Shen J, Duan H, Zhang B, et al. Prevention and control of COVID-19 in public transportation: Experience from China. *Environ Pollut.* 2020;266(Pt 2):115291. doi:10.1016/j.envpol.2020.115291
29. United States Environmental Protection Agency. List N Tool: COVID-19 Disinfectants | US EPA. Accessed February 16, 2022. <https://cfpub.epa.gov/wizards/disinfectants/>
30. Iqbal M, Campbell A. The emerging need for touchless interaction technologies. *interactions.* 2020;July-August 2020. doi:10.1145/3406100
31. UNHabitat. UN-Habitat's COVID-19 Response Plan | UN-Habitat. Accessed February 16, 2022. <https://unhabitat.org/un-habitat-covid-19-response-plan>
32. World Bank. Solid Waste Management. World Bank. Accessed February 19, 2022. <https://www.worldbank.org/en/topic/urbandevelopment/brief/solid-waste-management>
33. Nzediegwu C, Chang SX. Improper solid waste management increases potential for COVID-19 spread in developing countries. *Resour Conserv Recycl.* 2020;161:104947. doi:10.1016/j.resconrec.2020.104947
34. UNICEF. Guidelines on household infectious waste management. Accessed February 19, 2022. <https://www.unicef.org/indonesia/coronavirus/reports/guidelines-household-infectious-waste-management>
35. Hantoko D, Li X, Pariatamby A, Yoshikawa K, Horttanainen M, Yan M. Challenges and practices on waste management and disposal during COVID-19 pandemic. *Journal of Environmental Management.* 2021;286:112140. doi:10.1016/j.jenvman.2021.112140
36. World Health Organization. *WHO Guidance for Contingency Planning.* World Health Organization; 2018. Accessed February 20, 2022. <https://apps.who.int/iris/handle/10665/260554>
37. Taiwan CDC. Preparedness and Contingency Planning in Response to COVID-19 Epidemic. Published online February 28, 2020. <https://www.cdc.gov.tw/Uploads/ec19a58e-ce58-4513-a265-af1701ff91bc.pdf>
38. CDC. COVID-19 Rapid Response Team Guidance. Centers for Disease Control and Prevention. Published February 11, 2020. Accessed February 20, 2022. <https://www.cdc.gov/coronavirus/2019-ncov/global-covid-19/rtt-management-introduction.html>
39. CDC. Framework for Implementation of COVID-19 Community Mitigation Measures for Lower-Resource Countries. Centers for Disease Control and Prevention. Published July 20, 2021. Accessed February 20, 2022. <https://www.cdc.gov/coronavirus/2019-ncov/global-covid-19/community-mitigation-measures.html>

40. WHO. COVID-19 Strategic Preparedness and Response Plan (SPRP 2021). Accessed February 20, 2022. <https://www.who.int/publications-detail-redirect/WHO-WHE-2021.02>
41. WHO. Critical preparedness, readiness and response actions for COVID-19. Accessed February 20, 2022. <https://www.who.int/publications-detail-redirect/critical-preparedness-readiness-and-response-actions-for-covid-19>
42. WHO. National contingency plan for novel coronavirus. Accessed February 20, 2022. <https://www.unicef.org/eswatini/documents/national-contingency-plan-novel-coronavirus>

Author:

Anna Suraya

Fit Work Consulting
Jl. Sudirman no 54
Bekasi 17143

Liza Pratiwi

Consultant Project
Fit Work Consulting
Jl. Sudirman no 54, Bekasi
17143

Reza Pandu Aji

Consultant Project
Fit Work Consulting
Jl. Sudirman no 54
Bekasi 17143

Dyah Erti Mustikawati

Ministry of Health of the Republic of Indonesia
Jl. H. R. Rasuna Said, Blok X-5. Kav. 4-9, Jakarta

Grace Lovita Tewu

Ministry of Health of the Republic of Indonesia
Jl. Percetakan Negara No. 29, Jakarta

Rita Ratna Puri

Ministry of Health of the Republic of Indonesia
Jl. Percetakan Negara No. 29, Jakarta



MINISTRY OF HEALTH
REPUBLIC OF INDONESIA



german
cooperation

DEUTSCHE ZUSAMMENARBEIT

Implemented by:

giz Deutsche Gesellschaft
für Internationale
Zusammenarbeit (GIZ) GmbH

