SE ASIA BUSINESS RESILIENCE TOOLKIT:

A Framework for COVID-19 Risk Mitigation

fhi360
THE SCIENCE OF IMPROVING LIVES

AWR Lloyd

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CONTEXT

- On March 11, 2020, the World Health Organization (WHO) declared COVID-19 a global pandemic. As of August 3rd, 2022, there are over 577M global confirmed cases and over 6.4M deaths.

- Many countries in ASEAN continue to see surging COVID-19 transmission or fatality rates per capita. In Q1 2022, Philippines recorded the highest number of cases since the beginning of the pandemic.

- The Nikkei COVID-19 Recovery Index assesses more than 120 countries on infection management, vaccine rollouts and social mobility. The higher the ranking, the closer a place is to recovery. As of July 31, 2022, the rankings for each country was Cambodia (2), Vietnam (4), Thailand (58), Indonesia (62), Philippines (62),and Laos (62).

- The economic toll of COVID-19 across ASEAN has been and continues to be significant with, due to their dependence on sectors like manufacturing and construction which in 2020 recorded above 50% job losses collectively.

- Despite a vaccination rate of 71%, embattled Asia-Pacific region (APAC) economies are seeing new outbreaks and sustained lockdowns. New policies are frequently deployed in efforts to bring COVID-19 to heel, often at the cost of entire business sectors.

Source: WHO, ILO Flagship Report, Nikkei COVID-19 Recovery Index (August, 2022)

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Partnerships for Business Resilience and Recovery in Southeast Asia (2)

ASSIGNMENT AND PARTNERS

- With US Department of State (DOS) funding, FHI 360 and AWR Lloyd are leveraging their existing partnership to contribute to the DOS Fourth Pillar (see below) of the COVID-19 response strategy.

- By combining evidence-based best practices in public health, business analytics and change management principles, FHI 360 and AWR Lloyd will foster a more resilient private sector in across Southeast Asia, with a focus on Thailand, Vietnam, Indonesia, Philippines, Laos and Cambodia.

Fourth Pillar of DOS COVID-19 response strategy: Prepare for, mitigate and address second order economic, security, stabilization impacts of COVID-19 and prevent development backsliding.

FHI 360, a nonprofit organization, is the lead implementer for the Partnerships for Business Resilience and Recover in SE Asia, which is funded by the U.S. Department of State (DOS). They aim to equip private sector businesses in SE Asia with the necessary technical 'know-how' to accelerate safe resumption, continuation, or adaptation of business operations.

AWR Lloyd, a specialist corporate advisory firm, will join forces with FHI 360 to provide COVID-19 crisis response to private sectors and support COVID-19 risk communication and community wellbeing through private corporations.

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FHI 360 COVID-19 capabilities

FHI 360: INTRODUCTION*

FHI 360 is an international nonprofit working to improve the health and wellbeing of people around the world. With 4,000 staff worldwide, FHI 360 serves more than 60 countries via work grounded in research and science. FHI 360 is currently working on COVID-19 prevention, detection, and response operations throughout Asia. Activities include:

- Technical assistance to develop emergency response plans and protocols for hospitals and governments

- External quality assurance

- Procurement of COVID-19 related supplies

- Vaccination advocacy

- Assistance with specimen transport

- Training for laboratory staff on biosafety, sample collection and handling, packaging, cold-chain and storage

- Supporting virtual platforms to provide accurate COVID-19 information to citizens, foster civil society collaboration, and link vulnerable community members who may need services

- Technical assistance to develop messaging around COVID-19

*www.fhi360.org

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FHI 360 COVID-19 capabilities (2)

FHI 360 COVID-19 PREVENTION, PREPAREDNESS, DETECTION & RESPONSE CAPABILITIES

- Behavioral risk identification and mitigation
- Social behavior change to reduce spillover, amplification
- Product quality and compliance
- Market-related biosecurity
- Vaccine advocacy

- Community and facility-based surveillance
- Strengthening diagnostic networks
- Laboratory and health facility biosecurity

- Equipping frontline healthcare workers
- Risk communication
- Crisis response
- Development of vaccines and medicines

SUPPORT FOR AN ENABLING ENVIRONMENT

Health system strengthening, policy and legal analysis, workforce development and economic strengthening, education in emergencies, mobile technology, gender and social inclusion, research utilization

See more about FHI 360's capabilities in emerging pandemic threats

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AWR Lloyd's COVID-19 advisory services

AWR LLOYD RECOMMENDED COVID-19 RISK MANAGEMENT FRAMEWORK

CONTINUITY BASICS

War Room

Health & safety first

Keep calm, communicate & carry on

SURVIVE & THRIVE

Cost Reduction

Liquidity measures

Offense & long term
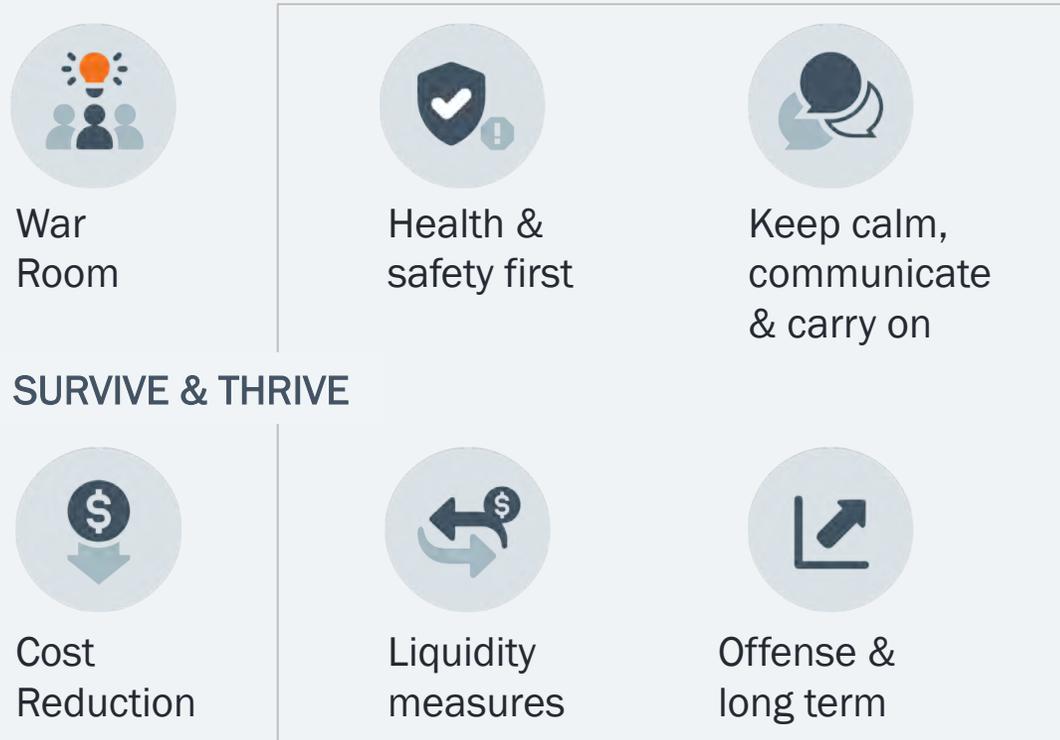
AWR LLOYD CORE SERVICE MODULES

1 Project continuity

AWR Lloyd has a partnership with FHI 360 to provide best practice health and safety protocols and project continuity advisory for major infrastructure, energy and resource projects.

2 Corporate strategic innovation

AWR Lloyd is advising its clients on corporate finance resilience and how to use the disruptive forces of the pandemic to accelerate corporate transformation, restructuring and innovation.

Project Overview

	THIS TOOLKIT				
CORPORATE MAPPING →	**SE ASIA BUSINESS RESILIENCE TOOLKIT** →	**HEALTH RISK GAP ANALYSIS** →	**BESPOKE TOOLKITS** →	**TRAINING AND EDUCATION** →	**SCALE SE ASIA COVID-19 RESPONSE** →
Identifying top private sector players across Thailand, Vietnam, Indonesia, Philippines, Laos and Cambodia who can play a key role COVID-19 response (significant outreach potential; important sectors etc.)	A broadly applicable, regionally-specific Toolkit which can be used by companies to facilitate safe and smooth business resilience. The Toolkit contains guidelines regarding health, safety & environment (HSE) fundamentals, vaccines, transport, international travel, workplace and home and community protocols, communication and awareness, digital tools, and mental health.	Interviews, analysis and business / med recommendations across select companies to understand country-specific and industry-specific risk gaps. Two surveys across select sectors to further understand COVID-19 impact and scale.	Establishing Joint Health and Safety committees to conduct in-depth assessment of engaged companies' risks and gaps. Customized Toolkits with granular guidelines promoting safe business continuity, such that response is proportional to risk level.	Asynchronous and live video trainings to ensure a strong understanding on use of Bespoke Toolkits at various levels across engaged companies. Promotion of knowledge cascade down the company and across surrounding communities to multiply effect of social / behavior change.	Using breadth and depth of information gathered during the project, refine a regionally-specific Toolkit to be used across main sectors. Scale up implementation of this refined Toolkit, which will also include guidelines on resilience to withstand future crises.

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About the SE Asia Business Resilience Toolkit

BUSINESS RESILIENCE TOOLKIT PURPOSE

This Toolkit is based on normative guidance and is informed by the latest peer-reviewed evidence.

It compiles, refines and presents global best practices with a view to promoting safe and smooth business continuity across Southeast Asia and beyond.

The Toolkit covers critical business functions and offers recommendations on aspects such as team structure, processes, communication & behavior change.

About the SE Asia Business Resilience Toolkit (2)

TARGET AUDIENCE

Business leaders, managers or health workers in SE Asian businesses of any size may use the Toolkit to inform their COVID-19 risk prevention, mitigation and response guidelines.

HOW TO USE THIS TOOLKIT

This Toolkit has 12 sections.

Readers are encouraged to select the pages or sections most applicable to their countries or industries to integrate with their existing guidelines.

Readers are also encouraged to cascade the contents of this Toolkit down their companies and across their communities.

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About the SE Asia Business Resilience Toolkit (3)

WHEN TO USE THIS TOOLKIT (CONTINUED)

This Toolkit may be used to mitigate the impact of COVID-19 across businesses with any rate of vaccine uptake or any level of COVID-19 vulnerability, in any sector.

This Toolkit is also broadly (although not specifically) applicable to mitigate the impact of other infectious diseases.

Use this Toolkit in accordance with the laws and current guidelines of your country or countries of operation.

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SECTION ONE

COVID-19 OVERVIEW

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COVID-19: introduction

WHAT IS COVID-19?

Coronavirus disease (**COVID-19**) is an infectious disease caused by the SARS-CoV-2 virus. The virus can spread from an infected person's mouth or nose in larger respiratory droplets to smaller aerosols when they cough, sneeze, speak, sing or breathe.

COVID-19 SYMPTOMS

Fever, red or irritated eyes

Dry cough

Loss of taste or smell

Fatigue

Headache, aches & pains

Sore throat

Serious Symptoms

Shortness of breath

Loss of speech, mobility, or confusion

Rash on skin, discoloration of finger or toes

Diarrhea

Chest pain

c. 0.125 μm particle size

Can be both symptomatic or asymptomatic

Droplets (>5-10 μm)   FOMITE   AEROSOL (<5 μm)

< 6 FEET   > 6 FEET

DROPLETS SURVIVE UP TO 3 HOURs   Approx. 80% of infected people are asymptomatic

Source: CDC, WHO, FDA, Press

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COVID-19: typical progression timeline

TYPICAL PROGRESSION TIMELINE

Threshold for hospitalization

- Oxygen saturation (SpO2) <93% on room air
- Hospitalized patients[3] generally recover or die within 10 days
- About 5% of the patients will require critical care support at the ICU. Mortality among ICU patients reduced significantly due to scientific advances
- Full recovery may take 2-14 days after ICU release
- Up to 20% of people with confirmed COVID-19 may require hospitalization

ONSET OF SYMPTOMS

SHORTNESS OF BREATH

INFECTION

Days 0 5 8 10 15 18 20 25

INCUBATION PERIOD: Incubation takes 5 days on average and can take up to 21 days

Occurs usually 3 months from symptoms onset, lasting for at least 2 months

INFECTIOUS PERIOD

SYMPTOMATIC PERIOD

MILD & MODERATE SYMPTOM PHASE	SEVERE & CRITICAL	RECOVERY PHASE	POST-COVID-19 CONDITION
Non-specific symptoms: mostly fevers, dry cough, fatigue, nausea, diarrhea	**Hallmarks:** ARDS[1], shortness of breath (dyspnea), tachypnea[2], hypoxemia	Recovered patients **may not be immune** to reinfection or relapse.	• **Poorly understood** condition
80% of cases with recovery take on average 14 days	*Usually occurs 8-11 days after onset of symptoms and tends to lead to **ICU admission***		• **Common symptoms:** fatigue, shortness of breath, cognitive dysfunction, impaired everyday functioning—with no alternative diagnosis
			• Symptoms may be new following initial recovery, persist from the initial illness, or fluctuate/relapse over time

Source: WHO, CDC, Press, AWR Lloyd Analysis | Note: (1) Acute respiratory distress syndrome, (2) fast and shallow breathing, (3) In general wards

Global impact of COVID-19 pandemic

Globally, WHO has confirmed >577M cases of SARS-CoV-2, including >6.4M fatalities[1] from COVID-19

EUROPE
241M
POSITIVE CASES
DIED: 2M

MIDDLE EAST
39M
POSITIVE CASES
DIED: 361K

AMERICAS
171M
POSITIVE CASES
DIED: 2.7M

AFRICA
9.2M
POSITIVE CASES
DIED: 174K

ASEAN
27.6M
POSITIVE CASES
DIED: 316K

ASEAN

Myanmar
Positive: 614K
Died: 19.4K

Vietnam
Positive: 10.79m
Died: 43k

Laos
Positive: 211K
Died: 757

Thailand
Positive: 4.60M
Died: 31K

Cambodia
Positive: 136
Died: 3.056K

Philippines
Positive: 3.79M
Died: 60K

Malaysia
Positive: 4.46M
Died: 35K

Brunei
Positive: 211K
Died: 225

Singapore
Positive: 1.73M
Died: 1,528

Indonesia
Positive:6.22M
Died: 157K

Source: WHO, OWID, Note: Data as of 3rd August 2022

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Sectoral Impact of COVID-19

A truly global event, the COVID-19 pandemic has impacted all business sectors worldwide. In SE Asia, hospitality, construction and manufacturing sectors have been impacted more than others.

IMPACT ON GLOBAL EMPLOYMENT

	Change in employment relative to no-pandemic scenario, 2020 (%)	Share of employment, 2019 (%)
Accommodation and food	12.9	4.1
Construction	8.8	7.5
Other services	8.2	5.6
Manufacturing	7.3	13.7
Real estate, business and administrative activities	5.9	4.6
Wholesale and retail trade etc.	5.1	14.8
Utilities (electricity, gas, etc.)	3.9	0
Transport, storage and communication	3.5	6.1
Mining and quarrying	3.2	0.6
Education	2.9	5.4
Health and social work activities	2.7	4.1
Public administration and defense; compulsory social security	-0.3	4.3
Agriculture	-0.3	26.7
Financial activities	-0.3	1.6

Worldwide, employment in the accommodation and food services sector has been the worst affected by the pandemic.

Source: ILO Flagship Report, AmCham-ERIA Indonesia, AWR Lloyd Analysis

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Sectoral Impact of COVID-19 (2)

IMPACT ON ASEAN

The collapse of tourism and disruption of manufacturing supply chains took a toll on countries like Malaysia, Philippines and Thailand, making them the hardest-hit countries in the region.

Countries in Asia-Pacific (APAC) need to diversify away from their over-reliance on export-led growth and towards sustainable and inclusive transformation.
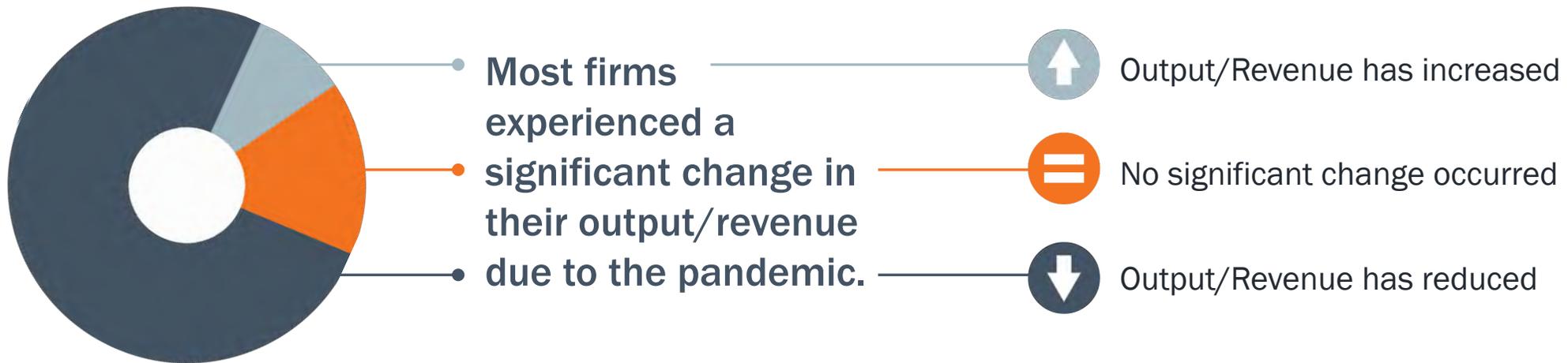
21.1%
Construction

15.9%
Wholesale & retail trade

10.3%
Accommodation & food

Share of net job losses in 2020 relative to the no-pandemic scenario, by sector, APAC

31.1%
Manufacturing

15.5%
All other economic activities

7.1%
Other services activities

Source: ILO Flagship Report, AmCham-ERIA Indonesia, AWR Lloyd Analysis

Sectoral Impact of COVID-19 (3)

CHANGES IN OUTPUT OR REVENUE DUE TO COVID-19

AMCHAM Indonesia's Survey Response:
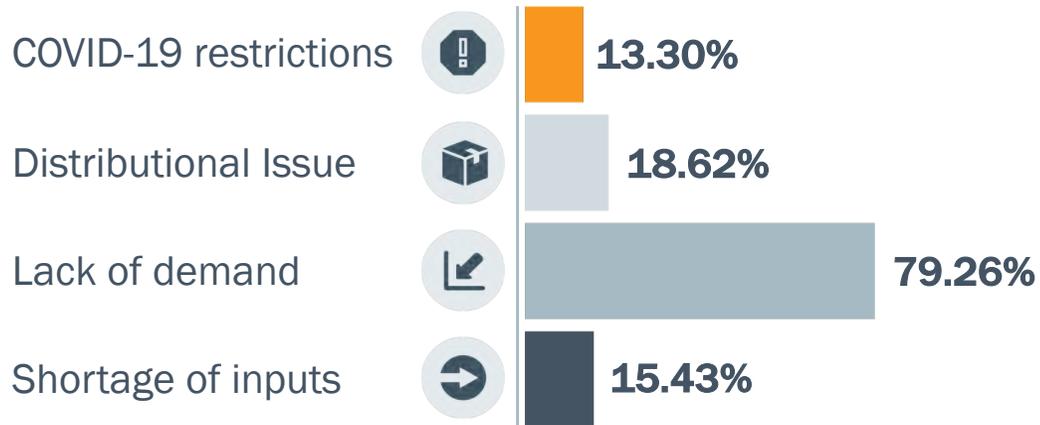Has your firm experienced a significant change in output and/or revenue and/or sales due to COVID-19?

Most firms experienced a significant change in their output/revenue due to the pandemic.

Output/Revenue has increased

No significant change occurred

Output/Revenue has reduced

Source: ILO Flagship Report, AmCham-ERIA Indonesia, AWR Lloyd Analysis

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Sectoral Impact of COVID-19 (4)

FACTORS CAUSING REDUCTION OF OUTPUT/REVENUE

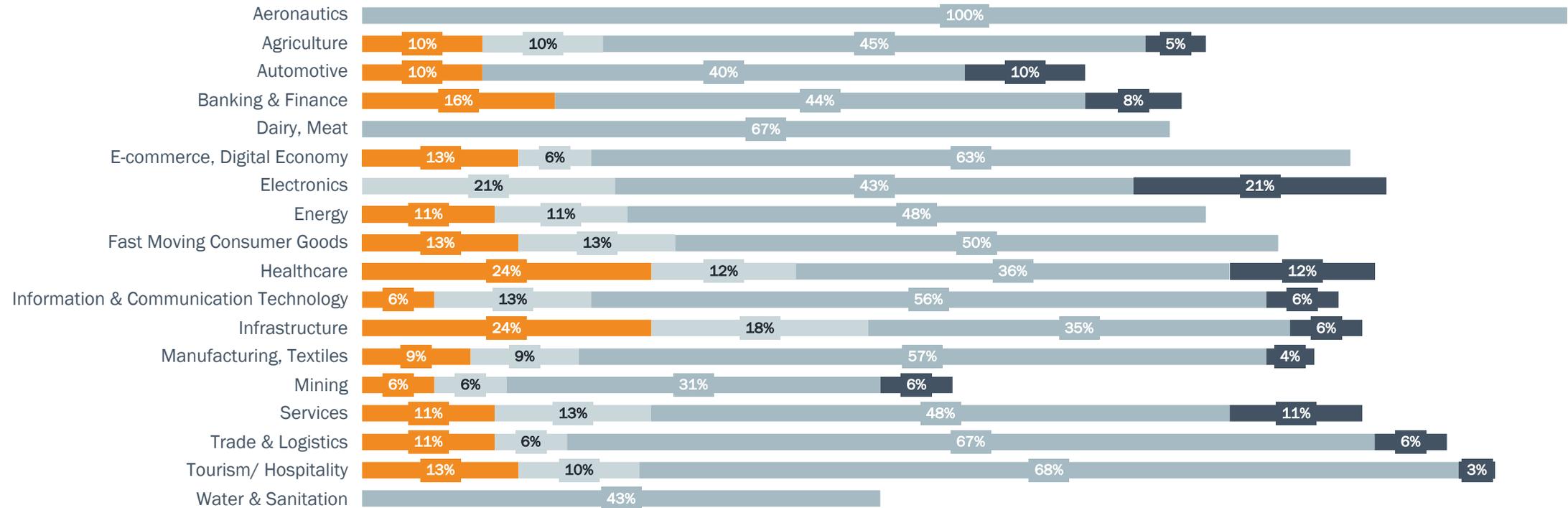**Survey Respondents:** A total of 264 firms operating in ASEAN.

Factor	Percentage
COVID-19 restrictions	13.30%
Distributional Issue	18.62%
Lack of demand	79.26%
Shortage of inputs	15.43%

EXPECTED IMPACT OF COVID-19 ON FUTURE OUTPUT

Negligible impact

downside

Upside

Source: AmCham-ERIA Indonesia, AWR Lloyd Analysis, Note: Lockdowns, restrictions on travel, and other general government restrictions.

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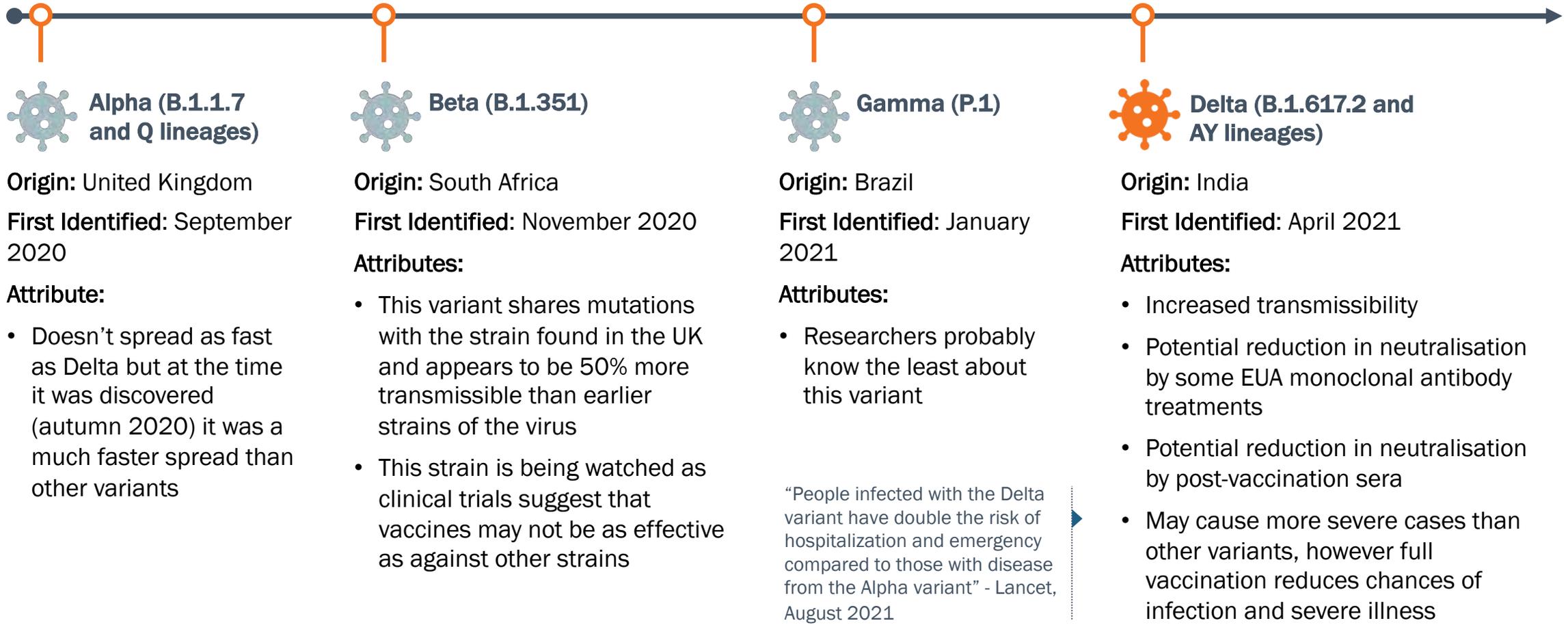3 HSE Governance
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Sectoral Impact of COVID-19 (5)

BREAKDOWN OF FACTORS CAUSING REDUCTION OF OUTPUT/REVENUE

Sector	Restrictions	Distributional Issue	Lack of demand	Shortage of inputs
Aeronautics			100%	
Agriculture	10%	10%	45%	5%
Automotive	10%		40%	10%
Banking & Finance	16%		44%	8%
Dairy, Meat			67%	
E-commerce, Digital Economy	13%	6%	63%	
Electronics		21%	43%	21%
Energy	11%	11%	48%	
Fast Moving Consumer Goods	13%	13%	50%	
Healthcare	24%	12%	36%	12%
Information & Communication Technology	6%	13%	56%	6%
Infrastructure	24%	18%	35%	6%
Manufacturing, Textiles	9%	9%	57%	4%
Mining	6%	6%	31%	6%
Services	11%	13%	48%	11%
Trade & Logistics	11%	6%	67%	6%
Tourism/ Hospitality	13%	10%	68%	3%
Water & Sanitation			43%	

Source: AmCham-ERIA Indonesia, AWR Lloyd Analysis

⊙ Restrictions   ▢ Distributional Issue   ↙ Lack of demand   ⊙ Shortage of inputs

Mutation of SARS-CoV-2: current variants of concern

Alpha (B.1.1.7 and Q lineages)

Origin: United Kingdom

First Identified: September 2020

Attribute:

- Doesn't spread as fast as Delta but at the time it was discovered (autumn 2020) it was a much faster spread than other variants

Beta (B.1.351)

Origin: South Africa

First Identified: November 2020

Attributes:

- This variant shares mutations with the strain found in the UK and appears to be 50% more transmissible than earlier strains of the virus
- This strain is being watched as clinical trials suggest that vaccines may not be as effective as against other strains

Gamma (P.1)

Origin: Brazil

First Identified: January 2021

Attributes:

- Researchers probably know the least about this variant

"People infected with the Delta variant have double the risk of hospitalization and emergency compared to those with disease from the Alpha variant" - Lancet, August 2021

Delta (B.1.617.2 and AY lineages)

Origin: India

First Identified: April 2021

Attributes:

- Increased transmissibility
- Potential reduction in neutralisation by some EUA monoclonal antibody treatments
- Potential reduction in neutralisation by post-vaccination sera
- May cause more severe cases than other variants, however full vaccination reduces chances of infection and severe illness

Source: News.com, CDC, FHI 360

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Mutation of SARS-CoV-2: current variants of concern (2)

Next?

The new super variant, the **Omicron** (B.1.1529) variant, was first identified on November 11, 2021, in South Africa with 32 mutations.

Omicron is now found in all continents and caused record levels of infections and hospitalizations. Several sub-variants (BA.1, BA.2,...BA4, BA.5 etc.) have emerged

Omicron is much more transmissible than Delta, appears to have a lower risk of severe disease, and can develop in people with previous COVID-19 infection or vaccination.

Currently approved vaccines continue to provide good protection against severe disease and death, including for Omicron and its subvariants.

- The more the virus spreads and infects people, the more likely mutations might develop.

- New variants are expected, It is likely that at least one more variant of concern will emerge

- It is difficult to predict:
  - How quickly it could spread
  - How well it might evade immunity or detection
  - Severity of the illness it could cause

Source: News.com, CDC, FHI 360

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Vaccine accessibility in the region

VACCINES BEING USED BY SOUTHEAST ASIAN NATIONS

THAILAND — Pfizer | AstraZeneca | Sinovac/Sinopharm | Moderna | Johnson & Johnson

VIETNAM — Pfizer | AstraZeneca | Moderna | Sinovac/Sinopharm | Sputnik V | Abdala

CAMBODIA — Pfizer | AstraZeneca | Sinovac/Sinopharm | Moderna | Johnson & Johnson | Sputnik V

INDONESIA — Pfizer | AstraZeneca | Sinovac/Sinopharm | Moderna | Novavax | Johnson & Johnson

LAOS — Pfizer | AstraZeneca | Sinovac/Sinopharm | Johnson & Johnson | Sputnik V | Sputnik Light

PHILIPPINES — Pfizer | AstraZeneca | Sinovac/Sinopharm | Moderna | Johnson & Johnson | Sputnik V

Source: WHO, Government data, Note: Data as of 4th August 2022.

Vaccine accessibility in the region (2)

VACCINATION RATES IN THE REGION

The table indicates the percentage of individuals in each country who have been fully vaccinated (either one or two doses, based on the specific vaccine formulation) and boosted.

■ Vaccination rates   ■ Vaccine boosters administered rates

Country	Vaccination rates	Vaccine boosters administered rates
Cambodia	86%	57%
Vietnam	82%	63%
Thailand	74%	41%
APAC	71%	30%
Phillipines	62%	13%
Laos	63%	0%
Indonesia	62%	20%
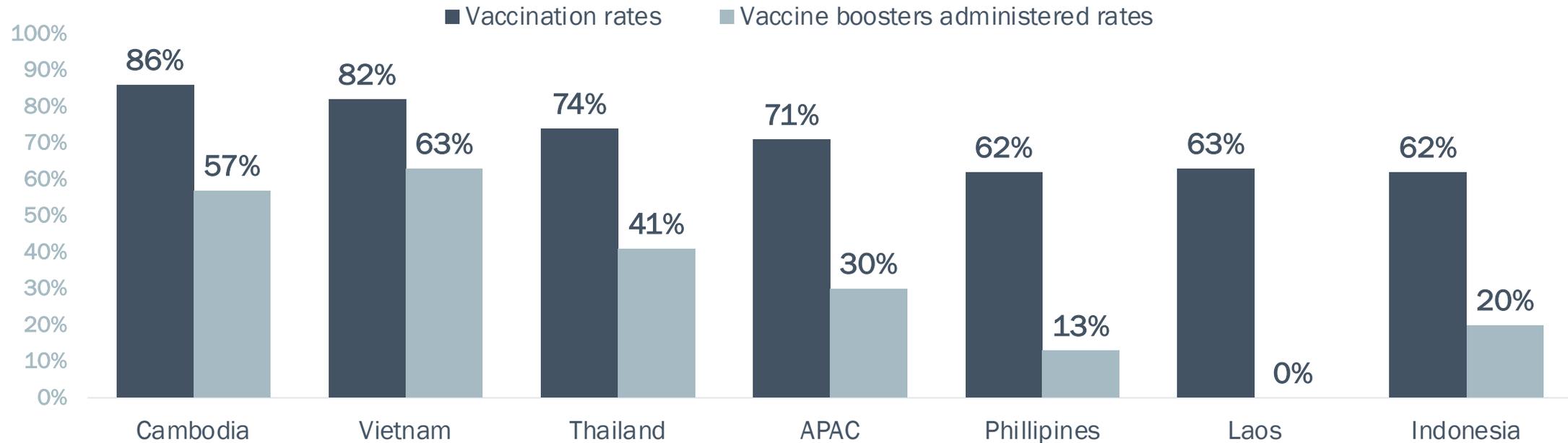
Source: WHO, Government data, Note: Data as of 4th August 2022.

Implications of vaccines

Global vaccine roll outs have reduced mortality rates and hospitalizations. Increasingly, some countries have abandoned the 'Zero-COVID' strategy and have now opted for living with COVID-19.

SINGAPORE: FROM PANDEMIC TO ENDEMIC COVID-19

May 2021: The government set plans to transition from 'COVID-zero' to **'Live with the Virus'**

June-July 2021: Eased restrictions for dining establishments, workplaces, and entertainment venues as the **general public started receiving their vaccinations.** Vaccinations were already rolled out for healthcare workers and front-line workers, and for individuals with vulnerable diseases since late December 2020 and early January 2021, respectively.

August 2021: Many businesses were allowed to **operate at or near full capacity**

Source: Fortune, Strait Times, OWID, AWR Lloyd Analysis

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Implications of vaccines (2)

SINGAPORE: FROM PANDEMIC TO ENDEMIC COVID-19 (continued)

September 2021: All-time high numbers of **delta variant and breakthrough infections**
- Cases ticked up to **over 100 per day** after nearly a year of almost no infections
- Government reintroduced some **physical distancing measures**, reducing dining groups from five to two people in restaurants, and directing companies to allow employees to work from home
- But their overall strategy has not changed - still committed to **reopen the economy and society progressively**, without putting too much pressure on the hospital system
- Amongst those infected from August-September, **52% were already vaccinated**, yet **98% of those individuals showed no or mild symptoms**

November 2021: **Booster shots** available for the general public.

Source: Fortune, Strait Times, OWID, AWR Lloyd Analysis, Government Data

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Implications of vaccines (3)

SINGAPORE: FROM PANDEMIC TO ENDEMIC COVID-19 (continued)

February 2022: High numbers of Omicron variant have caused the government to reset its Covid-19 prevention measures.

- Singapore has been seeing up to about 20,000 daily cases despite vaccination rate of almost 90%. This **reflects omicron's ability to evade immunity** even in a highly vaccinated population
- As a result, the government has reset its measures to **live with the Omicron variant.** Safe Management Measures (SMMs) include 5 persons per Group size, mandatory mask wearing indoors and outdoors, 50 % capacity for large settings and office and 1 M social distance

March 2022: Singapore **reopened its borders to all fully vaccinated travelers**, removing all existing vaccinated travel lanes (VTL) and unilateral opening arrangements from Apr 1

Source: Fortune, Strait Times, OWID, AWR Lloyd Analysis, Government Data

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Implications of vaccines (4)

SINGAPORE: FROM PANDEMIC TO ENDEMIC COVID-19 (continued)

April 2022: Daily case numbers and **Covid-19 hospitalisations had declined steadily** in the past week. As a result, the government has readjusted the protocols including no limit on group sizes, return-to-work policies, safe distance removal, mandatory mask wearing for indoor activities, optional mask wearing for outdoor activities and no capacity limit for gatherings

Source: Fortune, Strait Times, OWID, AWR Lloyd Analysis, Government Data

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Implications of vaccines (5)

POSITIVE IMPACT OF VACCINATIONS IN THE USA

The data shows the death rate among the unvaccinated is **10 times higher** than among the fully –vaccinated, and **35 times higher** than among the boosted, on average. This affirms the point that higher vaccination rates helped decline the severity of symptoms in American citizens infected with COVID-19 leading to lower mortality rates for them.

United States: COVID-19 weekly death rate by vaccination status, All ages
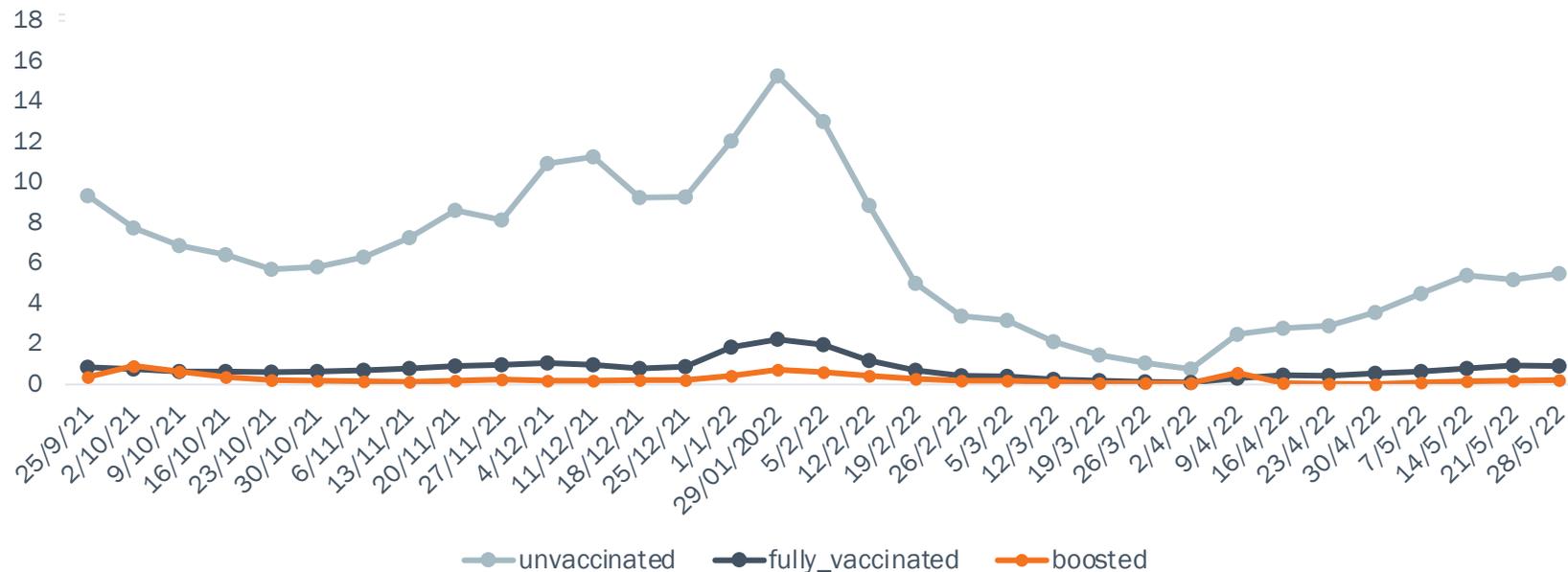
Death rates are calculated as the number of deaths in each group, divided by the total number of people in this group. This is given per 100,000 people.

Legend: unvaccinated — fully_vaccinated — boosted

Source: OWID, AWR Lloyd Analysis

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Additional Information

Please refer to the following toolkit section for more information about:

COVID-19 Test methods and appropriate application

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SECTION TWO

fhi360
THE SCIENCE OF IMPROVING LIVES

AWR Lloyd

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A 3-step risk management approach

When re-opening, operating, or growing an enterprise during COVID-19, a three-step assessment, modification and mitigation process promotes operational resilience.

KEY ASSESSMENT SEGMENTS

- HSE Governance
- Workplace
- International Travel
- Accommodation
- Transport
- Communications and Awareness
- Mental Health
- Digital Tools
- Vaccination
- Future Risk Mitigation

STEP 1: RISK ASSESSMENT

SAFE PROCEDURES

SAFE PEOPLE

COVID SAFE SYSTEM

SAFE PLACES

STEP 2: MODIFICATION

Change operating model to mitigate risk

STEP 3: MITIGATION

Guidelines to reduce risk

World Health Organization

OPERATIONAL RESILIENCE

Source: AWR Lloyd Analysis

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Step 1: Risk Assessment

A Risk Assessment is a semi-quantitative exercise that calculates the level of risk exposure to an organization. Each industry, business and department requires its own risk assessment. The approach below is broadly applicable and scalable; a set of questions produces a numerical value that can be plotted on a risk matrix. Each organization can calibrate their own risk assessment and matrix to their operational needs, required commercial outcomes, and risk appetite.

Source: AWR Lloyd Analysis, Note: adapted from John Hopkins Center for Health Security

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Step 1: Risk Assessment (2)

Example Risk Assessment Questions	Yes = 1	Result
Is there a high density of people inside facilities (e.g., many employees in an enclosed space at one time)?		
Do your employees travel to numerous sites to conduct business?		
Do you rely on international travel in order to operate?		0-3 = LOW
Do your employees directly touch clients or customers?		
Do you handle and transfer of goods and other products between employees, clients, customers?		
Are high-touch surfaces required for operations?		4-6 = MEDIUM
Is prolonged close contact between employees, clients, customers required? (>10 minutes, <6 feet)?		
Do employees interact with clients & customers in person daily?		
Do employees interact with many clients & customers in person each day?		7-9 = HIGH
Do you work directly with vulnerable populations (e.g., aged care etc.)?		
Is there an outbreak currently happening in your community		
Is your staff vaccination rate under 50%		
Risk Assessment Total Score (between 0 – 12 points)		10-12 = EXTREME

Source: AWR Lloyd Analysis, Note: adapted from John Hopkins Center for Health Security

Step 1: Risk Assessment (3)

SEVERITY

LIKELIHOOD

RISK MATRIX	ACCEPTABLE Little to no effect	TOLERABLE Effects are felt, but not critical	UNDESIRABLE Serious impact on life and operation	INTOLERABLE Could result in death & operational shut-down
IMPROBABLE Infection is unlikely to occur	Implement baseline measures	Implement baseline measures	Enhance baseline measures	Implement maximum restrictions
POSSIBLE Infection will likely occur	Implement baseline measures	Enhance baseline measures	Implement maximum restrictions	Shutdown
PROBABLE Infection will occur	Enhance baseline measures	Implement maximum restrictions	Shutdown	Shutdown

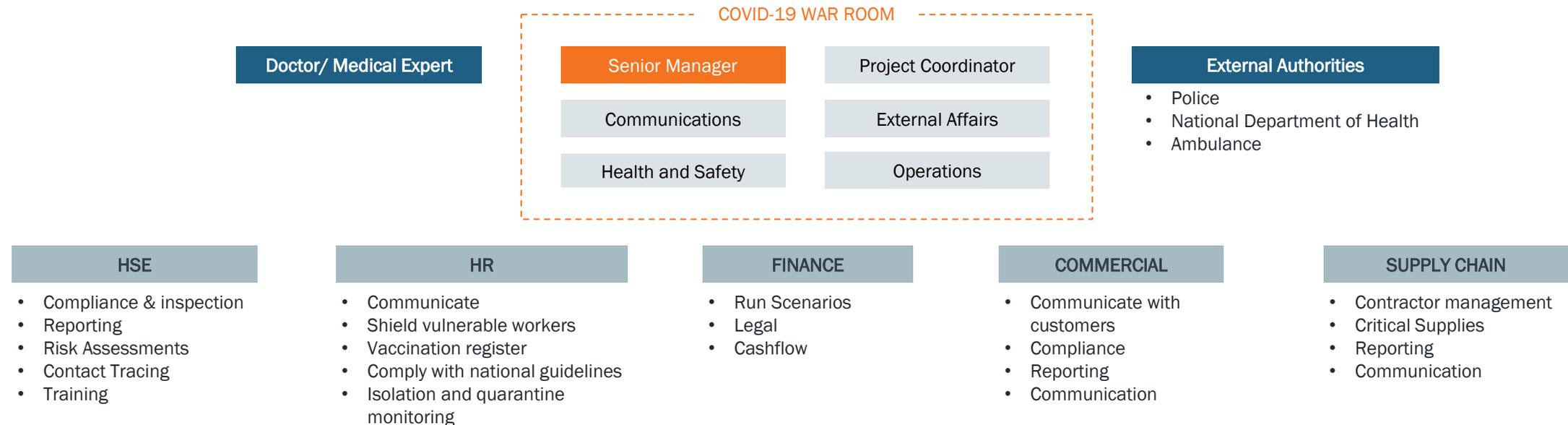Source: AWR Lloyd Analysis, Note: adapted from John Hopkins Center for Health Security

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Step 2: Modification

A modification exercise allows a reevaluation of the risk assessment outcome if measures to significantly reduce transmission of COVID-19 can be implemented. An example of this is a business that can move their entire operation online, eliminating the need to interact with customers or colleagues.

Source: AWR Lloyd Analysis

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Step 2: Modification (2)

LOW

MEDIUM

HIGH

EXTREME

Modification Assessment	Yes / Partially / In Progress/ No / Not Applicable
Is it possible to move your business entirely online?	
Is it possible to significantly limit the number of people (e.g., employees, clients, customers, other community members) that interact in person during daily business operations?	
Is it possible to restrict or significantly limit travel (domestic or international)?	
Can measures be implemented to ensure physical distancing (minimum of 6 feet) can be practiced?	
Can your business be modified to significantly limit or cancel large meetings, conferences, tournaments, or events?	
Can your business be modified to significantly limit or restrict physical contact between employees or with clients, customers, or other community members?	
Can your business be modified to significantly limit or restrict the goods and other products that are passed between employees and customers?	
Modification Score	

Source: AWR Lloyd Analysis

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Step 3: Mitigation

For organizations that are unable to eliminate transmission risk, the focus must be on reducing risk through the hierarchy of control measures shown in the following page.

◄---- LEAST EFFECTIVE ·· **MOST EFFECTIVE** ----►

Step 3: Mitigation (2)

ELIMINATION

REDUCTION

ISOLATION

CONTROL

PPE
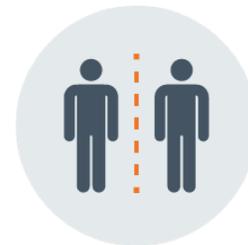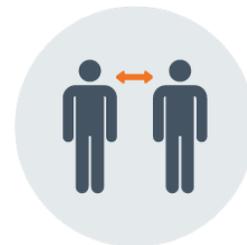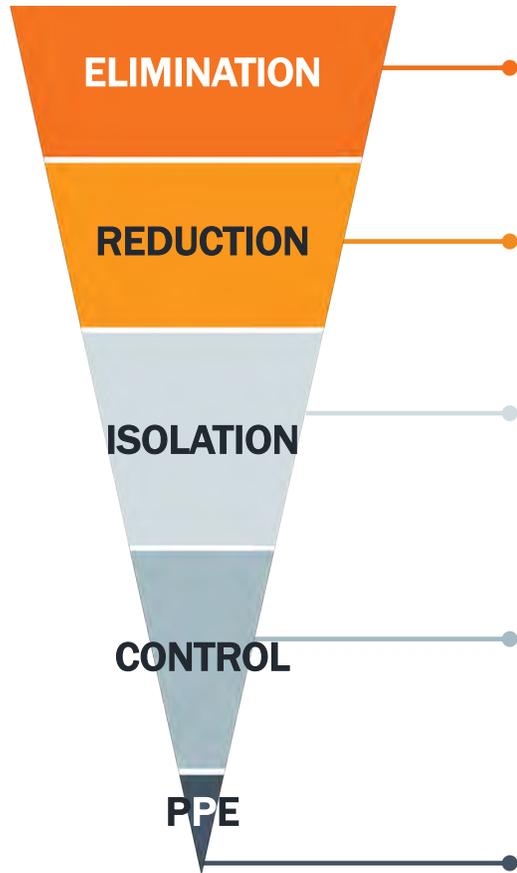
Remove the Hazard
The Hazard (COVID-19) cannot be removed, so we stay home and avoid contact with the hazard (COVID-19)

Replace the Hazard
Cannot replace the Hazard, so substitute or change the work process by physical distancing and remote working

Isolate the Hazard
Thermal scanning, isolating identified workers, maintaining physical distancing by markings and barricades, system screening (including self-screening with online tools), rapid and regular testing in certain settings

Change the Way People Work
Monitoring ventilation through proxy measures such as CO_2 monitoring, signs, posters, awareness program, handwashing, sanitizing, information, instruction, training and supervision

Personal Protective Equipment
Mandatory use of gloves and face mask, with strict monitoring on the use of PPE

Source: AWR Lloyd Analysis

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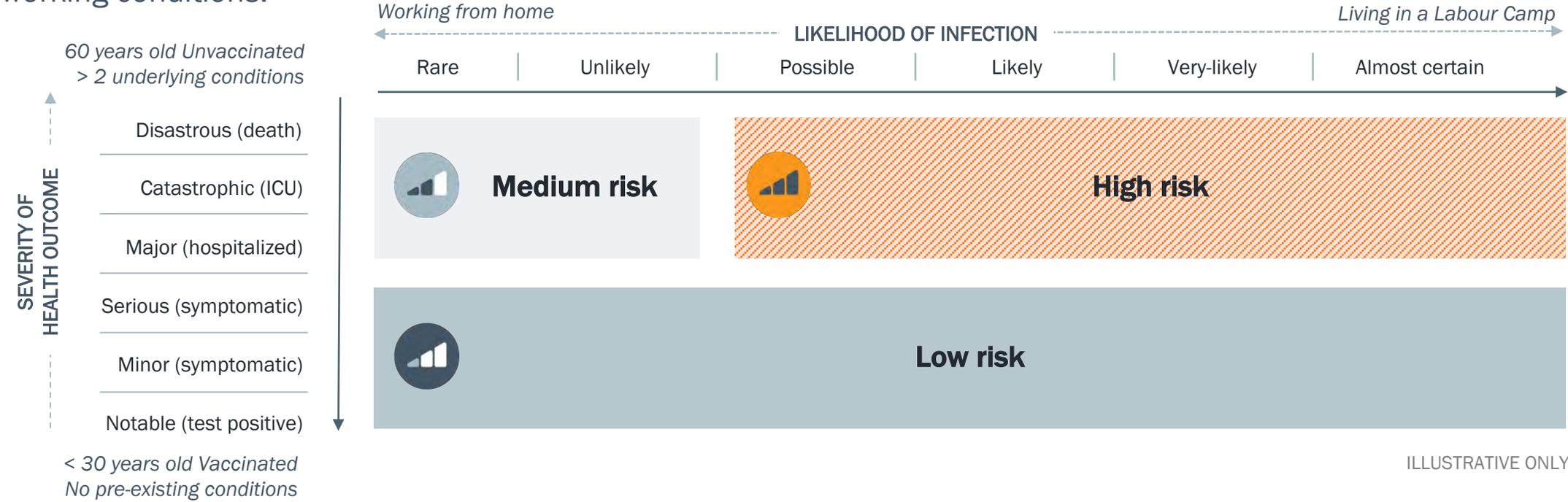8 Communication & Awareness
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SECTION THREE

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Recommended COVID-19 Crisis Management structure

In the event of a crisis, a crisis management team enables organizations to coordinate and communicate effectively across internal functions and with external stakeholders. Below is a scalable example with roles and responsibilities specific to COVID-19.

COVID-19 WAR ROOM

Doctor/ Medical Expert

Senior Manager	Project Coordinator
Communications	External Affairs
Health and Safety	Operations

External Authorities
- Police
- National Department of Health
- Ambulance

HSE	**HR**	**FINANCE**	**COMMERCIAL**	**SUPPLY CHAIN**
• Compliance & inspection • Reporting • Risk Assessments • Contact Tracing • Training	• Communicate • Shield vulnerable workers • Vaccination register • Comply with national guidelines • Isolation and quarantine monitoring	• Run Scenarios • Legal • Cashflow	• Communicate with customers • Compliance • Reporting • Communication	• Contractor management • Critical Supplies • Reporting • Communication

Source: AWR Lloyd Analysis

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Role of Pandemic Warden

In high density work settings such as constructions sites or schools, organizations can consider the deployment of pandemic wardens (PWs). PWs are responsible for overseeing the administration of infection prevention controls and procedures, compliance, reporting and responding to questions regarding safety procedures.

SUGGESTED QUALIFICATIONS OF PWs ON HIGH-RISK INDUSTRIAL SITES

OSHA certificate or IOSH certificate

5+ years
Experience on construction sites

First aid training
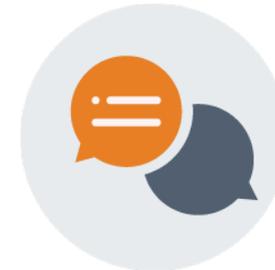
Able to communicate with workers on site

Source: AWR Lloyd Analysis

1	2	3	4	5	6	7	8	9	10	11	12
COVID-19 Overview	Thinking About Risk	HSE Governance	Workplace	International Travel	Accommodation	Transport and Visitors	Communication & Awareness	Mental Health	Digital Tools	Vaccination	Future Risk Mitigation

Role of Pandemic Warden (2)

KEY DUTIES OF A PANDEMIC WARDEN

1

PROMOTE AWARENESS
of infection prevention measures to protect people from COVID-19

2

MONITOR COMPLIANCE
of physical distancing, mask wearing, hand hygiene, and other basis protocols amongst personnel

3

REPORT AND RESPOND
to non-compliance and COVID-19 exposure in shared spaces

Source: AWR Lloyd Analysis

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Role of Pandemic Warden (3)

SUGGESTED TRAINING MODULES FOR PWs

Health, Safety & Environment (HSE)

COVID-19 protocols for safety, hygiene, cleaning and disinfection, transmission, physical distancing, PPE, case management for suspected and confirmed cases

Medical Systems

Recognizing symptoms of COVID-19, health & safety forms, First Aid provision protocols

Source: AWR Lloyd Analysis

1	2	3	4	5	6	7	8	9	10	11	12
COVID-19 Overview	Thinking About Risk	HSE Governance	Workplace	International Travel	Accommodation	Transport and Visitors	Communication & Awareness	Mental Health	Digital Tools	Vaccination	Future Risk Mitigation

Fit-to-Work review

While vaccinations can reduce the risk of death and infirmity in vulnerable employees, it is important to consider an employee's pre-existing health condition/s prior to assigning a job that may put them at a greater risk of infection. The below guideline helps assess the risk of an employee performing a job or task under certain working conditions.

Working from home

Living in a Labour Camp

LIKELIHOOD OF INFECTION

| Rare | Unlikely | Possible | Likely | Very-likely | Almost certain |

60 years old Unvaccinated > 2 underlying conditions

SEVERITY OF HEALTH OUTCOME

Disastrous (death)

Catastrophic (ICU)

Major (hospitalized)

Serious (symptomatic)

Minor (symptomatic)

Notable (test positive)

< 30 years old Vaccinated No pre-existing conditions

Medium risk

High risk

Low risk

ILLUSTRATIVE ONLY

Source: Oil and Gas Industry Best Practice, AWR Lloyd Analysis

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Fit-to-Work review (2)

Employers should consult with vulnerable workers to determine if additional risk control measures could be implemented to mitigate transmission risk

- Whether the vulnerable worker can fulfil a different role or responsibility which has a lower risk for COVID-19 transmission, such as:
    - Shifting tasks to reduce interactions with other staff, customers, or visitors
    - Moving from areas involving high interactions with patients (with or without COVID-19)
- Whether the vulnerable worker's environment can be adapted or improved to lower the risk for COVID-19 transmission (e.g., stricter physical distancing protocols or additional hygiene measures)
- Whether the vulnerable worker can be provided with additional hygiene enablement tools (such as their own hand sanitizer)
- Whether the vulnerable worker can be provided with specific PPE appropriate to the risk identified in the risk assessment
- Whether external risks can be mitigated further (for example, reducing interaction with visitors or the use of public transport)
- Whether the vulnerable worker can utilize his/her annual leave or sick leave during different levels of the lockdown

Source: Oil and Gas Industry Best Practice, AWR Lloyd Analysis

Special focus on vulnerable groups

The health risk factors below should be considered when designing fit-to-work policies that shield vulnerable workers. This list allows employees to know which conditions increase their vulnerability, and could help them to take appropriate measures, advocate for safer workplaces.

Note: Employers should determine the best way to ascertain this information while maintaining worker confidentiality and respecting country-specific national employment regulations regarding disclosure

- Cardiovascular diseases
- Chronic lung disease
- Poorly controlled HIV/AIDS
- Chronic liver disease
- 65 years and older
- Uncontrolled diabetes
- Severe obesity (BMI >40)
- Chronic kidney disease with eGFR<60
- Cancer, bone marrow or solid organ transplant
- Immunodeficiency diseases
- Underlying psychiatric disease
- Prolonged use of steroids or other immunosuppressive

Source: Oil and Gas Industry Best Practice, AWR Lloyd Analysis, Note: Cardiovascular diseases include heart failure, uncontrolled hypertension, ischemic heart disease

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Risk Forecasting: Upcoming religious and national occasions

The increase in communal contact and travel during national, cultural or religious occasions increases transmission of COVID-19. Organizations can effectively pre-empt these occasions by providing advice to staff and other stakeholders on measures to stay safe during this time.

Source: Government data, AWR Lloyd Analysis

ASEAN National Holidays/Festivals

- Cambodia
- Indonesia
- Laos
- Philippines
- Thailand
- Vietnam

Risk Forecasting: Upcoming religious and national occasions (2)

RELIGIOUS FESTIVALS

Avoid visiting and attending family gatherings; especially avoid visiting those at most risk from COVID-19 such as the elderly, pregnant women and people with chronic diseases
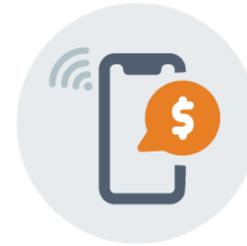
Refrain from distributing gifts such as money to children during this period and instead use electronic alternatives
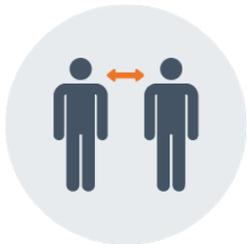
Continue to follow physical distancing of 2 meters; wear masks in public and follow other government directives

Employees can discuss the importance of their personal travel with their manager in advance

Source: Government data, AWR Lloyd Analysis

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Risk Forecasting: Upcoming religious and national occasions (3)

CASE STUDY: EID AL-FITR

May 13, 2021

- **End of fasting month** of Ramadan where families gather, pray together, and share meals

- Government **banned people from returning to their hometowns**, except for work or other reasons

- Travelers ignored the restriction and **4123 out of the 6742 people** randomly tested were **tested positive**

- **3448 COVID-19 cases** were recorded across Indonesia on the **day of the holiday**

- **1.5 million people** were thought to have **ignored the ban** and travelled home

- Eid Al-Fitr holiday was the **catalyst for rising cases**, with more than 40% growth rate and more 20% test positivity rate

Source: Government data, AWR Lloyd Analysis

Body temperature screening protocols

Temperature screening may identify people who have an elevated temperature, which is one of the symptoms of COVID-19. Any workplaces that implement temperature screening should be aware of its limitations and risks such as not being a reliable method for detecting COVID-19, and potential to cause congregation at entry points.

Temperature screening may be considered as an additional control in workplaces in areas where:

- it is difficult to achieve physical distancing

- large numbers of employees' work

- employees live together, such as in fly-in fly-out (FIFO) operations or in agricultural work

- employees need to travel together in close proximity

- a high number of external visitors are required to enter the workplace (for example, salespeople or delivery drivers)

- there are people who may be more vulnerable to the effects of COVID-19, such as older workers and/or those with chronic medical conditions

- businesses are public facing (such as retail stores)

- there is high-traffic with the public (such as railway stations)

- people are detained (such as prisons)

Source: AWR Lloyd Analysis

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Body temperature screening protocols (2)

IF TEMPERATURE TESTING IS USED:

Thermometers should be calibrated, maintained and cleaned as per manufacturer's specifications

The person conducting the testing must be trained in the correct use and cleaning and disinfection of the thermometer and the use of personal protective equipment (PPE) when using the thermometer

People conducting temperature screening should wear a mask

If temperature is above 37.5°C then screening should be conducted again after 15 minutes.

Make the person wait in an isolated shaded area, if air-conditioning is not provided in the person's vehicle.

DELIVERY STAFF/ VISITORS

If the temperature is confirmed to exceed 37.5°C (after being examined 2 times in a row with time difference of 15 minutes) then **deny entry and advise visitor to visit appropriate medical center for further review.**

EMPLOYEES

If the temperature is confirmed to exceed 37.5°C after screening 3 times in a row (with time difference of 15 minutes) or the appearance of apparent symptoms suggestive of flu /COVID-19, then **the guidelines for isolation must be followed.**

Source: AWR Lloyd Analysis

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Contact tracing protocols

A 'close contact' is a person who was in close proximity (less than 2 meters) for a period of more than 15 minutes (cumulative total) over 24 hrs. period with an infected employee from 2 days before illness onset (or, for asymptomatic patients, 2 days prior to positive specimen collection) until the time the patient is isolated.

LIST OF EXPOSED CONTACTS

- Family & Friends
- Co-worker contacts
- Roommates
- Classmates
- Other work contacts who share facilities such as toilets, rest shelters and mess-halls
- Exposed healthcare workers
- Transport contacts (flight, car, bus, etc.)

Source: CDC

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Contact tracing protocols (2)

	Fully Vaccinated	Unvaccinated or Not Fully Vaccinated			Recently Tested Positive for COVID-19 (Past 90 Days)
COVID-19 Test	Even if you don't have symptoms, you should get tested 5-7 days after your exposure.	Test immediately after finding out you are a close contact.			If you develop symptoms, consult with a healthcare professional for testing recommendations.
		⊕ Isolate for 5 Days	⊖ Re-test after 5-7 Days	⊖ Test after symptoms shows	
Monitor Symptoms	Get tested immediately if you develop symptoms				
Use of Mask	Wear a mask indoors or in public for 10 days following exposure or until your test result is negative.				
Quarantine*	No quarantine needed if no symptoms shows	Self-isolation at home for at least 5 days			No quarantine needed

These recommendations (including wearing a mask indoors or in public) might differ according to national requirements.

*Options for stopping quarantine
- After day 5 without testing   - After day 7 after receiving a negative test result (test must occur on day 5 or later)

Source: CDC

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COVID-19 Test methods and appropriate application

TYPE OF TEST	**Molecular test** Or Polymerase Chain Reaction (PCR) test	**Serological test** or Antibody test	**Antigen test** or Antigen rapid tests (ART)
PURPOSE	• Diagnoses active coronavirus infection • Useful to identify, quarantine and trace infected patients	• Shows if patient was infected in the past • Useful to identify people who may have immunity	• Diagnoses active infection in pre-symptomatic and early-symptomatic phases • Useful to isolate infected patients and quarantine close contacts of the patient
SAMPLE COLLECTION	**Nasopharyngeal:** the sample is taken with a swab from the nose or mouth	**Blood drawn:** the blood sample is taken with a finger prick or venous blood draw	**Nasopharyngeal:** the sample is taken with a swab from the nose or mouth
USE OF TEST	• Symptomatic individuals • Rostered routine testing	• Differentiate between acute and old infections in cases that test positive for COVID-19	• Screening for pre-event testing • Rostered routine testing
TURNAROUND TIME	• As early as 24 hours after sample collection	• 1-3 weeks on average	• As early as 30 minutes after sample collection
LIMITATIONS	• Unable to differentiate between acute and old infections	• Unable to rule out acute/ early infection if the antibody test is negative	• Potentially high false-negative rate in individuals with low viral load • Higher false positive rate than PCR tests

Source: UK Research & Innovation (UKRI); Tallahassee Memorial Healthcare

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Estimated time variation in COVID-19 diagnostic tests
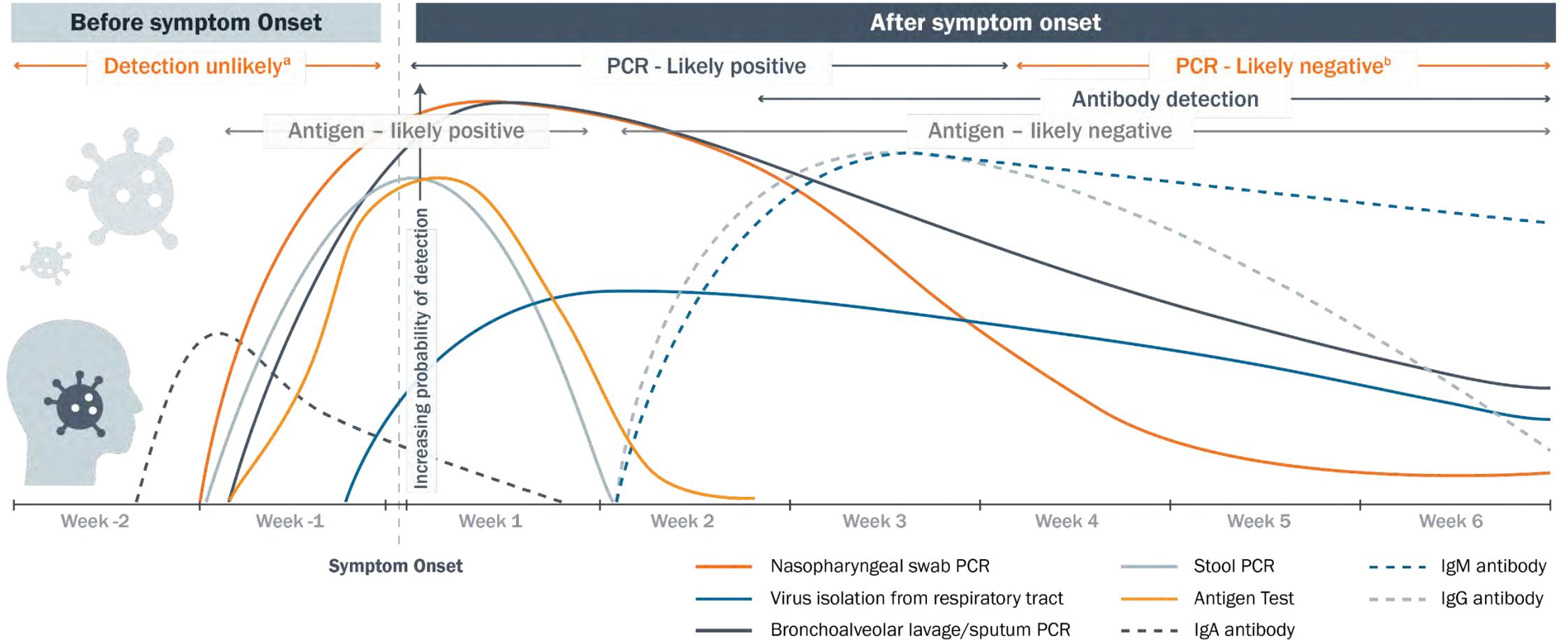
Source: Falzano et. al

Case Management: suspect and probable case flowchart

Suspected or symptomatic case → Report for → **MEDICAL SCREENING** at healthcare facility

Refer to healthcare facility

COVID-19 Symptoms? — Severe →

If symptoms worsen to severe

Mild ↓

Is testing available? — Yes → Isolate and perform PCR or Antigen test[1]

No ↓

Quarantine for at least 10 days, and fever resolution without any medication for 24 hours and with improvement of other symptoms

Isolation for at least 14 days, and until fever resolution without any medication for 24 hours and with improvement of other symptoms

Return to Work when fit

DEFINITIONS

Quarantine is used to keep someone who might have been exposed to COVID-19 away from others.

Isolation is used to keep someone who is infected with the virus away from others who are not infected. Confirmed cases using PCR testing can be isolated in shared accommodations with other confirmed cases

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Source: AWR Lloyd Analysis, CDC, Note: If patient displaying COVID-19 symptoms but first PCR test is negative, best practice is to isolate and perform second PCR test after 24 hours to confirm diagnosis

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Case Study – How schools are using Antigen Test Kits (ATK)

International School of Bangkok (ISB) is utilizing self-administered home Abbott Panbio ATKs for students and staff members, who are required to follow a weekly self-testing procedure to gain access to campus

Source: ISB, AWR Lloyd Analysis

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Case Study – How schools are using ATKs (2)

1 Staff and students, vaccinated or not, are required to do **home testing twice per week** before campus entry

2 Results must be uploaded into an **online self-disclosure form,** which is linked to the reporting system and turnstile system that **grants access to campus**

3 Any student or staff registering a **positive PCR/ ATK test** or **failing to submit** a completed self-disclosure form will **not be granted campus entry**

4 Student or staff **absent on the day of their designated testing date** must **provide a negative test** on the **next day** they return. They will be tested again on their normal, designated testing date

5 Any **adults/parents** wanting to enter the academic area of campus would need to provide a **negative ATK/PCR test result,** with a **confirmed appointment notice**

> ❗ Those tested positive from ATK home testing are required to undergo RT-PCR testing within 48 hours

Source: ISB, AWR Lloyd Analysis

Self-isolation and self-quarantine checklists

For mildly symptomatic and asymptomatic confirmed cases[1]

Only medical personnel with appropriate control can enter

Cough or sneeze into a tissue and dispose, or into elbow crook

Do not share things with others including utensils

Do not leave isolation building until after 10 days of isolation, and 24 hours after resolution of fever without medication and other symptoms improve

---

☐ Avoid touching your face with unwashed hands

☐ Stay in a well-ventilated accommodation with windows facing away from people, animals

☐ Food/water pick-up and drop-off outside door

☐ Laundry/delivery pick-up and drop-off outside door

☐ Self-monitor symptoms*, report if they worsen

☐ Clean room and toilet daily with disinfectant or cleaner

☐ Wash or sanitize hands properly and often **

☐ Use separate bathrooms and laundry

☐ Ask others to carry out delivery services/errands

☐ Keep yourself healthy, regularly exercise

☐ Do not cause yourself stress or anxiety

For asymptomatic close contacts or recent travelers with negative swab-test results, or asymptomatic personnel advised by health authorities

Do not leave room for duration of quarantine period

Separate yourself from others and do not enter shared areas

Wear a mask when out, dispose after single use

Cough or sneeze into a tissue and dispose, or into elbow crook

Undergo self-quarantine and ATK self-check every three days, or when symptoms are present.

Source: AWR Lloyd Analysis, Note: (1) the recommendations vary across countries depending on vaccine status, age, and severity of the symptoms, *Record frequency, **e.g., before eating, after bathroom,

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Case Study: Construction Protocols

HEALTH SECTOR CONSTRUCTION GUIDELINES

1 PLANNING

- Set shifts to avoid large groups and overlaps of workers
- Provide gloves, glasses, and two or more reusable masks
- Set hand washing stations with clean water, soap and additional disinfection products
- Provide basic construction tools to workers and avoid sharing of tools if possible (disinfect regularly if tools are shared)
- Engage workers coming from proximity of the facility rather than labor from other camps or villages
- Strengthen supervision to include COVID-19 prevention principles

2 WORKFORCE PREPARATION

- Orientation on COVID-19 for all workers, including disease description, symptoms, transmissibility, severity, and key prevention messages by WHO
- Workers must maintain physical distance of 6 feet and adhere to other suggested practices for infection prevention and control
- Workers should not greet each other with handshakes or embraces at any time
- Workers must always wear masks and disposable gloves
- Workers should wash their clothes frequently

Source: Mace, Cox's Bazar, AWR Lloyd Analysis

Case Study: Construction Protocols (2)

HEALTH SECTOR CONSTRUCTION GUIDELINES

3 ACCESS TO SITE

- Only workers, supervisors, and managers should be allowed on site
- Monitoring visits should be reduced to the minimum and planned when workers are on breaks (lunch/prayer time)
- Fence off construction site to ensure that no one can enter without authorization
- Clearly guard entry and exit gates
- Measure body temperature for all individuals entering the site
- Workers should be encouraged to reach the site using individual modes of transportation and avoid public transports

4 DURING CONSTRUCTION

- Construction crews should be segregated, and tasks allocated so they do not overlap
- Mark safe distance of 6 feet on grounds/railings in spaces where queueing may happen
- Instruction to workers should be given in open spaces
- Ventilate the site as much as possible, by leaving doors & windows open for example
- Keep distance from drivers when receiving and unloading goods and construction materials

Source: Mace, Cox's Bazar, AWR Lloyd Analysis

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Case Study: Construction Protocols (3)

HEALTH SECTOR CONSTRUCTION GUIDELINES

Anyone falling in one of the following categories should not be allowed on site:

- Has a family member suspected with COVID-19 living in the same household or self-isolating, or in close contact with a confirmed patient in the previous two weeks

- Is showing one or more symptoms related to COVID-19

- Is a high-risk patient (age, health condition, or pregnant)

Source: Mace, Cox's Bazar, AWR Lloyd Analysis

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Case Study: Construction Protocols (4)

COVID-19 RESPONSE (VIETNAM)

- Disinfect and sanitize construction areas, surfaces, equipment and machines

- Body temperature checks at the beginning and end of each shift

- No more than 30 individuals present on any working floor during a shift

- Limitation of direct contact between people at distances under two meters

> *"The country's preparedness and rate of response to the crisis has earned praise from the World Health Organization (WHO) and has enabled sectors, such as construction, to safely continue operation."*

John Campbell, Mace's Country Director for Vietnam

Source: Mace, Cox's Bazar, AWR Lloyd Analysis

Case Study: Education Protocols

JAKARTA INTERCULTURAL SCHOOL

Key Guiding Principles

- The health and safety of our students, faculty, staff, and community members are paramount
- A strong education program grounded in the JIS mission and values in accordance with the best health and safety practices
- Mandates and guidelines set forth by the Ministry of Education & Culture, and the Indonesia Government
- Information and advice from trusted health officials, reliable medical organization, and consultation with international schools around the world and in our region
- The feedback and needs of our community

Student, Faculty, Staff, or Household Member Tested Positive?

- Report diagnosis to JIS Nurse's Office for contract-tracing
- Affected individual(s) must quarantine for 14 days, and submit a written document from a licensed doctor/hospital confirming it is safe to return to campus
- Those that had physical, close (within 2 meters/6 feet), and approximate (in the same room) contact will be notified by the Nurse's Office, and must be tested
- Individuals must be tested and quarantine for 14 days

Student or Faculty Member shows Symptoms on Campus?

- Taken to isolation room monitored by JIS health team, and then sent home
- Required to seek medical attention and take a PCR test, that must be reported to the Nurse's Office
- Nurse's Office will start contract-tracing and notify every member with whom student or faculty member has been in contact
- Individuals must take the PCR test and quarantine for 14 days
- Entire campus will be thoroughly cleaned and disinfected according to standards set by the CDC
- To return to school, students/faculty member must submit an official Medical Certificate from a licensed doctor/hospital verifying they are virus-free and no longer contagious

Source: Jakarta Intercultural School (JIS)

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Case Study: Education Protocols (2)

FIVE PHASES ROADMAP

Phase 1: Full Home and Online Learning

Phase 2: Blended Learning

- 3 – 4 hours of in-person teaching in the morning
- Students are in pods and must stay together
  - No more than 18 students per pods
  - No more than 5 students per pods in Early Year
- Groups will be determined for rotation of days on and off campus
- Specialist and electives remain online

- Bus transportation possible with enhanced health and safety measures
- No in-person afterschool activities, assemblies, or large student gatherings, and lunch
- No cafeteria and library access – books are ordered online and picked up or delivered

Phase 3: Blended Learning with Increased Time on Campus

- 5 – 6 hours of in-person teaching in the morning
- Students are in pods and must stay together
  - No more than 18 students per pods
  - No more than 5 students per pods in Early Year
  - Full grade level pods at High School
- Groups will be determined for rotation of days on and off campus
- Specialist and electives remain online

- Bus transportation possible with enhanced health and safety measures
- Bring lunch from home or order Sodexo Box (delivered to classroom or grab & go)
- No cafeteria, outside lunch drop offs, deliveries, in-person afterschool activities, assemblies, or large student gatherings, and lunch
- Library access may become available dependent on relevant guidelines and regulations

Source: Jakarta Intercultural School (JIS)

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Case Study: Education Protocols (3)

FIVE PHASES ROADMAP (CONTINUED)

Phase 4: Blended Learning with Increased Time and Days on Campus

- 1 full day of in-person teaching
- Students are in pods and Pan bio may mix
  - No more than 18 students per pods
  - No more than 5 students per pods in Early Year
  - Full grade level pods at High School
- Groups will be determined for rotation of days on and off campus
- Specialist and electives will be in-person while some afterschool activities will be in-person, depending on division

- Bus transportation possible with enhanced health and safety measures
- Bring lunch from home or order Sodexo Box (delivered to classroom or grab & go)
- No cafeteria, outside lunch drop offs, deliveries, assemblies, or large student gatherings
- Library access may become available dependent on relevant guidelines and regulations

Phase 5: All Students on Campus

- All students return to campus in similar manner to pre-COVID-19 pandemic
- Continue with "new normal" enhanced health and safety protocols

Source: Jakarta Intercultural School (JIS)

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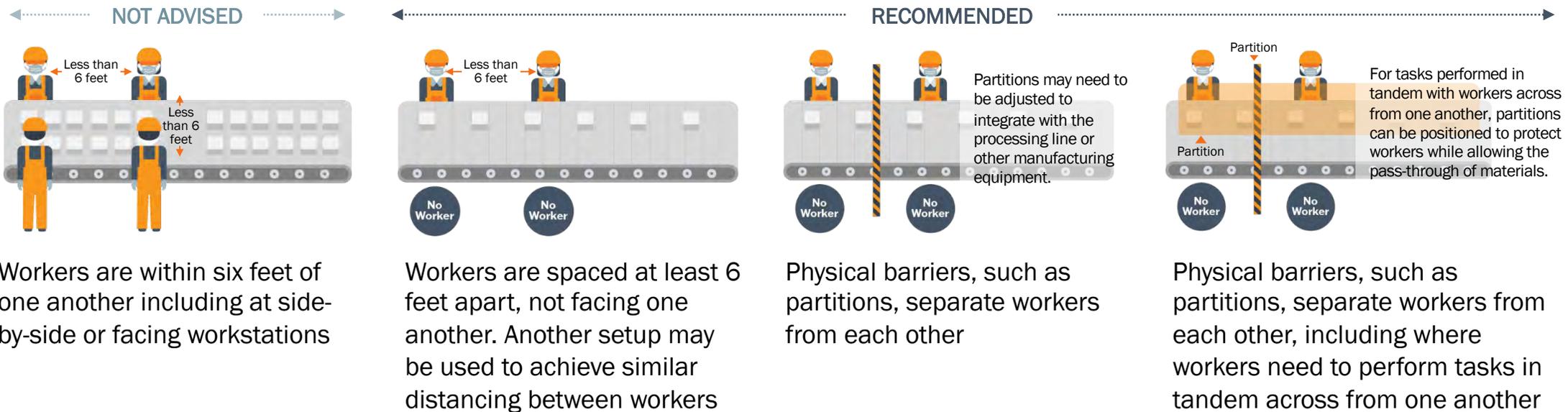9 Mental Health
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Case Study: Hospitality Protocols

Some of the protocols outlined in IHG Way of Clean are outlined below:

- **Reception:** Reduced contact at check-in, touchless transactions, front desk screens, sanitizer stations, sanitized key-cards, paperless check-out

- **Public Spaces and Facilities:** Additional deep cleaning of high touch surfaces, social distancing, guidance to implement 'last cleaned' charts, and best practices for pools, fitness centers and lounges

- **Guest Room:** Reduction of in-room furnishings/high-touch items, new laundry protocols, use of electrostatic technology (at select hotels) and the addition of in-room IHG Clean Promise cards with cleaning procedures

- **Food & Beverage:** New standards and service approach to buffets, banquets, room-service and catering

Source: Company data, *adapted from IHG 5-S Process model

Case Study: Hospitality Protocols (2)

MANAGING SUSPECTED OR CONFIRMED COVID-19 CASES

Mr & Mrs Smith is a global boutique hotel chain. The hotel's documented action plan includes procedures in the event of a suspected/confirmed case, in line with recommendations, policies and procedures set by local and national Public Health authorities.

- The ill person (guest or staff member) is isolated from other guests and staff at the hotel. The affected person must be provided with their own bathroom
- The affected guest room is removed from service and quarantined:
  - The room will not be returned to service until an enhanced cleaning and disinfection process has been completed, using certified products, approved for use against the virus
- The ill person is provided with a face mask and disposable tissues and advised to follow respiratory hygiene processes when coughing and sneezing.
- When attending an ill person, or entering an affected area where a person is displaying symptoms, additional protective equipment must be worn, removed, and disposed of in line with WHO guidance
- A procedure is in place for managing soiled/contaminated bedsheets, towels, clothes which includes them being bagged directly into special, marked laundry bags whilst in the room, reducing possible dispersing of airborne contaminants and instruction given to staff to wash them at (70°C or more)

Source: Company data

Case Study: Retail Protocols

CENTRAL PATTANA (CPN) COVID-19 PROTOCOL FOR EMPLOYEES

CPN is Thailand's largest developer of retail property, owning and managing 32 premium shopping centers across the country

- Shopping center staff must have at least one dose and proof of vaccination.
- Employees who have been infected and recovered from COVID-19 must present a medical certificate not older than three months.
- Employees who are waiting to be vaccinated must take the ATK test on the first day, and a periodic ATK test will be applied weekly.

  - On the first day of re-opening, 100% of employees must take an Antigen Test Kit (ATK) and a random ATK test is required every week.
  - Any employee with potential COVID-19 symptoms must stop working and immediately take an ATK test.
  - The employee's ATK test results must be certified by their employer. The certificate is valid for three days from the date of the test.
  - ATK tests must be FDA approved brands only.

Source: Press

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Case Study: Retail Protocols (2)

NTUC FAIRPRICE'S RESPONSE TO EMPLOYEE COVID CASE

NTUC FairPrice is Singapore's leading retailer, serving more than half a million shoppers daily through network of over 370 outlets across the island

- The affected employee was quarantined at a medical facility and necessary assistance was provided to the patient's family
- All staff at the store were put on leave of absence and underwent swab tests.
- The store was closed for two days to facilitate deep cleaning procedures in line with the National Environment Agency (NEA)'s guidelines

Source: Press

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Case Study: Manufacturing Protocols

Employers should assess their workplace for factors that might increase the risk of spreading COVID-19 and develop a health and safety plan using the following prevention recommendations:

ALIGNING MANUFACTURING WORKSTATIONS

NOT ADVISED · RECOMMENDED

Less than 6 feet · Less than 6 feet

Less than 6 feet

No Worker · No Worker · No Worker · No Worker

Partitions may need to be adjusted to integrate with the processing line or other manufacturing equipment.

Partition · Partition

For tasks performed in tandem with workers across from one another, partitions can be positioned to protect workers while allowing the pass-through of materials.

Workers are within six feet of one another including at side-by-side or facing workstations

Workers are spaced at least 6 feet apart, not facing one another. Another setup may be used to achieve similar distancing between workers

Physical barriers, such as partitions, separate workers from each other

Physical barriers, such as partitions, separate workers from each other, including where workers need to perform tasks in tandem across from one another

Consult with a heating, ventilation, and air conditioning engineer for adequate ventilation in work areas to prevent the spread of any airborne or aerosolized viruses

Source: Adapted from CDC for align manufacturing workstations

Case Study: Manufacturing Protocols (2)

PROVIDES ENERGY AND AUTOMATION DIGITAL SOLUTIONS FOR EFFICIENCY AND SUSTAINABILITY

Prioritizing the health and safety of employees in all manufacturing plants, as well as of customers and partners:

- Controlled access to Schneider sites aligning to social distancing guidelines
- Use of PPE kits and increased sanitation and disinfection measures, as required
- Coordinating with suppliers and partners to secure alternative sources of supply and shift production, as needed
- Facilitating downstream transportation lines
- Rebalancing any impact global inventories
- Managing service parts stock and delivery

Source: Schneider Electric, AWR Lloyd Analysis

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Case Study: Service sector response

PARTNERSHIPS WITH FRONTLINES OF THE PANDEMIC

LEVERAGING DIGITAL TECHNOLOGIES

Worked with the **Indonesian Ministry of Health & joint venture Good Doctor** to set up and run **vaccine centers with drive-through and walk-in services,** using Good Doctor's app as a registration platform to reduce wait times on-site, ensuring physical distancing

More than **100,000 vaccines** have been given out across 11 centers in the country since the launch in February 2021.

ENCOURAGING DIGITAL PAYMENTS

GrabPay was one of the three e-wallets chosen under the **Malaysian government's e-Panjana scheme** to spur short-term **economic recovery** and encourage citizens to use **contactless payments** by disbursing a collective amount of RM750 Mn collectively (USD180 Mn) to people's e-wallets.

GrabPay disbursed **RM 62.5 Mn,** which aided local merchants to purchase groceries, food, and other daily essentials.

MOVING TO DIGITAL PLATFORMS

Created a unique **mix-and-match model** for Singaporean citizens to order food from multiple stalls in a **hawker center** under one delivery fee, supporting close to **400 hawkers in 50 centers** since May 2020

Supporting the Philippine government's initiative to **retrain** and **bring on people as delivery partners on the platform;** as of April 2021, **4,321 individuals**—street vendors, drivers, and affected workers—have joined Grab

Source: AWR Lloyd Analysis

Case Study: Service sector response (2)

COVID-19 RESPONSE & EFFORTS FOR THE GRAB COMMUNITY

GrabFood & GrabExpress

- Rolled out Contactless Delivery
- Educated merchants and delivery-partners on food hygiene
- Educated partners to maintain physical distancing
- Collaborated with Department of Health to encourage restaurants that retain hygiene

Grab Rides

- Increase car hygiene standards
- Collaborated with Lifebuoy to distribute 150,000 units of hand sanitizers
- Collaborating with Central Pattana for special discounts on rides to vaccination centers at all 23 branches of Central department stores

Driver- & Delivery-partners

- Medical subsidy to test for COVID-19
- Compensation and Income Protection Insurance for Driver-partners medically affected by COVID-19
- Subsidized interest rates, access to emergency cash loans
- Special support for transport driver partners, may also deliver food and packages

Merchant-partners

- GrabFood adjusted commission to 0% for Self Pick-up order
- Supporting small merchant partners through various media

Grab Help Center

Temporarily suspending partner accounts if infected and updating status based on Medical Certificate

Source: Grab, AWR Lloyd Analysis

Additional Information

Please refer to the following toolkit section for more information about:

Reputational risk management

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4

General COVID-19 protocols for the workplace

For majority of the workforce who commute daily between home and their place of work, the measures listed below can help mitigate risk in the "new normal."

Get vaccinated

Wear mask at all times
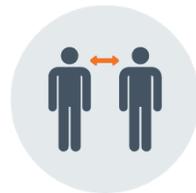
Stay 1 meter away from others

Bring hand sanitizer everywhere you go

Switch to glasses rather than contact lenses to avoid touching your eyes

Bring your own cutlery to avoid using office utensils

Wear covered clothes to protect skin from contaminated surface

Source: Innov8, CDC, AWR Lloyd Analysis

General COVID-19 protocols for the workplace (2)

LEAVING HOME

- Prepare and bring your own food to work

- Bring your own mask & alcohol-based hand sanitizer

- If you're sick, stay home. Don't go out. Don't socialize.

OUTSIDE HOME

- Wear a face mask or face covering in all public places to protect yourself and others

- Greet each other with a smile, a nod or a simple hello – no handshakes

- Maintain at least 1 meter between yourself and others

- Wash your hands frequently or use an alcohol-based sanitizer or hand rub

- Sneeze and cough into your elbow, or use a tissue and dispose into bin immediately

- Clean and disinfect frequently touched surfaces such as door handles, phones, keyboards, elevator buttons, handrails

- Reduce public gatherings. Limit large in-person meetings or hold meetings via phone or over the internet

RETURNING HOME

- Leave your shoes outside your home

- Take a bath and change your clothes immediately and before you hug, kiss or touch family members

- Wash your clothes or put in laundry bins if immediate washing is not possible

Source: Innov8, CDC, AWR Lloyd Analysis

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Office floor and area zoning

Engineering controls such as rearranging the office layout can reduce likelihood of transmission in the workplace.

FLOOR & AREA ZONING
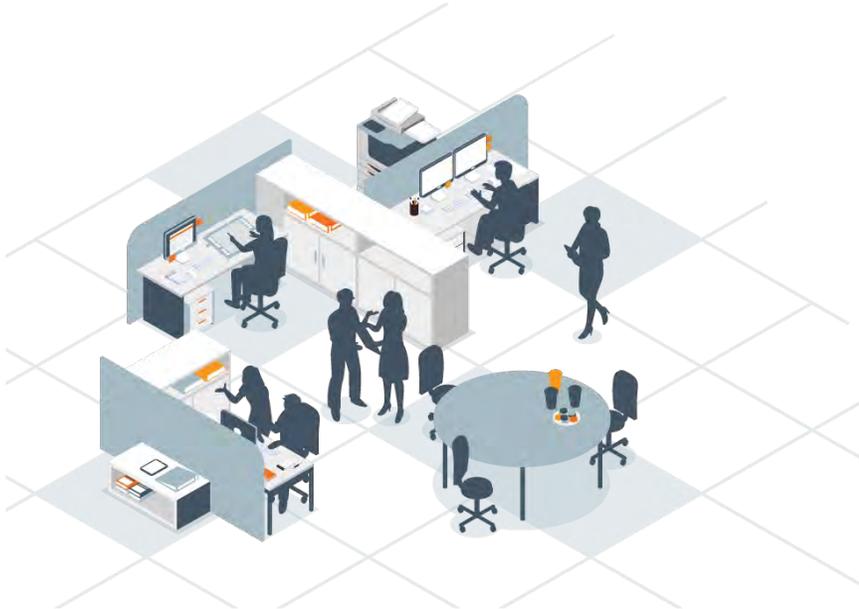
- Maintain floor/area zoning to limit cross contamination
- Ensure personnel are limited to their designated floors/areas/locations
- Implement one-way systems, entrance and exit into offices and zoned areas
- Distribute multilingual posters and fact sheets (electronic and paper based) to raise awareness
- Restrict designated employees and contractors to certain zones
- Where possible, members/personnel from one team should not interact with other team members/personnel
- Access should be determined according to business needs and may require prior approval.
- Restrict certain contractors to certain floors.

Source: AWR Lloyd Analysis

'Zero point of contact' strategy

For high-risk workplaces like constructions sites, zero-contact strategies may be required:

Examples of measures for zero contact protocols

- Always maintain a safe physical distancing of not less than 2-meters

- Wearing applicable PPE and color-coded high-visibility vests

- One-way systems for entrances and exits

- Reduce contact time: not being within the same physical space for more than 15 minutes at any time

- Do not crowd communal facilities (such as bathroom, dining facilities, transportation, accommodation etc.);

- Where possible, reduce sharing the same physical contact points or commonly/frequently touched surfaces (such as paper, tools, computers, tablets etc.). Ensure these surfaces and contact points are frequently disinfected.

- Not having the same contact points with third parties (i.e., cleaners, messengers, drivers, catering staff, etc.)

- Where possible, encourage an electronic handover process

- Only one team at a time conducts site visits to verify the preparation before accepting the handover

Source: AWR Lloyd Analysis

'Zero point of contact' strategy (2)

In the absence of physical distancing, restrict certain activities

OBJECTIVES

01 **Determine** critical activities that may require 'zero point of contact' measures

02 **Separate** personnel working on such activities that interact with each other

03 **Devise** additional protocols to protect these critical activities & associated personnel

Hand hygiene guidelines

HOW TO HANDWASH

Wash hands if soap and water is available! Otherwise, sanitizer is acceptable.

Duration of the entire procedure: at least 20 seconds

1 Wet hands with water

2 Apply enough soap to cover all hand surfaces

3 Rub hands palm to palm

4 Right palm over left dorsum with interlaced fingers and vice versa

5 Palm to palm with fingers interlaced

6 Backs of fingers to opposing palms with figures interlocked

7 Rotational rubbing of left thumb clasped in right palm and vice versa

8 Rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa

9 Rinse hands with water

10 Dry hands thoroughly with a single use towel

11 Use towel to turn off faucet

12 Your hands are now safe

Source: Adapted from UAE National Instructions for using hand and surfaces disinfectants

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Hand hygiene guidelines (2)

HOW TO USE SANITIZER

Use sanitizer for hand hygiene! Wash hands when visibly soiled.

Duration of the entire procedure: 20-30 seconds

1a **1b** Apply a palmful of the product in cupped hand, covering all surfaces

2 Rub hands palm to palm

3 Right palm over left dorsum with interlaced fingers and vice versa

4 Palm to palm with fingers interlaced

5 Backs of fingers to opposing palms with fingers interlocked

6 Rotational rubbing of left thumb clasped in right palm and vice versa

7 Rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa

8 Once dry, your hands are safe

Source: Adapted from UAE National Instructions for using hand and surfaces disinfectants

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Personal Protective Equipment (PPE): specific to potential risk exposure groups

PPE protects users and those around them from potential hazards. Guidelines for specific PPE to be donned by workers in certain job function are laid out below:

PPE RATIONALIZATION BY EMPLOYEE RISK EXPOSURE GROUP		FFP2/3 or N95 mask	Surgical mask	Site issued Respiratory Protective Equipment (RPE)	Surgical gloves	Reusable gloves	Eye protection	Gown	Disposable plastic apron	Disposable coverall
VERY HIGH	HCW and EMS staff	X	X		X		X	X	X	X
HIGH	Worker in crowded area (e.g., inspectors) w/o issued RPE		X				X			
HIGH	Transportation worker		X							
HIGH	Cleaners (disinfection)	X	X		X		X			X
HIGH	COVID-19 site screening teams	X	X		X		X			
MEDIUM	Workers working in places with high airborne pollutants		X	X			X			
MEDIUM	Cleaners (general)		X			X	X			
MEDIUM	Security (general)		X							
LOW	Administrative staff		X							
LOW	Visitors / delivery		X							

⚠ 1) PPE use should be informed by national recommendations and availability of supplies of the different masks; 2) A cloth mask, if used, should be placed over a surgical mask.

Source: South Africa Department of Mineral Resources and Energy

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PPE: managing infection control and supplies

PPE supplies should be carefully managed and prioritized for workers engaged in jobs with higher risk of COVID-19 transmission

COVID-19 ESSENTIAL MATERIALS TO BE MANAGED INCLUDE

Face masks

Disposable gloves

Disposable isolation gowns and/or single-use/disposable coveralls

Eye protection (goggles)

Hand sanitizer

PRIORITIZATION OF THESE COVID-19 ESSENTIAL MATERIALS TO BE AS FOLLOWS

Medical personnel and their support staff who are at the *front line*

>

Personnel with chronic diseases and those with flu symptoms

>

Contact Tracing Teams

>

Support staff: security personnel, reception staff, food handlers, housekeeper and cleaning staff, barbers etc.

Source: AWR Lloyd Analysis

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PPE: Industrial worksite illustration

In an industrial setting, specific COVID-19 PPE may need to be integrated with other PPE specific to other occupational hazards

- It is recommended that surgical masks are given to workers to use at the worksite.

- Fitted N95 or FFP2 respirators are used by workers in a healthcare setting

- However, note that workers need to be aware of valve releases, which is not protective to other person nearby who are not wearing respirators

- This will help release the heat buildup inside the respirator and is more comfortable for the wearer

- Reusable gloves should always be disinfected before and after every shift as well as in between when entering the rest shelters and toilets.

- Foot-operated spray disinfectant is particularly useful for site locations

Source: FHI 360, AWR Lloyd Analysis

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PPE: Industrial Worksite illustration (2)

EYE PROTECTION
close fit plastic frames
are being used

EAR PLUGS
if necessary

COVERALLS
3x provided for
frequent washing

HELMET (WITH CHIN STRAPS)

SUITABLE RESPIRATOR
Provide mask replacement for
workers if the mask is damaged
(e.g., wet due to work)

RUBBER COATED TYPE SAFETY GLOVES
for worksite inspections

SAFETY FOOTWEAR
Safety shoes, anti-slip
soles, if necessary

Source: FHI 360, AWR Lloyd Analysis

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Heating, Ventilation and Air Conditioning Systems (HVAC)

The CDC recommends a layered approach to reduce exposure to SARS-CoV-2. This includes improving building ventilation. Protective ventilation engineering can reduce airborne concentrations and help reduce the overall viral dose to building occupants.

TOOLS TO IMPROVE VENTILATION

☐ Increase the introduction of outdoor air by:
1) Opening air dampers to reduce HVAC air recirculation
2) Opening windows and doors (if possible) to increase air flow

☐ Use fans to increase the effectiveness of open windows, placing them in a way that will not cause contaminated air to flow directly from one person to another

☐ Ensure ventilation systems provide acceptable air quality for the current occupancy level in each space

Source: CDC, AWR Lloyd Analysis

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HVAC Systems

TOOLS TO IMPROVE VENTILATION (CONTINUED)

☐ Turn off any demand-controlled ventilation (DCV) controls that reduce air supply

☐ Improve central air filtration and set it as high as possible

☐ Ensure restroom exhaust fans are functional and operating at full capacity

☐ Use portable high-efficiency particulate air (HEPA) fan systems to enhance air quality

☐ Use ultraviolet germicidal irradiation (UVGI) as supplemental treatment to inactivate SARS-CoV-2 when there are limited options for ventilation improvements

☐ Generate clean-to-less clean air movement by evaluating and repositioning the damper settings, supply louvers, and exhaust grilles, as necessary

Source: CDC, AWR Lloyd Analysis

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HVAC Systems (2)

- Consult experienced heating, ventilation, and air conditioning (HVAC) professionals for any needed changes in HVAC systems

- Buildings that provided healthy indoor air quality prior to the pandemic can be improved for pandemic occupancy using less costly interventions using tools in the toolbox.

- Multiple tools can be implemented at the same time to increase overall effectiveness of ventilation interventions—reducing the risk of exposure to the virus and the spread of the disease.

- It will be up to the building owner or operator (with expert consultation as required) to identify the appropriate tools needed

- Ventilation improvements can be applied to public transportations as well to reduce exposure risk and lower the spread of the virus

Source: CDC, AWR Lloyd Analysis

Summary of workplace protocols

FOR WORK SITES WITH A LARGE LABOR FORCE, CRITICAL MITIGATION MEASURES ARE SUMMARIZED BELOW

Communication & awareness

- **Multilingual** awareness materials
- At **rest shelter** (e.g., awareness, occupancy)
- **Trainings** for supporting staffs
- Ensure **compliance**

Testing & vaccination

- Implement **one-way systems** (e.g., entrances and exits)
- Always wear a **mask**
- **Wash hands** frequently, and bring **hand sanitizer**
- Get **vaccinated**

Delivery of goods & materials

- Delivery only at **designated** zones
- **Disinfect** all incoming deliveries
- **Sanitize** unloading zones routinely
- Reduce paperwork

Isolation & quarantine facilities

- Identify and establish **isolation and quarantine procedures**
- Create evacuation and isolation **plans** for suspected cases
- Quarantine **close contacts** of confirmed cases
- Isolate **confirmed** cases

Source: AWR Lloyd Analysis

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Summary of workplace protocols (2)

FOR WORK SITES WITH A LARGE LABOR FORCE, CRITICAL MITIGATION MEASURES ARE SUMMARIZED BELOW (CONTINUED)
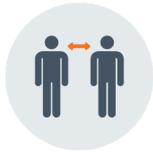
Safe distancing measures

- Allow safe distancing of **two meters** across sites (e.g., conference rooms, meetings)
- Appoint COVID-19 **Pandemic Warden(s)**
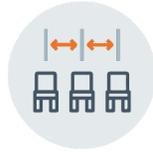
Congestion management

- Reduce the number of workers for **each shift**
- Create movement control plan for **some** spaces
- Limit in-person meetings

Hygiene & cleanliness

- Provide **pre-packaged** meals
- Follow **PPE** specifications
- Provide adequate hand hygiene facilities in common areas
- **Disinfect** shared facilities & surfaces **regularly**

Record keeping & monitoring

- Daily **cleaning** and disinfection
- Daily **temperature** checks
- **Track** and **record** suspect and confirmed cases

Source: AWR Lloyd Analysis

Physical distancing in worksites[1]

PHYSICAL DISTANCING

Defining physical distance:

- A safe space while having person-to-person interaction to mitigate the risk of potential spreads of airborne biological hazards (e.g., bacteria, viruses) to as low as reasonably practicable.

- Distance needed between yourself and others: 2 meters

- Make physical distancing a corporate advisory

Special attention to maintaining physical distance at:

- Daily Toolbox Talk (TBT) sessions
- Rest shelter
- Third-party trainings
- Queues for receiving food parcels
- Other critical in-person business meetings
- Queues for boarding transport, screening

Source: AWR Lloyd Analysis | Note: (1) Different ASEAN countries have different national laws regarding physical distancing measures

Physical distancing in worksites (2)

HOW TO MAINTAIN PHYSICAL DISTANCE:

- Use rest shelter in rotations

- Designate the role of a Pandemic Warden(s)

- Rearrange meeting rooms, conference rooms, and other facilities to maximize physical distancing (e.g., reduce chairs)

- No traditional greetings/handshaking

- Split into small manageable groups

- Reduce attendance for in-person meetings to no more than 10 people

- Avoid direct interaction by using telephonic and video conferencing for client-contractor communication

"Combining the effective use of vaccines and physical distancing measures (e.g., avoiding crowds/confined spaces and close-contact setting) is critical to moving towards a future, where COVID-19 becomes an endemic disease that we can learn to live with, through effective action to control transmission.

Asia-Pacific Strategy for Emerging Diseases (APSED)

Source: AWR Lloyd Analysis

Example of work teams, schedules and rosters

Large projects, especially those involving Fly-in Fly-out workers, may benefit from the triaging of personnel into categories with different work patterns.

- Identify **Location Critical Personnel** and **Fully Remote Personnel or non-Location Critical.**

- For contractors and their personnel, discretion to direct personnel to work remotely if continued business support can be maintained.

- Location Critical Personnel can be separated into teams - one team would work from home and one team would work from site/office.

- Ideally, week on/week off rotation with premises deep-clean and disinfection between shifts.

Source: AWR Lloyd Analysis

Example of work teams, schedules and rosters (2)

IDENTIFY LOCATION CRITICAL PERSONNEL AND FULLY REMOTE PERSONNEL OR NON-LOCATION CRITICAL

Location Critical Personnel

- Personnel whose duties require in-person presence at work locations for critical business continuity
- Further segregate between Team A & Team B for staff that is not already on shift patterns
- 2-week shift cycle (14 calendar day rotation)

Non-location Critical Personnel

- Personnel who do not require in-person presence at the relevant work location to perform their roles ("Fully Remote Personnel")

Source: AWR Lloyd Analysis

1	2	3	4	5	6	7	8	9	10	11	12
COVID-19 Overview	Thinking About Risk	HSE Governance	**Workplace**	International Travel	Accommodation	Transport and Visitors	Communication & Awareness	Mental Health	Digital Tools	Vaccination	Future Risk Mitigation

Example of work teams, schedules and rosters (3)

Further, for supporting operations personnel (site/field operations)

- Shift and shift change over: referring to the arrangement of day and night shifts, which may be, for example, 8 hours or twelve 12 hours rotations instead of 2 weeks on / 2 weeks off.

- Team swap and rotation model: Team Blue and Team White would ideally be deployed in the same team swap/rotation model, when Team Blue is on their rotation then Team White members are rotated off.

- For sites that have multiple shifts in a day, Team Blue and Team White can be comprised of the personnel needed for each of the shifts, which should follow the pattern of rotation that is currently in place

Source: AWR Lloyd Analysis

Zoning plan and risk management

Complex projects and construction sites employing contractors can consider dividing their worksite into zones. Entry to zones can be controlled to shield workers from other work groups of a higher COVID-19 risk rating. Cascade zoning through eating, sleeping, transport, and working environments, keeping bubbles of people apart from each other on a structured basis to build resilience across bubbles

Source: AWR Lloyd Analysis

Zoning plan and risk management (2)

RISK PROFILE | **PROJECT STAKEHOLDER** | **MITIGATION MEASURES TAKEN** | **STAKEHOLDER ZONING**

HIGH

Infrequent site and non-essential visitors who live and work locally (essential deliveries, drivers, visitors, vendors)

- Restrict visitors where possible
- Video Calls
- Restricted to Zones onsite (e.g., delivery area)

Frequent visitors to site

- Video Call, if possible
- Restricted to Zones onsite
- Postpone meetings or training

Essential staff living inside work site

- Video Call if possible
- Onsite accommodation with carefully managed crew changes
- Separate contractors within worksite
- Restricted Access on Site

LOW

Shift no.		Date:	
Staff name	Allocated zone	Zones visited	Time of visit
Name	A	?	00h00
Name	B	?	00h00
Name	C	?	00h00
Name	D	?	00h00
Name	E	?	00h00

Office zones

A B C D E
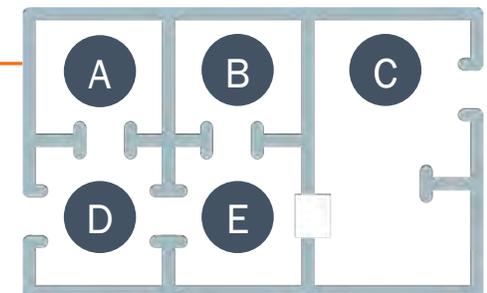
Source: AWR Lloyd Analysis, Note: illustration is for illustrative only

Hybrid working as the future of work post Covid-19

Number of days per week that workers are required to be in the office

Companies' policies	47%	5%	23%		12%	5%	8%

45% Hybrid work model

Workers' expectation	19%	7%	11%	19%	15%	29%

52 % Hybrid work model

■ Full-time in office   ■ 4 days in office   ■ 3 days in office   ■ 2 days in office   ■ 1 day in office   ■ Fully remote
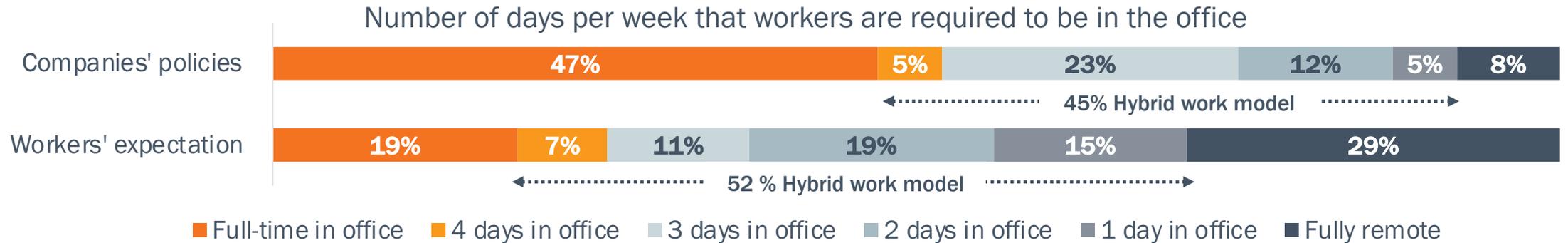
Hybrid work is up by seven points each year (to 38%), and 53% of people are considering the transition to a hybrid work model in the coming year. This trend does not align with company policies, which require most employees to return to the office full time.

Companies are demanding that employees spend 1.5x more time in the office than employees expect.

36% of workers who chose a hybrid work model selected 2 days as the ideal time to spend in the office.

Employees expecting to work remotely full time exceed company expectations by 2.6x

Employees wanting a hybrid work model exceed company expectations by 15%.

Source: Microsoft Work Trend Index, Gensler U.S. Workplace Survey Winter 2021, AWR Lloyd Analysis

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How to make hybrid work *work?*

Given workers more autonomy to choose their schedules. Two-thirds of workers expect to spend full days in the office. However, younger workers prefer working from office for partial days.

18%
Come to the office for specific meetings

66%
Full days in the office

16%
Partial days in the office

Baby Boomers
Gen X
Millennials
Gen Z

0% 20% 40% 60% 80% 100%

■ Full days in the office   ■ Partial Days
■ Only for specific meetings   ■ Extended period of time
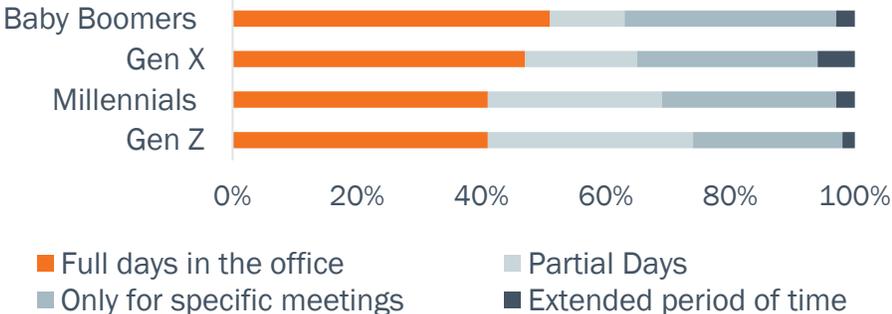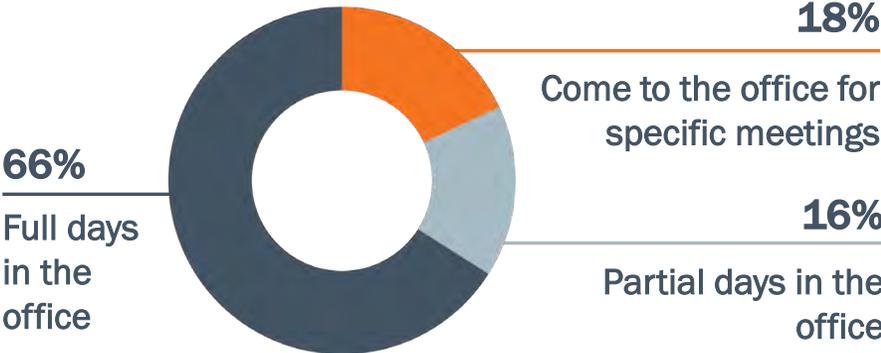
Privacy and health safety are primary concerns for post-pandemic work. — *over a third of workers feel their company's workplace is not prepared for hybrid work*, and when asked what would make them more comfortable returning, access to *private spaces* is ranked by three-fourths of workers, outranked only by *enhanced air filtration and cleaning protocols*

Indoor air filtration systems	**80%**
Enhanced cleaning protocols	**76%**
Access to more private spaces	**74%**
Vaccine requirements	**65%**
Operable windows	**65%**
Outdoor workspaces	**61%**
Mask mandates	**59%**
Testing requirements	**57%**

0% 20% 40% 60% 80% 100%

■ Safety
■ Privacy
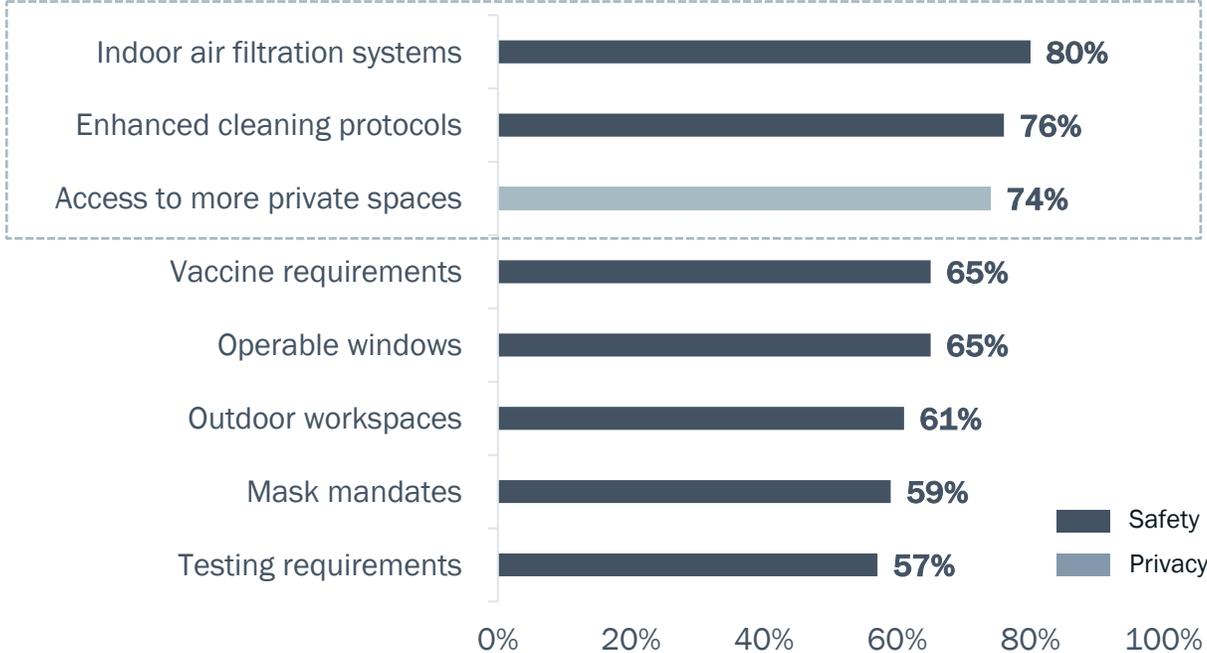
Source: Gensler U.S. Workplace Survey Winter 2021

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How to make hybrid work *work?* (2)

DEGREE OF REMOTE REALIZATION

Fully collocated	**Alternating on-site**	**On-site on-demand**	**Connected remote**	**Work from anywhere**
0	25–50	50–75	90–95	100
Employees in this model work on site 100% of the time	Employees alternate days or weeks on sire for collaboration within and/or across functions	Employees go into office only designated days for collaboration	Employees reside within 3 hours of the office to enable once-a-month attendance affiliation or other purposes	Employees can reside anywhere and have no requirement to go into to the office

Hybrid

% remote work

Source: BCG, PWC

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How to make hybrid work *work*? (2)

US Executive planning new investment to support hybrid working

72%
Tools for virtual collaboration

70%
IT infrastructure for virtual connectivity

64%
Training for managers to manage virtual work

57%
Conference rooms with enhanced virtual connectivity

50%
Hoteling applications

48%
Communal space in the office

Source: PWC

How to make hybrid work *work*? (3)

BRAID THE DIGITAL AND PHYSICAL EXPERIENCE

- Equity: give each participant their own screen, placing monitors on rolling carts that can easily be moved around. Teams can pull a remote colleague into a breakout session or up to the table
- Engagement: to be fully engaged, people need clear sightlines to one another and to the content.
- Ease: ample power supplies, whiteboards, and a variety of software solutions will contribute to an easier, more seamless hybrid collaboration experience for people.

FLIP ENCLOSED AND OPEN SPACES

- Open office concept: Meetings will happen more often in open spaces with movable boundaries
- Individual focus work will happen in enclosed spaces like pods or small enclaves to provide different levels of visual and acoustical privacy that people have come to expect while working at home

Source: Harvard Business Review

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How to make hybrid work *work?* (4)

SHIFT FROM FIXED TO FLUID

- The hybrid future solves for a more fluid workplace that can flex as needs change.
- Not only does this accelerate innovation and advance the culture of the organization, it can also ensure real estate is always optimized.
- For example, an organization can design an open area that supports hybrid meetings in the morning, becomes the café at lunch, hosts a town hall in the afternoon, and can be rented for an evening event.

BALANCE "WE" AND "ME" WORK

- Effective collaboration happens when there's an ebb and flow of people coming together to work as a team and then moving apart to focus individually, process their ideas and follow up on assigned tasks.
- Too much together time, without enough individual focus time can result in groupthink
- It's important that the pendulum not swing too far by designing offices that are all about the "we" and not balance the need for "me" spaces.

Source: Harvard Business Review

Additional Information

Please refer to the following toolkit sections for more information about:

- HSE Governance: Case studies by sector

- On-site healthcare options for industrial project sites

- Communication and leadership can combat the 'infodemic'

- Digital Tools: Self-assessments

- Remote site inspections using drones

- Willingness and hesitancy towards the vaccine

- Employee Vaccination Guidelines

- Program to strengthen knowledge, motivation & compliance

SECTION FIVE

5

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THE SCIENCE OF IMPROVING LIVES

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International Travel: Inbound Travel Regulations

	International Travel	Quarantine	Quarantine Location	PCR Test	Vaccines	Medical Certificate/Insurance	Mandatory Contact Tracing Apps
INDONESIA	Allowed	Vaccinated: No quarantine Unvaccinated/Partial: Mandatory (5 days)	Designated Facilities	48 Hrs. before flight	Required to show vaccination record card	Required medical certificate (All international travelers are required to complete e-HAC before travel at Peduli Lindungi app) Required medical insurance (Traveler shall have COVID-19 insurance)	Peduli Lindungi
PHILIPPINES	Allowed only to vaccinated travelers	Vaccinated: No quarantine Travelers who are unable to present a proof of vaccination: Mandatory (14 days)	Designated Facilities (Until release of PCR result) Home Quarantine (Until the 14th day for unvaccinated people)	48 Hrs. before flight	Required to show vaccination record card	Required medical form (All travelers are required to complete e-HDC before travel)	Traze Mobile
CAMBODIA	Allowed	Vaccinated: No quarantine Unvaccinated/Partial: Mandatory (7 Days)	Designated Facilities	Vaccinated: Not required Non-vaccinated: PCR test upon arrival	Required to show vaccination record card	Required a deposit of $2000 US to the Cambodian government to cover COVID services for unvaccinated travelers	Non-mandatory

Source: Visit ASEAN, Note: Last updated on 4 August 2022

International Travel: Inbound Travel Regulations (2)

	International Travel	Quarantine	Quarantine Location	PCR Test	Vaccines	Medical Certificate/Insurance	Mandatory Contact Tracing Apps
THAILAND	Allowed	Vaccinated: not required Unvaccinated/Partial : Mandatory 5 Days	Designated facilities	Not required for fully vaccinated persons but require 72 Hrs. before arrival for unvaccinated persons	Required to show vaccination record card (Min. 14 days before travel)	Required medical certificate (All travelers are required to register on the COE "Thailand Pass") Required medical insurance (Traveler shall buy COVID-19 insurance with minimum USD 10,000 coverage)	Non-mandatory
VIETNAM	Allowed	Not required	Not required	72 Hrs. before arrival and negative result within 24 Hrs. before departure	Not required	Required health declaration (Required to fill out health declaration upon arrival) Required medical insurance (Traveler shall have COVID-19 insurance with minimum USD 10,000 coverage)	Non-mandatory
LAOS	Allowed	Not required	Designated Facilities	72 Hrs. before flight & Upon arrival	Required to show vaccination record card	Required medical form (Complete health declaration form upon arrival) Required medical insurance	LaoKYC

Source: Visit ASEAN, Note: Last updated on 4 August 2022

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A Case Study: Tourism in Thailand

Amazing Thailand

Safety and Health Administration (SHA) Certification

WHAT IS SHA AND SHA+ ?

Certificates given by the Tourism Authority of Thailand to hotels and services that meet pandemic-level safety and health standards.

BASIC REQUIREMENTS FOR SHA+ CERTIFICATE

- >70% of staff is fully vaccinated
- Unvaccinated staff cannot have close contact with guests
- Every staff member is prepped with COVID-19 emergency solutions.
- Only these establishments can issue SHABA certificates (to confirm bookings for people entering Thailand under government conditions without quarantine) which can then be used to apply for the 'Thailand Pass'.

Source: TAT, AWR Lloyd Analysis

A Case Study: Tourism in Thailand (2)

WHO CAN ENTER THAILAND AND HOW?

	No Quarantine	AQ (Alternative Quarantine)
Eligible Countries	Only eligible countries	All countries
Quarantine	No quarantine	Quarantine at the AQ hotel for 5 nights
Vaccination	Fully vaccinated No vaccination	Not required
Accommodation Requirements	Not required	5 nights reservation at government-approved hotel such as SHA Extra Plus (SHA ++) hotels
Medical Insurance	Medical insurance that covers Covid-19 treatment with minimum coverage of USD10,000 (Except Thais and foreign expatriates under national healthcare coverage)	Medical insurance that covers Covid-19 treatment with minimum coverage of USD10,000
COVID-19 test result before departure	Vaccinated: RT-PCR test not required Unvaccinated: An RT-PCR test result no older than 72 hours before the departure date in lieu of a vaccination certificate	Have a RT-PCR COVID-19 test result issued within 72 hours before travelling
RT-PCR COVID-19 tests in Thailand	Not required	1 test on day 4-5

Source: TAT, thaiembassy

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A Case Study: Tourism in Thailand (3)

SHA+ REQUIREMENTS INCLUDE BUT ARE NOT LIMITED TO

Provide one way access or screening points at every route

Restrict entry of anyone with a temperature of >37.5˚C at screening points

Record employees and customers' travel history and details

Allow only customers who wear masks to use the service

Clean public facilities every 2 hours

Develop new technology to reduce the risk of exposure

Source: TAT, AWR Lloyd Analysis

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International travel best practices

When international travel is necessary, some simple best practices can promote the health and safety of staff

Get vaccinated

Exercise by yourself
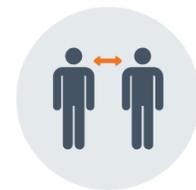
Keep a distance of 2 meters

Avoid public transport in rush hours

Avoid touching your face

Avoid physical contact with others
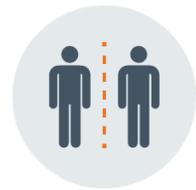
Avoid unnecessary interactions

Check-in online

Contactless payment

Source: International SOS

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International travel best practices (2)

When international travel is necessary, some simple best practices can promote the health and safety of staff

HYGIENE TOOLKITS

Hand sanitizer

Disinfectant wipes

Masks

Gloves

AVOID TOUCHING

Door handles

Rails

Switches

Others' personal items

DISINFECT ITEMS

Seat handles

Tray tables

Bags

Source: International SOS

Evacuation: activating your assistance provider

With the resumption of international travel, organizations should be aware of, and plan around the challenges of assisting employees abroad. Employee Assistance Programs, such as International SOS, exist to help employees travel safely while border restrictions are in force.

EXAMLPE OF OVERSEAS EMERGENCY PATIENT TRANSFER
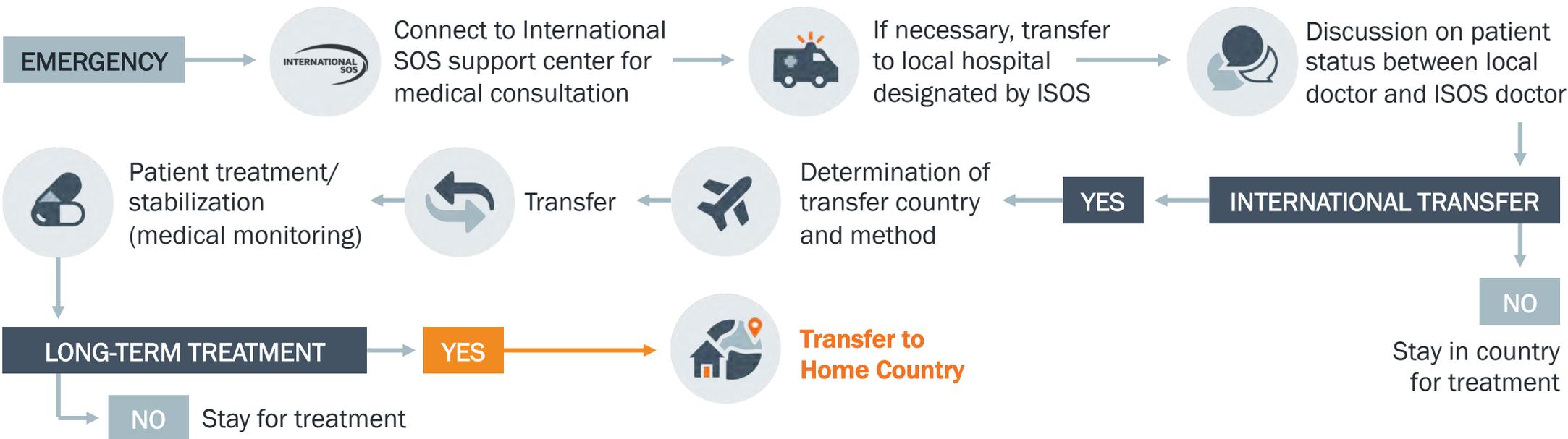
EMERGENCY → INTERNATIONAL SOS → Connect to International SOS support center for medical consultation → If necessary, transfer to local hospital designated by ISOS → Discussion on patient status between local doctor and ISOS doctor

Patient treatment/ stabilization (medical monitoring) ← Transfer ← Determination of transfer country and method ← YES ← INTERNATIONAL TRANSFER

INTERNATIONAL TRANSFER → NO → Stay in country for treatment

LONG-TERM TREATMENT → YES → **Transfer to Home Country**

LONG-TERM TREATMENT → NO → Stay for treatment

Source: International SOS

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SECTION SIX

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THE SCIENCE OF IMPROVING LIVES

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6

Key COVID-19 protocols in accommodation

Accommodation can quickly become a COVID-19 flashpoint; these protocols can help reduce transmission in this high-risk setting

SAFE DISTANCING MEASURES

- Allow safe distance of 2 m between individuals
- Allow safe distance of 1 m between dining tables and stations
- Prohibit or limit mass gatherings (max. 5-10 pax)
- Reduce dining hall occupancy rate to 50% - 75%
- Put in place multilingual awareness materials

CONGESTION & INTER-MIXING

- Restrict staff movement, incl. during off days
- Limit cross-interaction
- Schedule the use of common facilities/areas
- Appoint dedicated staff for food preparation
- Use one-time utensils, cutleries, containers, etc.

HYGIENE & CLEANLINESS

- Disinfect high contact surface at least daily
- Implement safe handling of contaminated laundry
- Manage stock of infection control supplies
- Silent hours for cleaning/disinfection
- Provide sufficient ventilation in all areas

Source: AWR Lloyd Analysis

Key COVID-19 protocols in accommodation (2)

Facilities & recreation

Closure of communal spaces

Provide entertainment and communication services

Quarantine and isolation

Allocate 20% of accommodation as designated isolation facility

Perform active contact tracing

Health Screening

Health screening during entry/exit

Hygiene orientation for visitors

Record Keeping

Record keeping of persons in quarantine and isolation

Source: AWR Lloyd Analysis

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COVID-19 best practices from Singapore dormitories

Singapore modified dormitory standards to reduce transmission risk, and all personnel should be confined into dormitories with daily COVID-19 testing while guests are prohibited from entry

	CURRENT DORMITORY STANDARDS	NEW DORMITORY STANDARDS
Living space	≥ 3.5 sqm/person, excl. shared facilities	≥ 4.2 sqm/person, excl. shared facilities
Room occupancy	• No maximum # of beds • In practice, **12-26** beds • No spacing requirement • Mostly **double** decker beds	• ≤ **12** beds • ≥ **1 meter** spacing between beds • Double-deck beds allowed
Toilet, bathroom & sink capacity	≥ 1 set[1] per **15** residents	1 set[1] per **6** residents
Sick bay & isolation	≥ **1** sick bay bed per 1,000 bed spaces	≥ **10** sick bay bed per 1,000 bed spaces

Reduce intermixing amongst dormitory residents by modularizing dormitory living and segmenting communal facilities

Source: Singapore Ministry of National Development, AWR Lloyd analysis, [1]1 set incl. bathroom, sink, and toilet

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Cleaning and disinfecting guidelines

GUIDELINES

Guidelines address the following non-healthcare facilities: accommodation, offices, non-office areas (staircase handrails, ladders, shipping and receiving areas, security check points and others), common areas and recreational facilities, control rooms, workshops and transport vehicles

Source: AWR Lloyd Analysis

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Cleaning and disinfecting guidelines (2)

GUIDELINES

GENERAL CLEANING GUIDELINES

- Extra attention given to surfaces touched most often by different individuals
- **Routine** cleaning of facilities and transport
- Cleaning & disinfecting of **high contact surfaces** such as elevator buttons, light switches, handrails and doorknob handles
- Dust and wet-mopping and scrubbing of floors
- Cleaning restrooms
- Wiping heat and air conditioner vents
- Spot cleaning walls and carpets

CLEANING FREQUENCY

- **Frequently touched surfaces** will be cleaned and disinfected daily if not between shifts
- Surfaces with more frequent use will be cleaned more frequently
- Internal or external cleaning staff are responsible for regular cleaning of common areas
- Disposable wipes and other cleaning products will be provided in common areas so that employees can wipe down surfaces before use
- Frequently used surfaces include shared work surfaces, computers, rest rooms and other facilities

Source: AWR Lloyd Analysis

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Cleaning and disinfecting guidelines (3)

GUIDELINES

TYPE AND USE OF DISINFECTANTS

- Use of Quaternary ammonium compounds for disinfecting and housekeeping
- Alcohol (Isopropyl 70% or Ethyl Alcohol 70%) will be used where bleach is not suitable
- Special precaution and risk assessment based on the disinfectant's properties and application methods
- Regular preparation and replacement of disinfectants

STAFF: TRAINING, PPE AND HYGIENE

- Cleaning staff will be **trained** and briefed prior to cleaning tasks on information such as COVID-19 symptoms, instructions if they develop symptoms, and use of PPE
- Cleaning staff shall wear impermeable gloves and N95 masks
- Cleaning staff will **report** breaches in PPE
- Cleaning staff will wash hands for 20 seconds before and after tasks

Source: AWR Lloyd Analysis

Cleaning and disinfecting guidelines (4)

GUIDELINES

WASTE DISPOSAL

- Dispose used test kits in the waste kit at work.

- Separate the kit from any recyclable material including the packaging, tube holder, or instruction booklet

- Dispose used cloth and wipes in waste bags

- Have a closed-lid receptacle dedicated for contaminated PPE with clear signs for employees to dispose the PPE in the correct bins. Wash hands for at least 20 seconds after PPE disposal

- Face mask strings should be removed to avoid impact on wildlife

Source: AWR Lloyd Analysis

Cleaning and disinfecting guidelines (5)

GUIDELINES FOR SUSPECTED/CONFIRMED COVID-19

Guidelines for cleaning and disinfecting where there has not been any reported case for suspected/confirmed COVID-19

Source: AWR Lloyd Analysis

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Cleaning and disinfecting guidelines (6)

GUIDELINES FOR SUSPECTED/CONFIRMED COVID-19

GENERAL CLEANING GUIDELINES

- Cleaners proceed from cleaner to dirtier areas to avoid spreading dirt
- Keep windows open for **ventilation**
- Avoid using spray pack to apply disinfectants on potentially contaminated areas as it may create splashes which spread the virus
- Clean toilets with **separate set** of equipment
- COVID-19 related waste will be collected in a separate bag and labelled as COVID-19 waste and disposed by bio-medical treatment and disposal facility

CLEAN HARD, NON-POROUS SURFACE

- Surfaces include stainless steel, floors, kitchen surfaces, countertops, tables and chairs, sinks, toilets, railings, light switch plates, doorknobs, toys, keyboards, remote controls and recreation equipment
- Clean surface with soap and water
- Rinse surface with water and wipe with clean towel
- Apply disinfectant
- Rinse with water and allow surface to dry

Source: AWR Lloyd Analysis

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Cleaning and disinfecting guidelines (7)

GUIDELINES FOR SUSPECTED/CONFIRMED COVID-19

CLEAN SOFT, POROUS SURFACE

- Includes carpets, rugs, transportation seats, towels, clothing, sofas, chairs & bedding
- Clean and disinfect routinely
- Remove visible contamination with appropriate cleaners
- Launder using hot water
- Dry on high heat

Source: AWR Lloyd Analysis

Cleaning and disinfecting guidelines (8)

HOW TO CLEAN FREQUENTLY TOUCHED SURFACES

Workstations, countertops, doorknobs, keyboards, remote controls, desks

- Disposable disinfectant wipes to be used, so that commonly used surfaces can be wiped down by employees before each use.

- Cleaning staff to wear disposable gloves when cleaning and disinfecting surfaces. Gloves should be discarded after each cleaning. If reusable gloves are used, those gloves should be dedicated for cleaning and disinfection of surfaces for COVID-19. Manufacturer's instructions for cleaning and disinfection products to be followed. Hands to be cleaned immediately after gloves are removed.

- If surfaces are dirty, they should be cleaned using a detergent or soap and water prior to disinfection.

- For disinfection, diluted household bleach solutions, alcohol solutions with at least 70% alcohol, and most common household disinfectants to be used.

Source: AWR Lloyd Analysis

Cleaning and disinfecting guidelines (9)

- Diluted household bleach solutions to be used if appropriate for the surface. Follow manufacturer's instructions for mixing, application and proper ventilation. Check to ensure the product is not past its expiration date. Never mix household bleach with ammonia or any other cleanser. Unexpired household bleach will be effective against coronaviruses when properly diluted.

- For soft (porous) surfaces such as carpeted floor, rugs, and drapes, remove visible contamination if present and clean with appropriate cleaners indicated for use on these surfaces.

- After cleaning, launder items as appropriate in accordance with the manufacturer's instructions. If possible, launder items using the warmest appropriate water setting for the items and dry items completely, or approved products for emerging viral pathogens to be used for porous surfaces.

- All contaminated waste (trash, soiled gloves) from the infected site needs to be disposed of safely.

Source: AWR Lloyd Analysis

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Cleaning and disinfecting guidelines (10)

ALL AREA CLEANING

- Close off areas used by ill person and wait as long as possible before beginning cleaning and disinfection to minimize exposure to respiratory droplets
- Increase air circulation by opening windows and doors, wait 24 hours before cleaning and disinfecting
- Clean and disinfect all areas used by ill person
- Keep cleaning equipment to a minimum
- Mop floor with disinfectants or prepared bleach solutions
- Wipe all frequently touched areas with chemical disinfectants and allow to air dry
- Surface of food preparation site is rinsed with water and allow to air dry after applying disinfectants
- Clean toilets and all accessible surfaces of walls with disinfectant or bleach solutions

Source: AWR Lloyd Analysis

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Cleaning and disinfecting guidelines (11)

ALL AREA CLEANING (CONTINUED)

- Wash curtains, fabrics, quilts by hot water cycle with detergent or disinfectant at 70 degrees Celsius for 25 minutes

- Steam cleaning for items that cannot be laundered for example furniture

- Items that are heavily contaminated and cannot be cleaned by washing or steaming should be disposed of

- Discard cleaning equipment made of cloth and absorbent materials such as mops and cloths into biohazard bags to prevent cross contamination

- Leave disinfected area and avoid using the next day where possible

- COVID-19 related waste will be collected in a separate bag and labelled as COVID-19 waste and disposed to bio-medical treatment and disposal facilities

Source: AWR Lloyd Analysis

Cleaning and disinfecting guidelines (12)

AREAS USED BY INFECTED PERSON

1. Cleaning staff clean and disinfect all areas (offices, bathrooms, and common areas) used by the ill persons, especially on frequently touched surfaces.

2. Cleaning of soiled areas must be completed prior to disinfection to ensure the effectiveness of the disinfectant product. If EPA- and DEC-registered products for SARS-CoV-2 are not available, disinfect using a disinfectant labeled effective against rhinovirus and/or human coronavirus.

3. If such products are unavailable, use a fresh chlorine bleach solution (approximately 1 tablespoon of bleach in 1 quart of water). Follow manufacturer direction when creating the dilution.

Source: AWR Lloyd Analysis

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Cleaning and disinfecting guidelines (13)

AREAS USED BY INFECTED PERSON (CONTINUED)

4. Label directions must be followed when using disinfectants to ensure the target viruses are effectively killed. This includes adequate contact times (i.e., the amount of time a disinfectant should remain on surfaces to be effective), which vary between five and ten minutes after application. Disinfectants that come in a wipe form will also list effective contact times on their label.

5. For disinfectants that come in concentrated forms, carefully follow instructions for making the diluted concentration needed to effectively kill the target virus. Information can be found on the product label.

6. Cleaning and disinfecting should be conducted by staff who have been trained to use products in a safe and effective manner.

7. Staff to be reminded to ensure procedures for safe and effective use of all products are followed.

Source: AWR Lloyd Analysis

Laundry and dishwashing guidelines

LAUNDRIES AND DISHWASHING

To protect support workers in accommodation facilities, laundry and dishwashers should also take the following precautions

- Do not shake dirty laundry; this minimizes the possibility of dispersing the virus through the air.

- Wash items as appropriate, in accordance with the manufacturer's instructions.

- Dirty laundry that has been in contact with an ill person cannot be washed with other people's items.

- Use regular laundry soap and hottest water possible (at least 60-90◦C).

- Clean and disinfect hampers or other carts for transporting laundry according to guidance above for hard or soft surfaces.

Source: AWR Lloyd Analysis

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Laundry and dishwashing guidelines (2)

LAUNDRIES AND DISHWASHING (CONTINUED)

- Contaminated laundry should be placed into a laundry bag or basket with a plastic liner and shall not be shaken.

- Gloves and a surgical/procedural mask should be worn when in direct contact with contaminated laundry.

- Laundry should be thoroughly dried.

- Hand hygiene should be performed after handling contaminated laundry and after removing gloves.

- If the laundry container comes in contact with contaminated laundry, it should be disinfected using a diluted bleach solution.

- The proper functioning of the dishwashing and laundry equipment should be checked, particularly the operating temperatures, as well as the correct dosage of cleaning and disinfecting chemicals.

Source: AWR Lloyd Analysis

Food handling and dining hall protocols overview

Catering facilities tend to be areas where people crowd. In high-risk settings transmission mitigated through the following controls:

SAFE DISTANCING & DE-CONGESTION
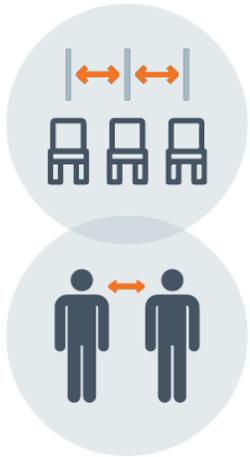
- Reduce hall occupancy to **50% - 75%**

- **1 person** per table at a time

- **2m distance** in food parcel queue, between workers in kitchen areas and other food handlers

- **1m distance** between dining tables & stations

- **Stagger** meal timings, **schedule** and allow entry in batches to avoid crowding

- Setting specific timing for identified room occupants

- Post signage to communicate occupancy, physical distancing

- For **shared camps, separate timings** for **separate company** personnel

- **Avoid intermixing** of batches and bubbles

- No self-serve buffet system

- Warden to monitor queues

- Only authorized persons to enter the food preparation/ storage areas

Source: Abu Dhabi Agriculture and Food Safety Authority guidelines for safe handling of food, AWR Lloyd Analysis
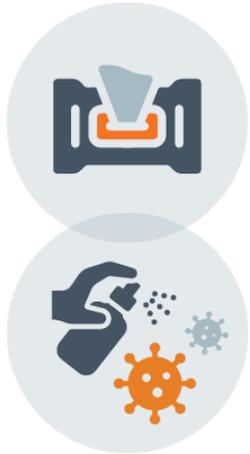
Food handling and dining hall protocols overview (2)

CLEANING & DISINFECTION

- **Fruit and vegetables** shall be **pre-washed**
- Follow **sanitizing procedure** as per Hazard Analysis and Critical Control Point (HACCP) Management Plan
- Specified **training for cleaners** and housekeeping workers
- **Periodic** cleaning and **disinfection of** all food establishment **areas**
- Food handling staff to practice hand hygiene
- Food handling staff should not work if ill

- Tables & chairs (including the underneath) + other high-touch surfaces (equipment, tools, utensils) to be cleaned & disinfected after each meal
- Dish-washing shall be done by designated staff
- Check for proper functioning of the dishwasher, dosage of cleaning chemicals

Source: Abu Dhabi Agriculture and Food Safety Authority guidelines for safe handling of food, AWR Lloyd Analysis

Food handling and dining hall protocols overview (3)

HYGIENE & CROSS-CONTAMINATION

- No common-use condiments and no shared food containers
- Disposable cutleries and pre-packed food
- **Personal** drinking water bottles, disposable bottles & cups
- Hand hygiene prior to meals
- Workers to wear face masks in food parcel queues
- Use approved caterers that maintain high hygiene standards + dedicated catering and food-handling staff
- Temperature checks for catering staff

- Symptomatic employees should not work
- PPE for all food handlers + training on PPE use
- Uniforms of food handlers must be handled as per safe laundry guidelines

Source: Abu Dhabi Agriculture and Food Safety Authority guidelines for safe handling of food, AWR Lloyd Analysis

Food handling and storage guidelines

COLD FOOD STORAGE SPECIFIC PRECAUTIONS FOR COVID-19

1 Food contact surfaces and door handles should be frequently disinfected.

2 Food storage should be well organized with all incoming food deliveries including disinfection and disposal of packaging material as appropriate prior to storage.

3 Access into walk-in cold rooms should be limited to designated food handlers and entry documented to maintain traceability.

4 Disinfect hands and wear a new pair of gloves prior to entry.

5 Wear mandatory PPE (head-cover, beard-cover, hand gloves, facemasks and shoe covers) before entry into the cold rooms.

6 The deep cleaning frequency of the refrigerator and freezer units should be enhanced in line with the operations and potential risk of contamination in cold storage facilities.

Source: AWR Lloyd Analysis

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Food handling and storage guidelines (2)

FOOD SAFETY HYGIENE SPECIFIC TO COVID-19 AMONG FOOD HANDLERS

1 Wash hands often with soap and water for at least 20 seconds, especially before, during, and after preparing food and after handling garbage.

2 Wear a surgical mask and follow the physical distancing guidance of at least 2 meters

3 Disinfect frequently touched surfaces like door handles, countertops, chairs, tables, condiment holders, bathrooms and staff changing rooms. Make sure of frequent cleaning of the food and waste containers.

4 Use and change hand gloves before and after every activity where your hands come into contact with food.
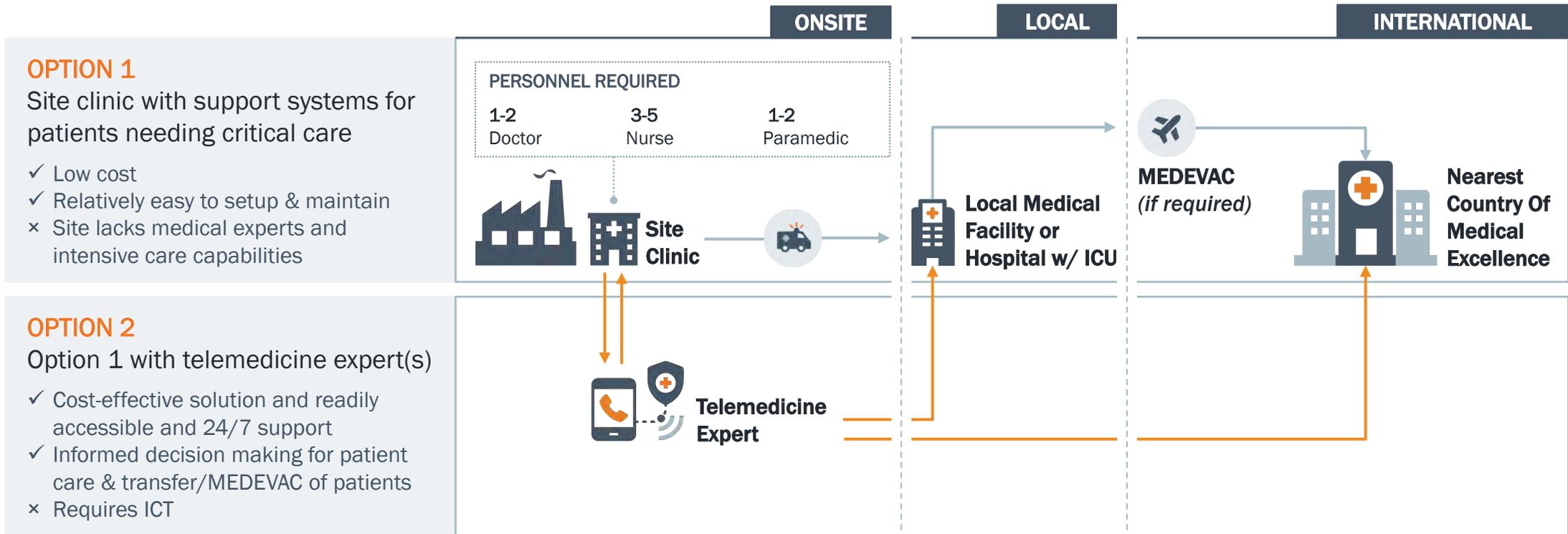
5 Hold a valid medical fitness certificate and valid pass 'essential food safety training'/ 'basic food hygiene' while working inside the food establishment.

Source: AWR Lloyd Analysis

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On-site healthcare options for industrial project sites

For large industrial projects, an overlay of remote expertise on COVID-19 can be introduced via telemedicine in a cost-effective way

ONSITE   **LOCAL**   **INTERNATIONAL**

OPTION 1
Site clinic with support systems for patients needing critical care

✓ Low cost
✓ Relatively easy to setup & maintain
✗ Site lacks medical experts and intensive care capabilities

PERSONNEL REQUIRED

1-2	3-5	1-2
Doctor	Nurse	Paramedic

Site Clinic

Local Medical Facility or Hospital w/ ICU

MEDEVAC *(if required)*

Nearest Country Of Medical Excellence

OPTION 2
Option 1 with telemedicine expert(s)

✓ Cost-effective solution and readily accessible and 24/7 support
✓ Informed decision making for patient care & transfer/MEDEVAC of patients
✗ Requires ICT

Telemedicine Expert

Source: AWR Lloyd Analysis

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SECTION SEVEN

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THE SCIENCE OF IMPROVING LIVES

AWR Lloyd

Key COVID-19 safe transport guidelines

Where transport is provided to the workforce, the measures below can be adjusted to the result of a risk assessment

FLEET MANAGEMENT

- Reduce vehicle capacity to **25% - 75% (subject to risk assessment)**
- Allow only max. 3 pax in a light vehicle
- Conduct only **point-to-point trip**
- **Avoid mixing** shifts, dorms, offices, etc.
- Ensure cleaning records are kept

HYGIENE & CLEANLINESS

- Disinfect vehicle **exterior** between trips
- Disinfect vehicle **interior** at least daily
- Provide **hand hygiene** facilities/supplies
- Provide adequate **ventilation** during trips (open windows)
- Install a driver cabin **partition**

PERSONNEL ON-BOARDING

- **Temperature screening** before trips
- Entry/exit through **rear entry** doors
- Allocate **2 seats** per worker
- Implement **zigzag** seating arrangement
- Prohibit **food consumption** during trips and **prohibit talking**

Source: AWR Lloyd Analysis

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Driving protocols

Those involved in vehicle driving, loading or maintenance can consider the following transmission mitigation measures:

Frequently clean, disinfect and sanitize the following surfaces

inside & outside your vehicle several times a day e.g., Steering wheel; radio; controls; door handles; armrests; head rests; company and personal electronic devices; all tools and equipment, especially those shared with others

Thoroughly wash & disinfect your hands regularly

- Wash your hands with liquid soap and water for a minimum of 20 seconds.
- If soap and water is not available, disinfect hands regularly with hand sanitizer before entering and after leaving the vehicle.
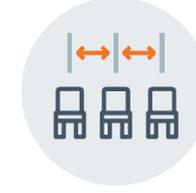
Always apply safe physical distancing

- Maintain **2 meters** separation outside the vehicle.
- If vehicle space is constrained, maintain at least **1 meter** separation inside the vehicle and open windows for cross ventilation.

Source: AWR Lloyd Analysis

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Driving protocols (2)

Always wear hand gloves

when at loading and unloading docks, gas stations, customers' sites and terminals or while interacting with others (while taking signatures or exchanging documents).

Report to your supervisor

if you or any passenger shows potential symptoms of COVID-19 such as dry cough, fever, sore throat, difficulty in breathing or headache

Light vehicle:

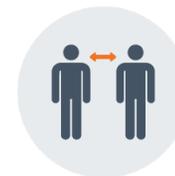Ensure a maximum of 3 occupants on board at any time (1 driver + 2 passengers)

Sign transport documents with your own pen

and do not share it with anybody else

Always wear a protective face mask

while inside the vehicle at all times.

When on duty, reduce personal interactions

as much as possible

Source: AWR Lloyd Analysis

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Goods and materials delivery protocols

Offices, warehouses or work settings should also practice safe behaviors around deliveries and logistics

Applicable for both worksites and camps

PRIOR TO ENTRY/ON ARRIVAL

- Consolidate deliveries to minimize frequency and required personnel
- E-receipts/e-forms prior to delivery. Find alternatives to all hard-copy signatures
- Disinfect vehicle with a spray solution comprising 1% sodium hypochlorite
- Delivery personnel to undergo contactless body temperature screening
- Delivery personnel to wash/ sanitize hands, wear clean hand gloves and surgical/cloth mask

Source: AWR Lloyd Analysis

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Goods and materials delivery protocols (2)
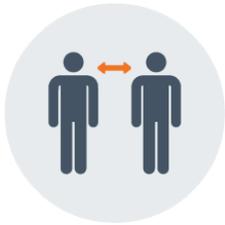
DURING DELIVERY PROCESS

- Deny entry if delivery personnel exhibit COVID-19 symptoms
- Checkpoint security to inform duty manager and line HSE about the same
- Delivery staff to preferably remain inside the vehicle and use contactless communication methods
- Delivery staff and goods receiving personnel to maintain 2 m distance at all times
- Goods to be delivered at a well ventilated designated and restricted receiving area
- Delivery staff must return to the vehicle cabin and remain seated inside post unloading.
- Dedicated, separate shared facilities (changing rooms, toilets, etc.) for delivery personnel

Source: AWR Lloyd Analysis

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Goods and materials delivery protocols (3)

POST DELIVERY

- Checkpoint security to ensure safe removal and disposal of all PPE & gloves in biomedical waste bins

- Incoming deliveries to be handled by goods receiving personnel wearing appropriate PPE

- Incoming deliveries to be sanitized before delivered to team members

- Outer packing to be removed at a designated de-boxing area

- The receivables areas to be sanitized routinely using industrial grade disinfectants.

- Sanitize frequently touched goods handling equipment

Source: AWR Lloyd Analysis

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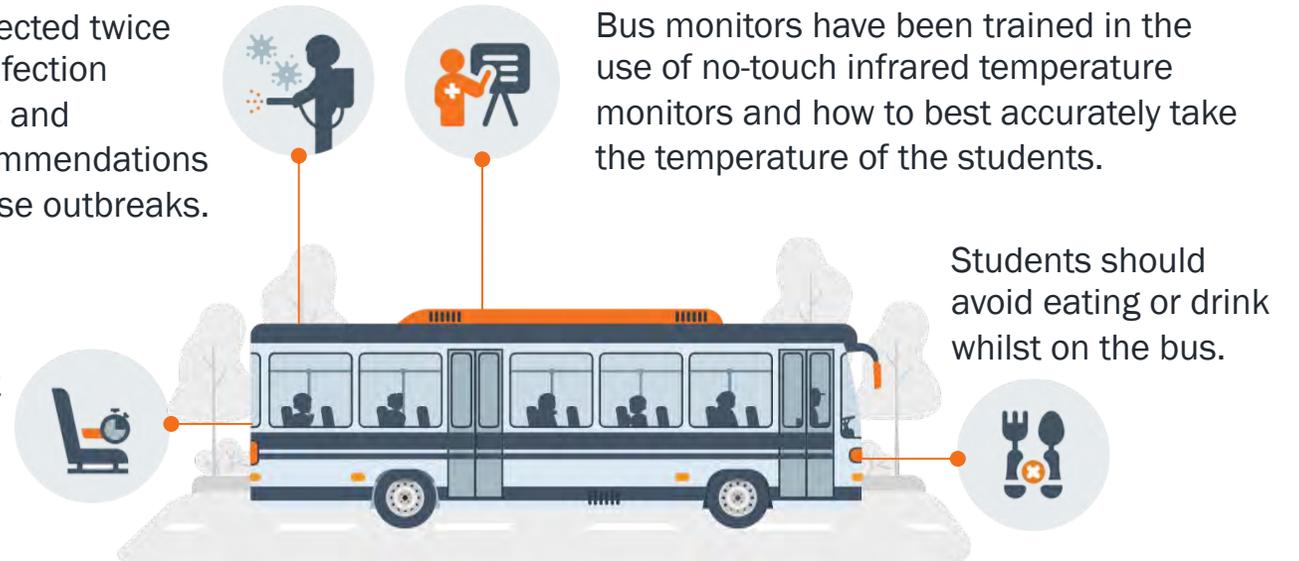12 Future Risk Mitigation

Case Study: Transportation Protocols

MONTRI TRANSPORT SERVICES

MONTRI transport service works with large international schools in Bangkok to ensure that strong safety measures are implemented. Bussing times have been adjusted to accommodate to physical distancing requirements and student schedules.

All buses are disinfected twice daily following disinfection cleaning guidelines and concentration recommendations for infectious disease outbreaks.

Bus monitors have been trained in the use of no-touch infrared temperature monitors and how to best accurately take the temperature of the students.

Students should avoid eating or drink whilst on the bus.

Students should sit in the same seat during both trips.

Additional supplies in each bus:

- No-touch infrared temperature monitor
- A bottle of hand sanitizer
- Disinfectant wipes
- Sick bags for emergency use

Source: Company Data, AWR Lloyd Analysis

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SECTION EIGHT

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Communication and leadership can combat the 'infodemic'

CLEAR COMMUNICATION

An "infodemic" is a situation in which false information is spread in a way that is harmful. Communication, organisation and leadership can improve morale, group cohesion and adherence to safety regulations, and reduce misinformation, frustration and stigma.

Adhere to set guidelines

Acknowledge loss of colleagues

Offer regular forums for open discussion

Integrate religious and cultural factors

Engage interpreters and cultural brokers

Source: WHO

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Communication and leadership can combat the 'infodemic' (2)

1

Adhere to set guidelines
Adhere to WHO guidelines on combating stigma and develop a coordinated communications strategy throughout the chain of command around dispelling COVID-19 myths by sharing facts about transmission, prognosis, and treatment.

2

Integrate religious and cultural factors
Death of colleagues should be raised to and acknowledged by managers and responded to appropriately. Avoidance or lack of sensitivity can lead to resentment. Managers may need training on how to handle these situations sensitively.

3

Acknowledge loss of colleagues
Set up regular forums in which leadership and health professionals are available to answer questions and clarify confusion around safety regulations, and log or address complaints.

Source: WHO

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Communication and leadership can combat the 'infodemic' (3)

4

Offer regular forums for open discussion

Consider integrating non-medical healers or religious authorities among medical staff and communication channels (e.g., imams and priests) to reinforce messaging and gain legitimacy

5

Engage interpreters and cultural brokers

Engage interpreters and cultural brokers to facilitate communication between medical staff, workers and leadership.

Source: WHO

Vaccine myth busting

Communicating accurate vaccine information is critical and can prevent common vaccine myths, rumors and conspiracy theories in the workplace

MYTH: THE VACCINES ARE FULL OF TOXIC INGREDIENTS.

FACT VACCINE INGREDIENTS ARE SAFE

Vaccine manufacturers such as Pfizer and Moderna publish ingredient lists on their websites. To gain approval for use, all vaccine manufacturers must declare their ingredients to various health bodies to gain approval for use. All approved vaccines have also undergone rigorous testing to ensure they are safe for use both in theory and in practice.

MYTH: VACCINES CAN GIVE YOU COVID-19.

FACT VACCINES CANNOT GIVE YOU COVID-19

There is no live virus present in the vaccine, so it is impossible for them to infect you. Vaccines contain components that prime your immune system to fight off infection, which may cause temporary side effects such as fatigue, fever, or muscle aches, but this is normal for vaccines in general and does not mean you have been infected.

Source: USAID, FHI 360, AWR Lloyd Analysis

Vaccine myth busting (2)

MYTH: YOU CAN GET COVID-19 THROUGH 5G NETWORKS.

FACT 5G NETWORKS CANNOT TRANSMIT COVID-19

COVID-19 is spread through droplets that travel through the air when an infected person speaks, coughs, or sneezes. Contaminated surfaces can also give you the virus if you touch your eyes, nose or mouth after contact. However, it is impossible for viruses to travel through radio waves or mobile networks.

MYTH: COVID-19 VACCINES CAN ALTER YOUR DNA.

FACT THE VACCINES CANNOT ALTER YOUR DNA

COVID-19 vaccines contain a strand of genetic material called mRNA (messenger RNA), which gives instructions to our body's natural defenses on how to develop immunity to the disease. However, this mRNA doesn't ever enter our cell nuclei, which is where our DNA lives. mRNA does not stay in our bodies – it simply disintegrates after its job is done.

Source: USAID, FHI 360, AWR Lloyd Analysis

Vaccine myth busting (3)

MYTH: I HAVE HAD COVID-19 SO I DON'T NEED THE VACCINE.

**FACT** YOU CAN BENEFIT FROM THE VACCINE EVEN AFTER HAVING COVID-19

While your body produces antibodies after you have been infected with COVID-19 that give you immunity to the disease, we still don't know how long this immunity lasts. While it is uncommon, there have been cases of reinfection already. You will be better protected against reinfection from COVID-19 if you take the vaccine.

MYTH: THERE ARE MICROCHIPS IN THE VACCINE.

FACT THE VACCINE DOES NOT CONTAIN MICROCHIPS
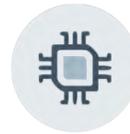
A video which went viral on Facebook made false claims about vaccines containing microchips or other tracking devices. This is simply not true. One company is providing the option of a microchip in the label of a syringe to help providers confirm a vaccine dose's origin, but this is neither injected into the body, nor is it a widespread practice.

Source: USAID, FHI 360, AWR Lloyd Analysis

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Steps to addressing misinformation on vaccines

EMPLOYERS HAVE A STAKE IN INCREASING VACCINE DEMAND AND REDUCING HESITANCY

FACT	WARNING	FALLACY		FACT
• Lead with the facts • Make them clear, relevant, memorable	• Misinformation alert! • Misleading tactics alert!	• **Unintentional** Explain reasons why facts could have been misinterpreted	• **Intentional** Flag tactics being used to deceive • Undermine trust in disinformation authors • Reveal hidden agenda	• Provide alternative correct information • Must replace misinformation • Make correct information more memorable than misinformation

Acknowledge and respond to concerns about side effects

Counter misinformation with accurate, easy-to-understand information delivered through trusted sources and channels

Source: CDC & ADB

Steps to addressing misinformation on vaccines (2)

CASE STUDIES

India

- Rumors were circulating about how vaccines can cause negative side effects such as infertility
- The government used mass media and influential people to communicate correct information
- Key messages are 1) vaccines provide protection against COVID-19; and 2) vaccines are safe.

Indonesia

- In 2017, the government rolled out the measles-rubella childhood vaccine campaign. However, parents were doubtful if the vaccine is "halal". Thus, the campaign was not successful.
- During COVID-19, the government assured that Sinovac vaccine is "halal".

Philippines

- In 2016, vaccine manufacturer released new finding on how vaccines increase risk of severe dengue amid Philippines' dengue vaccination program, leading to the people's mistrust of the government.
- During COVID-19, the government is focusing on educating the households and communities by improving communication on the vaccines.

Source: CDC & ADB

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Steps to addressing misinformation on vaccines (3)

CASE STUDIES

Thailand

- Migrant workers were prohibited from getting vaccinated by their parents as they thought vaccines would cause physical damage. Some would rather quit their jobs than getting vaccinated.

- The management team kept staffs informed on vaccine uptake statistics and vaccination implications to encourage vaccine uptake among the staffs

Source: Data from the interview as part of Health Risk Gap Analysis under PBRR Project

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Communication & awareness: information signs

Companies can communicate & raise awareness through information signs that align with WHO and European Center for Disease Prevention and Control guidelines:

Do not enter this site if feeling unwell

STOP! Have you had your temperature checked?

Use pedestrian walkway One-way system in place Adhere to 2-meter physical distancing

Please sit HERE

Gloves, Masks and Face Shields must be worn in this area

Maximum XX persons permitted to work in this area at one time

Source: AWR Lloyd Analysis

Communication & awareness: distribution channels

COVID-19 RISK MITIGATION PLANS MAY BE DISTRIBUTED TO THE FOLLOWING:

- Company contractors
- Project managers
- Government entities
- All vendors & suppliers
- Visiting agencies
- All staff & workers
- Clients
- Customers

Source: AWR Lloyd Analysis

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Communication & awareness: distribution channels (2)

On large worksites, companies should cascade all relevant HSE communications, updated by the WHO and their own COVID-19 guidelines, to all employees and subcontractors in the appropriate language/ languages.

COMMUNICATION CAN TAKE PLACE AS PER THE FOLLOWING:

- Daily COVID-19 management meetings
- Weekly progress HSE Meetings
- Safety Briefings
- Sharing relevant video clips on the prevention of the spread of COVID-19

- Official letters to all subcontractors
- Official emails
- Daily Toolbox Talk/ meeting – every shift change
- Interoffice memos/circular

Source: AWR Lloyd Analysis

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Program to strengthen knowledge, motivation & compliance

Effective communication within the workforce that leads to behavior change requires planning and coordination

- Behavior change tools & messages
- Identify risk areas & solutions
- Select champions to share their stories
- Engage worker Representatives
- Peer communication
- Monitor & reward compliance

Behaviour Change Program

Source: FHI 360

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Program to strengthen knowledge, motivation & compliance (2)

ENGAGE WORKER REPRESENTATIVES

- Involving various types of workers in COVID-19 management decisions ensures workers feel heard
- Ensures workers have ownership over measures and mandates

SELECT CHAMPIONS TO SHARE THEIR STORIES

- Identify workers, such as those who have recovered from COVID-19
- Train them to share their stories during e.g., transport time to motivate peers to adopt key behaviors

TRAIN WORKERS FOR PEER COMMUNICATION

- Training in peer-to-peer communication on COVID-19 virus prevention and control measures and policies
- Train workers of all categories (e.g., camp leaders, supervisors)
- Training should be interactive, involving practice exercises, and tools to use when talking to their peers

Source: FHI 360

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Program to strengthen knowledge, motivation & compliance (3)

IDENTIFY RISK AREAS & SOLUTIONS WITH WORKER REPRESENTATIVES

- Assessment results may be shared with workers during training, so they understand risks and measures for specific areas and activities, and the need for compliance.

MONITOR AND REWARD COMPLIANCE

- Workers may feel more motivated if their compliance with prevention and control measures is recognized
- Rewards may include food or an afternoon off work

PRODUCE BEHAVIOR CHANGE TOOLS & MESSAGES

- Tools and messages should address barriers, act as facilitators for desired behavior
- Can be shared by trained peers or made available at rest stations, cafeteria, etc.
- "How to" videos on handwashing steps and time, the correct use of masks, donning and doffing of respirators and symptoms of COVID-19 could be useful.

Source: FHI 360

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Trainings to be conducted for company workers

EMPLOYEES SHOULD RECEIVE FORMAL TRAINING ON COVID-19 RISK MITIGATION MEASURES

COVID-19 awareness training

Specialized training for contractors/ third-party (e.g., catering)

Cleaning and disinfecting training for support staff (e.g., cleaners, housekeeping)

Training for drivers & passengers

Training for equipment operators

Training for correct PPE use

Peer communication training for all workers (from camp leader to supervisors)

Source: AWR Lloyd Research

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Reputational risk management

Organizations should be aware that their response to COVID-19 may be monitored and scrutinized. This can lead to unforeseen reputational issues

BEFORE
Prepare, appoint, establish, curate

1 **Prepare** templates for social media and press releases in anticipation of possible crises, e.g., negative media coverage on a severe outbreak of COVID-19 at Company.

2 **Appoint** one high-ranking designated spokesperson to rapidly respond in case of interview requests.

3 **Establish** a chain of command to alert and involve in case of a crisis. This should include the marketing and communications team, the CEO, and the COVID-19 manager. List their roles and contact details.

4 **Curate** a list of friendly journalists or media outlets (and their contact details) who will portray the company in a positive light if needed. They should be sent press releases during a crisis.

Source: AWR Lloyd Analysis

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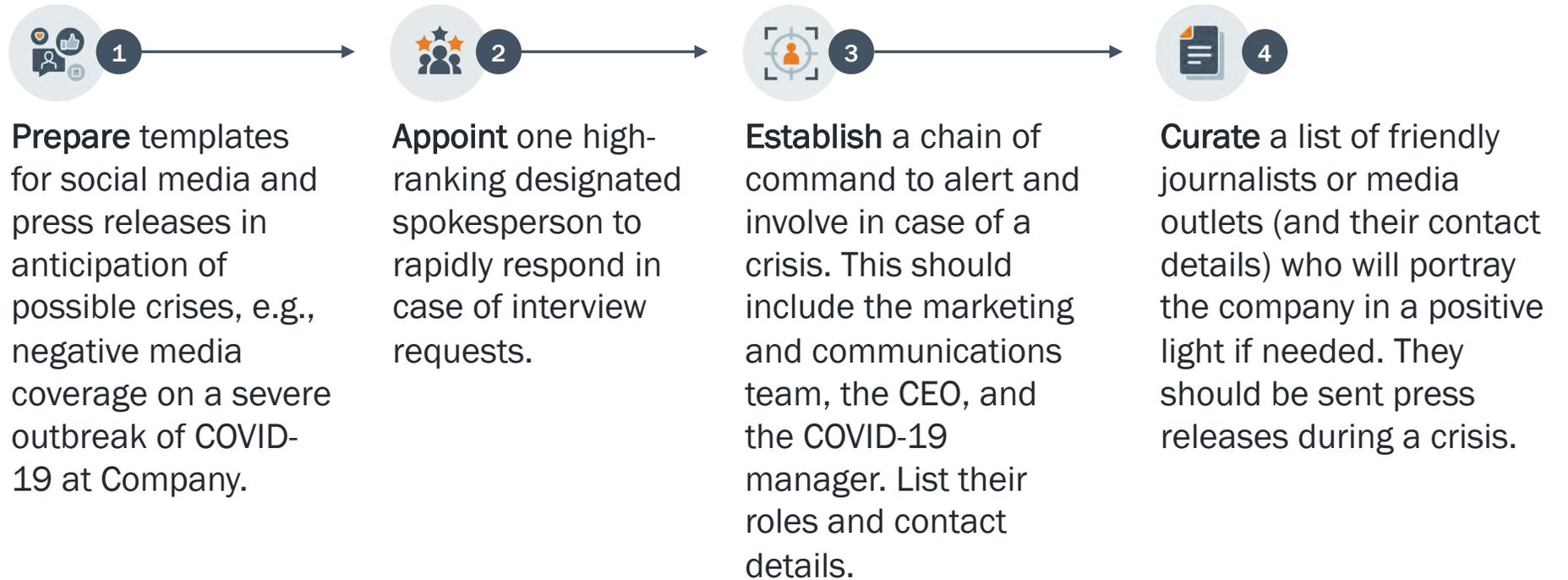10 Digital Tools
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Reputational risk management (2)

DURING
Listen, identify, review, respond

1

Listen to all coverage on crisis. This may be done manually, and automatically through tools such as Talkwalker Alerts[1]. If immediate response is needed, issue a holding statement, e.g. "We will respond shortly, thank you for your patience."

2

Identify the exact concerns raised by the media. Separate into true facts and misunderstandings. Compile past, present and future company actions to address real issues, and use to modify templates.

3

Review response with established chain of command to ensure honesty, empathy, clarity, and conciseness.

4

Respond. Designated spokesperson should be briefed by chain of command before interviews. Avoid public squabbles, and don't offer false promises.

Source: AWR Lloyd Analysis | Note: (1) Talkwalker Alerts is a free online tool that tracks usage of your brand's key words

Reputational risk management (3)

AFTER
Monitor, update, analyze, learn

1 **Monitor** social media and relevant news outlets to ensure that the public relations crisis is resolved.

2 **Update** your response as needed. Post clearly about how you are working to address any remaining issues. In addition, update all employees on stance and steps taken to ensure a cohesive story throughout the company.

3 **Analyze** the quality of company response once crisis is over with the whole team. Keep records evaluating all actions taken for future reference.

4 **Learn** from issues picked up by media. What are the company's reputational weaknesses? How can these be strengthened in the long term?

Source: AWR Lloyd Analysis

SECTION NINE

fhi360
THE SCIENCE OF IMPROVING LIVES

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9

Psychological resilience & wellbeing optimize business and health outcomes

Mental health is part of Corporate and Social Responsibility (CSR)

- Just as a company is ethically responsible for promoting physical health and safety within the workplace, it is also increasingly held responsible for the **mental health and wellbeing** of its employees.

- For example, the Australian minerals industry have made mental health a key element of their workplace health and safety strategy, with evidence that mining employees in Australia have worse mental health compared to other community members.

> *"As part of our commitment to the health and safety of our workforce, the Minerals Council of Australia recognises the importance of addressing all aspects of workforce health including mental health."*

Source: Minerals Council of Australia, Harvard Business Review, AWR Lloyd Analysis

Psychological resilience & wellbeing optimize business and health outcomes (2)

Reduce workplace accidents and injuries and boost productivity

- Better mental health means **fewer accidents and injuries**, as well as improvements in productivity and performance.

- Organizations in which employees feel undervalued and insecure experience 18% less productivity and 16% lower profitability.

- Maximizing productivity through supportive organization cultures is especially critical as physical distancing measures have reduced work output due to fewer on-site man hours.

Harvard Business Review

"In the US, it is estimated that 60-80% of workplace accidents are attributed to stress, and studies show links between psychological distress and increased workplace accidents and occupational injury."

Source: Minerals Council of Australia, Harvard Business Review, AWR Lloyd Analysis

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Psychological resilience & wellbeing optimize business and health outcomes (3)

Improves physical health and takes pressure off general health services

- Mental healthcare services and psychosocial interventions take pressure off general health services, which are under pressure **even more than usual** due to the pandemic.

HOW STRESS HORMONES AFFECT OUR BODY

Cardiovascular System
- Heart rate ↑
- Blood pressure ↑
- Arterial tension ↑

→
- Stroke
- Heart attack

Immune System
- Thyroid function ↓
- # of killer cells ↓

→
- Cancer

Digestive System
- Blood flow ↓
- Metabolism ↓
- Dry mouth ↑
- Intraocular pres. ↑
- Eyesight ↓

Source: Minerals Council of Australia, Harvard Business Review, AWR Lloyd Analysis

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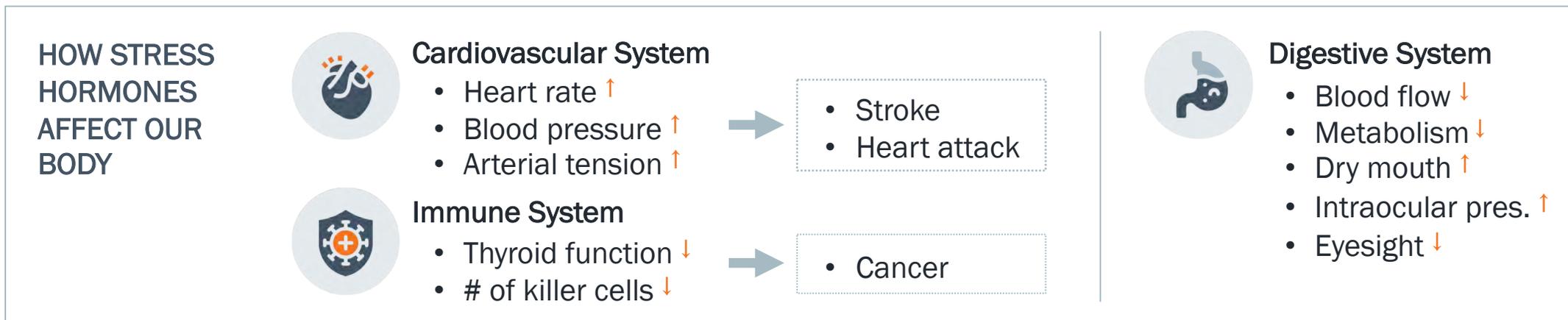10 Digital Tools
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Key elements for mental health

Simple guidelines and considerations developed by the WHO can be used to support the mental and psychosocial well-being of employees at the workplace or at home, their families, and the local community.

WHO MENTAL HEALTH GUIDELINES
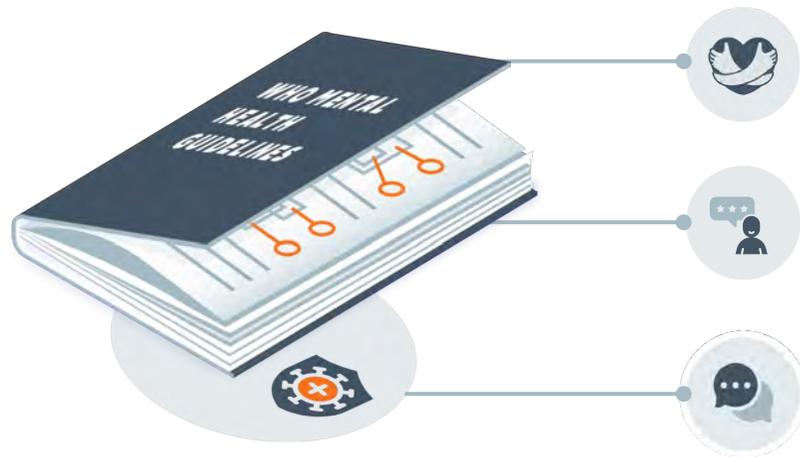
Be empathetic to those who are affected by COVID-19, regardless of their nationality

Do not refer to those with COVID-19 as "COVID-19 cases", "victims", "COVID-19 families" or "diseased"

Refer to those with COVID-19 as "People who have COVID-19", "People who are being treated for COVID-19" or "People who are recovering from COVID-19"

Source: WHO Guidelines, AWR Lloyd Analysis

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Key elements for mental health (2)

WHO MENTAL HEALTH GUIDELINES (CONTINUED)

Avoid watching, reading, listening or sharing news that causes anxiety or stress to you and others in the office

Seek information to take steps to prepare your plans and protect yourself and those around you

Share information update to your employees regularly on office policies

Gather information from the WHO and local authorities' platforms to distinguish facts from rumors

Source: WHO Guidelines, AWR Lloyd Analysis

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Solutions to boost psychological resilience and wellbeing

EXAMPLES OF PRACTICAL SOLUTIONS

Suggested solutions to problems should follow from the unmet-need workshops. The following are examples of solutions to wellbeing, psychosocial and mental health related problems:

Friendship benches, an evidence-based talk therapy system led by non-mental health professionals such as nurses, or worker volunteers.

Teletherapy in multiple languages (this service is offered by companies like Workplace Options).

Fitness programs and access to organized team or individual sports such as running or cricket.

Source: AWR Lloyd Analysis

Solutions to boost psychological resilience and wellbeing (2)

EXAMPLES OF PRACTICAL SOLUTIONS (CONTINUED)

Access to religious spaces (e.g., mosque, temples etc.). Religious and cultural holidays should be observed or at the least acknowledged.

'**Wellbeing leads**' – workers nominated/trained to encourage participation in meaningful, social activities such as film nights or music groups.

'**Sleep hygiene**' and healthy eating workshops and resources. These could be run by joint physical and mental health teams.

Source: AWR Lloyd Analysis

Solutions to boost psychological resilience and wellbeing (3)

EXAMPLES OF PRACTICAL SOLUTIONS (CONTINUED)

Daily 'care spaces', run by a team leader (online or off-line). These give workers space to reflect on how they're coping, and unmet needs. Workplace support from colleagues and in particular supervisors, is particularly critical for workers under the strictest quarantine measures or with suspected/confirmed COVID-19.

The Pakistan Country Director for the Interactive Research & Development health organization, suggests **WhatsApp peer-led support** groups of 10-15 people, supported by a counsellor.

Counsellors can **share key information** on mental health and self-care, but also allows participants to set the agenda for conversation and share experiences (lockdown, financial insecurity etc.)

Source: AWR Lloyd Analysis

Sources of psychological resilience and wellbeing

SOURCES OF PSYCHOLOGICAL RESILIENCE AND WELLBEING EXPLAINED

RELIGIOUS OR CULTURAL SPACES

Spaces for people to celebrate or mourn in religious or culturally appropriate ways (e.g., mosque, temple). Workers need to be given space and time to grieve for the loss of their colleagues or loved ones back home.

MEANINGFUL ACTIVITIES

Team leaders should be responsible for encouraging participation in meaningful and social activities, such as film evenings, professional development workshops, music groups, or cricket matches.

HEALTHY HABITS

'Sleep hygiene' and healthy eating workshops and resources, run by joint physical and mental health teams

Source: AWR Lloyd Analysis

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Wellbeing workshops and professional support in person and online

WELLBEING WORKSHOPS

1 Deliver wellbeing education workshops to workers **led by health team members** (e.g., nurses).

2 The purpose is to **identify physical** and **psychological responses** to stress, confinement, uncertainty and loss – e.g., disrupted sleep, anxious thoughts, feeling hopeless, stomach aches and headaches, panic attacks, suicidal ideation, anger and irritability, loss of appetite.

3 Leaders should explain that such symptoms are normal in difficult circumstances.

4 Leaders should then **identify self-care strategies** and practices to manage response symptoms – e.g., scheduling and routine, relaxation, meditation, breathing techniques, eating well, exercise, assertive communication, and how to ask for help. Workers could be provided with wellbeing resources such as relaxation music and fragrant oils.

5 Create a peer support group with counselling opportunities for employees with a health expert

Source: AWR Lloyd Analysis

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Wellbeing workshops and professional support in person and online (2)

PROFESSIONAL SUPPORT

1 Identify a **clear referral process** for workers who want further professional support with these issues (e.g., contacting the medical team for an appointment). Encourage them to reach out if they are experiencing severe symptoms such as suicidal ideation, severe insomnia, or amnesia.

2 Ensure that the medical team are **properly resourced** – workers should only be offered help that can actually be provided.

3 A mental health lead in the medical team with the required psychiatric/psychological training and experience should be designated – either a current staff member, or a new recruit.

4 The company should have **protocols for treating workers** who may need psychiatric medication, off-site treatment, time off, or talking therapy options (this could be offered in collaboration with Workplace Options).

Source: AWR Lloyd Analysis

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Identifying workers' unmet needs through workshops

IDENTIFYING UNMET NEEDS

1
Run **bottom-up problem-solving** workshops. These are structured discussion groups/workshops with workers, led by a respected team leader and another staff member such as a nurse or external researcher.

2
Leaders should ask questions like, "What main problems or difficulties are you having at the moment?" to **identify issues** related to work, health, teamwork, social and personal life. Get an order of importance/priority from the workers for the different problems and difficulties.

3
Elicit suggested or desired solutions – "how would you solve this problem?"

4
Compile the results of this to **get a picture** of what needs, and problems are currently a priority for the workers, and how they envision a solution.

Source: AWR Lloyd Analysis

Identifying workers' unmet needs through workshops (2)

CO-DEVELOPING SOLUTIONS

1 Can be a springboard for the design of any **proposed psychosocial or organizational interventions** and changes, which should directly meet the most important needs of the workers, as they see them.

2 Note that several iterations of the discussion will be necessary – solutions should be co-developed by the management and the workers. Different groups of workers may be facing different problems and require different solutions.

3 Team leaders will need **training** to run these workshop discussions.

4 An occupational and clinical psychologist could form part of the team.

Source: AWR Lloyd Analysis

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Sources of psychological resilience and wellbeing

A mental health and psychosocial stress assessment can be conducted to identify which issues are most urgent, and for which workers in particular. This assessment could be integrated as part of routine physical health screenings. Depending on the needs identified, solutions may include:

Religious or cultural spaces

Meaningful activities

Healthy habits

Fitness and exercise

Support groups

Fostering team culture

Source: AWR Lloyd Analysis

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Sources of psychological resilience and wellbeing (2)

SOURCES OF PSYCHOLOGICAL RESILIENCE AND WELLBEING EXPLAINED

FITNESS AND EXERCISE

Fitness programs (there is some evidence that participation in workplace fitness programs can enhance health-related fitness and reduce risk-taking behaviour).

SUPPORT GROUPS

Daily 'care spaces' for workers, especially those with COVID-19, to reflect on their wellbeing or unmet needs. Workplace support from supervisors in particular protects against mental health problems.

FOSTERING TEAM CULTURE

Support team leaders and managers to apply evidence-based best practices to create workplace culture that boosts health, positivity and resilience, including fostering social connection, compassion, teamwork, loyalty and trust.

Source: AWR Lloyd Analysis

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Mental health considerations

In addition to physical health measures, the company's return-to-work strategy should include solutions to the mental health and organizational impacts of COVID-19, including:

Promote psychological resilience of workers and management teams

Implement optimal coordinated communications strategy

PSYCHOLOGICAL RESILIENCE

"

*The process of **adapting well** in the face of adversity, trauma, tragedy, threats, or significant sources of stress.*

"

- American Psychological Association

Source: AWR Lloyd Analysis

Mental health considerations (2)

The following psychological stressors may be aggravated:

- Loss of usual routine and coping mechanisms, e.g. exercise, religious practice
- Loss of family member(s), inability to attend funerals
- Reduced income, lower remittance sent back to family
- Uncertainty about the future, unclear direction from management
- 'Infodemic' of COVID-19 fake news, conspiracy theories

These stresses may increase inter-connected negative outcomes:

- Non-compliance towards instruction, aggression
- More workplace accidents and injuries
- Increased absenteeism, poor performance and efficiency
- Poor memory, lack of concentration

PBRR recommends hiring a professional global mental health support organisation to inform corporate policies.
(e.g *Workplace Options or others)*

Source: AWR Lloyd Analysis

1	2	3	4	5	6	7	8	9	10	11	12
COVID-19 Overview	Thinking About Risk	HSE Governance	Workplace	International Travel	Accommodation	Transport and Visitors	Communication & Awareness	Mental Health	Digital Tools	Vaccination	Future Risk Mitigation

COVID-19 Response by Workplace Options

PANDEMIC-RELATED CASES: 16,541

February 2021
May 2021

9.7%
0.5%
Increase in percent of cases

104
23
Increase in countries with recorded cases
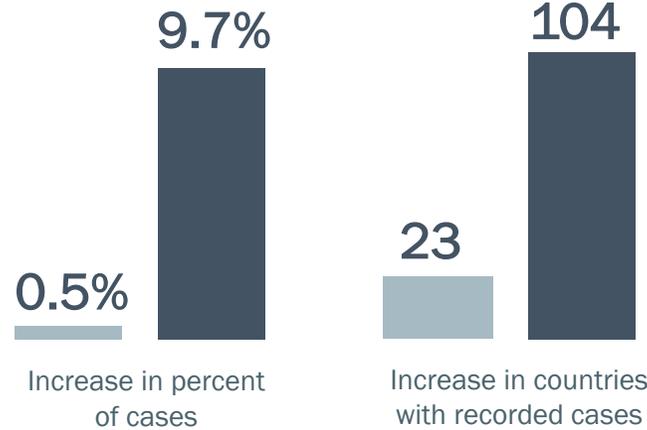
256+
New crisis hotlines in **34** languages

Supported
1.7M+ via webinars, live events, calls, and trainings

97% VIRTUAL VS. 3% IN-PERSON CASES

46% of all cases
Single-Session Therapy

19% of all cases
Video Therapy Cases

32% of all cases
Telephonic Therapy Cases

Source: Workplace Options

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Workplace Options COVID-19 Response (2)

- **Workplace Options** is the world's largest privately-owned and independent provider of **integrated employee wellbeing solutions**

- It offers **emotional, practical, and physical support** to employees and families **worldwide**

- Offers **more than 209 new crisis hotline services** in **36 languages** worldwide

- Offers virtual webinars, live events, calls, and training, **supporting more than 1 million individuals**

- **85%** of the cases are reported **virtually**, while **15%** of the cases are reported **in-person**

- **Single-session therapy is highly demanded**, followed by telephonic therapy and video therapy

Source: Company Data

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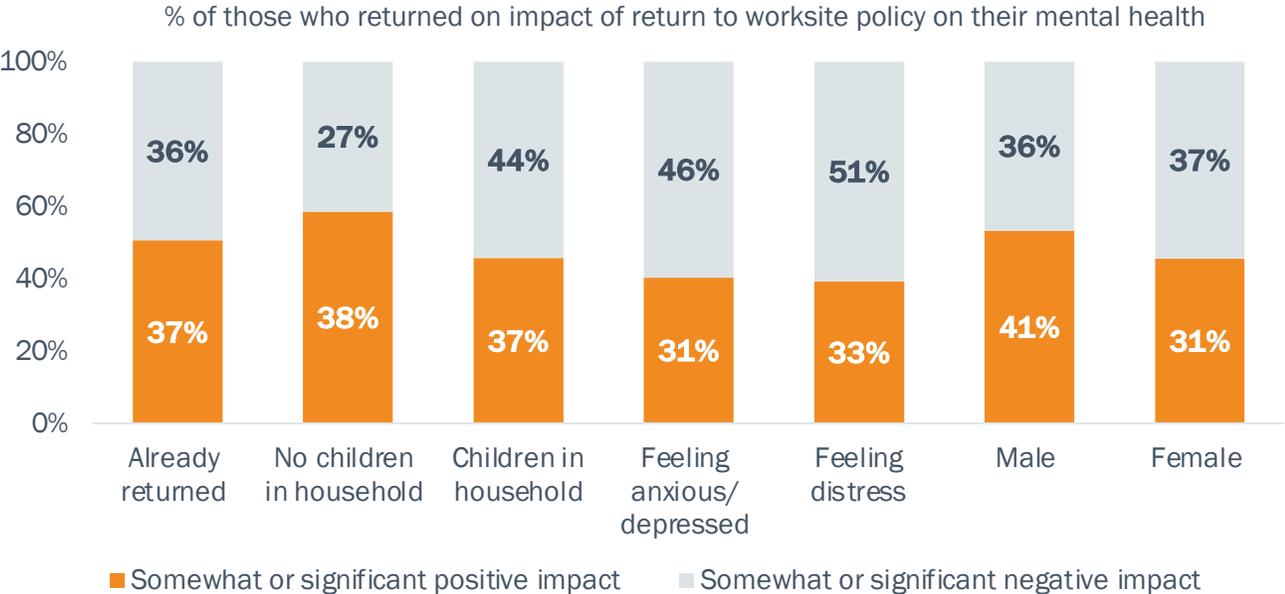8 Communication & Awareness
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Return to Workplace Policy & Mental Health

It was found that those with dependents (females and those with children at home) experienced greater negative impacts on mental health than those who do not (males and those without children at home) as they were more concerned about transmitting Covid-19 to their dependents and scheduling flexibility. Also, return to worksite seemed to worsen the mental health conditions for those who already suffered mentally

% of those who returned on impact of return to worksite policy on their mental health

	Already returned	No children in household	Children in household	Feeling anxious/ depressed	Feeling distress	Male	Female
Somewhat or significant negative impact	36%	27%	44%	46%	51%	36%	37%
Somewhat or significant positive impact	37%	38%	37%	31%	33%	41%	31%

■ Somewhat or significant positive impact   ■ Somewhat or significant negative impact

Respondents who reported that return to on-site had a **negative impact impact on mental health were x5** more likely to report taking **reduced responsibility at work** upon return

Respondents who reported that return to on-site had a **positive impact on mental health were x2** more likely to report **being engaged/ present** upon return

Source: McKinsey | Note: The survey was disseminated to 245 respondents who worked remotely immediately after the pandemic and now have returned to on-site work in pre-COVID 19 environment

Solutions to alleviate employees' stress from return to worksite

Early Communication

At the earliest possible date can help manage that anticipatory stress and create the opportunity for employees to plan for changes to their lives (for example, childcare options) and health needs.

Flexibility at workplace

Of those who have returned on-site, a majority report **that flexible work schedules** (60%) and **hybrid work arrangements** (57%) could reduce stress

Health & Safety at Workplace

Among safety interventions, improved air filtration was a core request, with 62 percent of respondents reporting that it could decrease the stress they experienced from returning on-site

Personalised Policies

Recognizing that different employees anticipate and experience on-site work differently; communicating how positive and negative mental health impacts are valid

Addressing Stigma

Replacing negative attitudes about mental health issues with healthier attitudes and policies that can improve employees' well-being

Source: McKinsey

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Digital tools: An overview

Contact tracing is an essential epidemiological tool in the fight against COVID-19. However, the magnitude and transmissibility of the disease has outstripped the capacity of health authorities to track, trace, and treat infections as they arise.

TRADITIONAL METHOD

Expensive, slow tracing, and **challenging to scale**

Higher effectiveness at reducing transmission rates for a fixed number of individuals

DIGITAL METHOD

Scalable and **low-cost**

Higher feasibility for large-scale implementations

Countries developed smartphone applications for digital contact tracing using GPS or Bluetooth data to track

Source: Khmer Times, HDSR, AWR Lloyd Analysis

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Digital tools: An overview (2)

Digital tools as of June 2021 (from 77 countries):

124

Released as smartphone or as web-based platforms

11

Still in development

17

Cancelled

152

Total

Source: Khmer Times, HDSR, AWR Lloyd Analysis

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Digital tools: An overview (3)

CAMBODIA'S QR CODE SYSTEM

All individuals must scan the QR code through the application when visiting ministries, institutions, hotels, guesthouses, restaurants, entertainment venues, condominiums, companies, factories, enterprises and other public places. Site owners can create their QR code at stopcovid.gov.kh.

Blue Screen – Entry allowed
This person is fully vaccinated and has not been involved with any COVID-19-infected patient. Vaccine status is connected to personal identification card.

Green Screen – Entry allowed
This person is normal with no involvement with any COVID-19-infected patient. If already fully vaccinated, the person can update their vaccination record on the application to reach the BLUE status.

Source: Khmer Times, HDSR, AWR Lloyd Analysis, System updated on October 18, 2021, to include vaccination records

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Digital tools: An overview (4)

CAMBODIA'S QR CODE SYSTEM (CONTINUED)

Yellow Screen – Entry can be denied
This person has been involved with a COVID-19-infected person or travelled somewhere in the last 14 days and has not yet completed quarantine.

Red Screen – Entry not permitted
This person has been infected with COVID-19 and should be reported to the Ministry of Health (Call: 118).

Source: Khmer Times, HDSR, AWR Lloyd Analysis, System updated on October 18, 2021, to include vaccination records

Digital Tools: Self-assessments

Self-assessment tools are available for individuals who have concerns in relation to COVID-19 to evaluate whether they need to seek testing or medical care if they suspect that they or someone they know has contracted COVID-19 or has come into close contact with someone infected with COVID-19.

MORCHANA APPLICATION FOR SELF-ASSESSMENTS

The application offers a contact tracing solution that enables smartphone device users in Thailand to perform self-assessment and determine the risk level of infection based on exposure and travel history. It is designed to track the spread of the novel coronavirus, prompt quick and accurate public health responses, and ensure effective and measurable physical distancing measure.

Source: CDC, PubMed, WHO, AWR Lloyd Analysis

Digital Tools: Self-assessments (2)

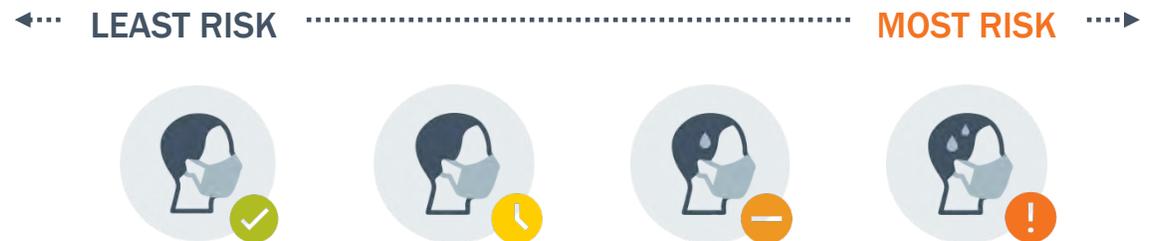## USE OF TECHNOLOGY FOR SELF-ASSESSMENT & CARE

The online tool asks a series of questions and provides recommended actions and useful resources based on the user's responses:

- Self-isolate
- Test for COVID-19
- Seek medical advice

Benefits: helps prevent our healthcare system from being overwhelmed through:

- Real-time data collection
- COVID-19 databases and analysis
- Management of people with COVID-19 concerns

Source: CDC, PubMed, WHO, AWR Lloyd Analysis

Following a series of questions, the application will provide individuals with a QR code in specific colors based on risk levels:

LEAST RISK .... **MOST RISK**

If the QR Code is:

- Seek Medical Attention
- Self-Isolated for 14 days
- Low risk; isolation and test are not required
- Normal

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Digital tools: Comparison

		Type	Contact Tracing / Proximity Data	Test Result Notification & COVID-19 Status	Quarantine Monitoring	Updates and Awareness	Telemedicine	Health Self-assessment	Compliance Reporting	Location Check-in/ Barcode	Vaccination Information
INDONESIA	PEDULILINDUNGI	App	✓	✓	✓	✓	✓			✓	✓
PHILIPPINES	STAYSAFE PH	App		✓	✓	✓		✓			
PHILIPPINES	TRAZE	App	✓							✓	
CAMBODIA	STOPCOVID 19	App	✓			✓				✓	✓
CAMBODIA	KHMER VACC	App									✓
THAILAND	THAICHANA	App							✓	✓	
THAILAND	MORCHANA	App	✓	✓		✓		✓			
THAILAND	MORPROM	App				✓		✓			✓
THAILAND	THAISAVETHAI	App	✓						✓	✓	

Source: AWR Lloyd Analysis

Digital tools: Comparison (2)

		Type	Contact Tracing / Proximity Data	Test Result Notification & COVID-19 Status	Quarantine Monitoring	Updates and Awareness	Telemedicine	Health Self-assessment	Compliance Reporting	Location Check-in/ Barcode	Vaccination Information
VIETNAM	BLUEZONE	App									
LAOS	LAOKYC	App	✓			✓	✓			✓	
INTERNATIONAL	AOK PASS	App		✓					✓		

Source: AWR Lloyd Analysis

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Case Study: Singapore digital solutions for safe return to work

Digital tools in Singapore have been successfully use to map activities and issue quarantine order during the course of COVID-19 pandemic. The use of digital contact tracing enabled government to save time through integrating data collected from applications with other data sources and subsystem. These measures led to cost savings by developing more scalable solutions that doesn't rely on heavy infrastructures or manpower efforts. Currently the three applications widely used in Singapore are SGworkPass, FWMOMCare, and TraceTogether.

Source: Singapore Ministry of Manpower

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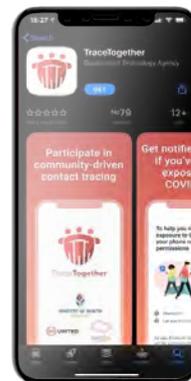# Case Study: Singapore digital solutions for safe return to work (2)

SGWORKPASS ACCESSCODE STATUS

SGWorkPass incorporates 'AccessCode', which displays whether a foreign worker is permitted to leave their dormitory for work.

FWMOMCare
Mobile application to monitor foreign workers health and declare their health status to the Ministry of Manpower (MOM)

TraceTogether
Mobile application (also available as a physical token) to identify close contact with confirmed COVID-19 cases

SGWorkPass
Mobile application that gives workers permission to leave work and return to work

Source: Singapore Ministry of Manpower

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Case Study: Singapore digital solutions for safe return to work (3)

ACCESSCODE COLORS AND DESCRIPTION ARE SHOWN BELOW:

Red

- FWMOMCare is not installed and updated
- TraceTogether is not installed and updated
- QR code address and dormitory records do not match
- Employer has not been given approval to operate
- If the worker:
  - Is confirmed to be infected with COVID-19 or serving a Quarantine Order / Stay-Home Notice
  - Missed Rostered Routine Testing (RRT)
  - Requires re-test
  - Requires swab

Green

- Worker is safe to exit dormitory & return to work
- Employer is given approval to restart operations

Black

Worker's place of stay temporarily cannot be used to determine AccessCode status

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AOKpass

Singapore developed, blockchain-based app is safe, efficient and monitors compliance for work resumption

HOW DOES THE AOK PASS WORK?

A DIGITAL HEALTH PASSPORT

AOKpass is a "Digital Health passport" or application developed by International SOS together with International Chamber of Commerce that helps users to verify their COVID-19 compliance status anywhere for return to business travel purposes

CREATE A PASS WITH ATTESTED MEDICAL INFO

- Users consult with a medical practitioner to get tested/ vaccinated by accredited providers for medical results to create a pass

- Unique code gets generated to show medical practitioner for them to attest validity of user information

PRESENT THE PASS WHEN AND WHERE REQUIRED

- Users can select the pass to display AOK QR code for verification

- Verifiers check for COVID-19 compliance status and other work-related vaccinations using blockchain

Source: AOK Pass Website

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AOKpass (2)

OTHER IMPORTANT REMARKS

Hardcopy certificates issued by medical professionals are digitized, authenticated and made available for verification

Data entered into ICC AOKpass remains localized within the user's app and does not rely on centralized data records or external systems

Successfully pilot tested in July with Singapore employees for resumption of work in Thailand

Source: AOK Pass Website

Remote site inspections using drones

Even before COVID-19, companies across various industries have been integrating the use of drones. Specifically, drones are being utilized in oil & gas industry and construction to enable remote site inspections. This improves efficiency, saves time, and reduces transmission risk for workers during COVID-19.

BENEFITS OF USING DRONE FOR SITE INSPECTION

- **Reduced risk**. The site inspector doesn't need to be put in a potentially risky situation

- **Savings—downtime**. Certain assets (e.g., nuclear power plants and pressure vessels) that need to be shut off before inspection can keep performing without loss of downtime.

- Increased safety through **increased inspections**. Given the relatively low cost of drone inspections, many companies are using them to perform inspections more regularly, which means that potential problems can be surfaced and addressed more quickly.

- **Better records**. By archiving visual data, companies have a digital footprint of the asset's life history that can be accessed at any time.

Source: EHS Today, NS Energy, Flyability

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Remote site inspections using drones (2)
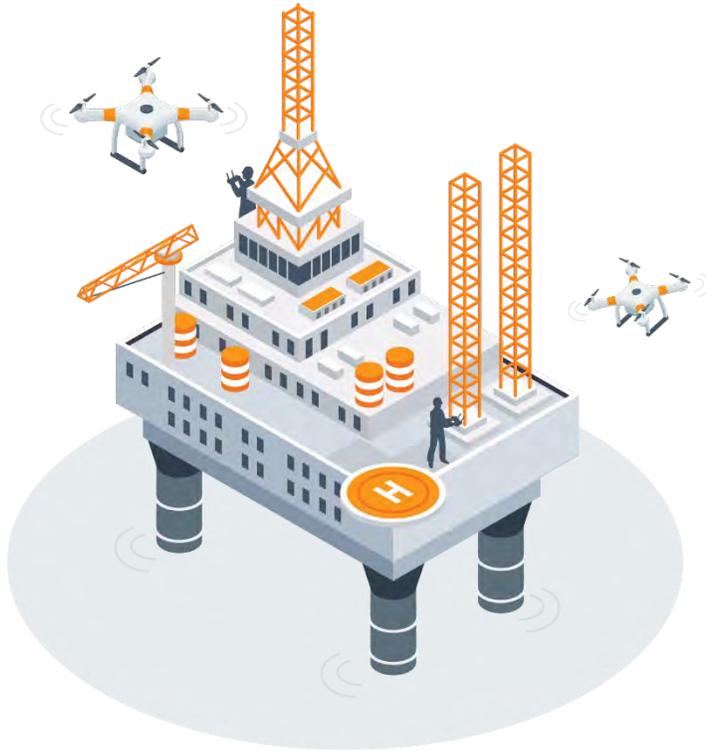
Occupational Safety and Health Administration (OSHA) uses drones to conduct safety inspections of employer facilities – with the employer's consents during COVID-19.

Drones quickly provide OSHA inspectors detailed view of facility, significantly slashing the time required for direct ground inspection.

Since 2012, ExxonMobil has deployed drones for aerial surveillance and inspection of operations in North America, UK, and Australia.

The company has mainly been targeting offshore platforms and refining and petrochemical complexes.

BP was the first oil & gas company in US to receive license to operate commercial drones in 2013. BP also deploys crawlers and other robotic tech to undertake risky tasks in operational areas.

Today, drones are not only used in risky operational areas – but also in inspecting sites and oilfields as to comply with safe-distancing and reducing workers number on site.

Source: EHS Today, NS Energy, Flyability

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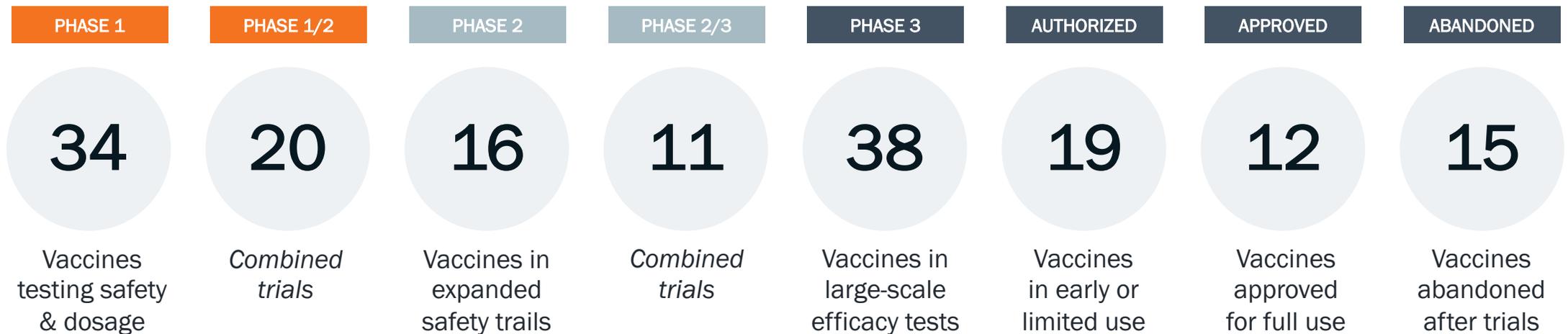9 Mental Health
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SECTION ELEVEN

11

fhi360
THE SCIENCE OF IMPROVING LIVES

AWR Lloyd

COVID-19 vaccine development

The COVID-19 vaccines produce protection against the SARS-Cov-2 virus. This immunity helps reduce the risk of developing the illness and its consequences, and helps you fight the virus if exposed. Since the beginning of the pandemic, many pharmaceutical companies have been racing to develop safe and effective vaccines to fight against COVID-19.

CORONAVIRUS VACCINE TRACKER

PHASE 1	PHASE 1/2	PHASE 2	PHASE 2/3	PHASE 3	AUTHORIZED	APPROVED	ABANDONED
34	20	16	11	38	19	12	15
Vaccines testing safety & dosage	*Combined trials*	Vaccines in expanded safety trails	*Combined trials*	Vaccines in large-scale efficacy tests	Vaccines in early or limited use	Vaccines approved for full use	Vaccines abandoned after trials

Source: New York Times. Last updated May 2022

COVID-19 vaccine development (2)

HOW DO THEY WORK?	COVID-19 VACCINES	SIMILAR VACCINES
Viral Vector (non-replicating) Uses a harmless virus which is altered to contain part of COVID-19's genetic code.	Oxford-AstraZeneca, Sputnik V, Johnson & Johnson	Ebola
RNA (Nucleic Acid) Contains a synthetic version of part of COVID-19's genetic code (messenger RNA).	Pfizer-BioNTech, Moderna	None (new tech)
Inactivated Virus Contains a weakened or inactive version of the COVID-19 virus so it doesn't cause disease.	Sinovac, Sinopharm	Cholera, Polio, MMR, Yellow fever, TBC
Protein Subunit Uses pieces of the COVID-19 virus – sometimes fragments of the 'spike' protein.	Novavax, EpiVacCorona	Seasonal Influenza, Hepatitis B, Tetanus

This tells cells to make the COVID-19 'spike' protein which triggers an immune response

This triggers an immune response

Source: New York Times, Yale Medicine, AWR Lloyd Analysis

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COVID-19 Vaccines: benefits and challenges

COVID-19 VACCINES AIM TO

1 Elicit production of protective levels of antibodies to SARS-CoV-2

2 Establish immunological memory in the vaccine recipient

3 Ultimately, stop the transmission of SARS-CoV-2 thereby:

- Halting the pandemic
- Preventing morbidity and mortality due to COVID-19

Current vaccines are not 100% efficacious in preventing infection or transmission but they reduce the risk of severe illness or death. As seen in the U.S., compared to the fully vaccinated, unvaccinated people are:

5x more likely to test positive for SARS-CoV-2

11x more likely to be hospitalized

11x more likely to die of COVID-19

Source: Healthcare IT News, CDC, WHO, AWR Lloyd Analysis

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COVID-19 Vaccines: key issues

Authorized or approved vaccines are very safe—adverse effects are generally uncommon. However, adverse effects surveillance is essential.

Pregnant women are at higher risk for severe COVID-19. Data on vaccination pregnant women are increasing. The American College of Obstetricians and Gynecologists say that vaccination should not be withheld for women who choose it. COVID-19 vaccine is recommended for people who are pregnant (CDC)

COVID-19 vaccine is recently approved for children 5-11 years old, and trials are ongoing for smaller children

Duration of protection is uncertain, so boosters are required

Global bodies such as CDC and WHO monitor variants

INVESTIGATIONS ARE ONGOING TO UNDERSTAND VARIANTS' IMPACT ON:

Clinical safety of vaccines

Public health preventive measures

Severity of disease

Diagnostics

Development of immunity & vaccines

Transmission

COVID-19 Vaccines: comparison[1]

	Effectiveness*	Type	Dosage	Suitable for	Storage	Possible side effects	FDA warnings
Pfizer-BioNTech	95%	RNA	x2 shots 21 days apart	>12 years	-80 to - 60°C (6 months)	Chills, headache, pain and fatigue	Heart inflammation in young adults
Moderna	94.1%	RNA	x2 shots 28 days apart	>18 years	-25 to - 15°C (7 months)	Chills, headache, pain and fatigue	Heart inflammation in young adults
Sinopharm	79%	Inactivated Virus	x2 shots 2 – 4 weeks apart	>18 years	2 to 8°C (24 months)	Headache, fatigue and muscle pain	Blood clots, stroke
Covaxin	78%	Inactivated Virus	x2 shots 4 – 6 weeks apart	>18 years	2 to 8°C (12 months)	Body ache, headache, fever, nausea, rashes	
Oxford Uni-AstraZeneca	76%	Viral vector	x2 shots 4 – 12 weeks apart	>18 years	2 to 8°C (6 months)	Tenderness, muscle pain, fever, fatigue	Thrombocytopenia syndrome - a clotting disorder
Covishield	76%	Viral vector	x2 shots 4 – 12 weeks apart	>18 years	2 to 8°C (6 months)	Tenderness, muscle pain, fever, fatigue	Thrombocytopenia syndrome - a clotting disorder
Johnson & Johnson	72%	Viral vector	x1 shot	>18 years	2 to 8°C (3 months)	Fatigue, fever, headache and muscle pain	Neurological disorder, blood clots
Sinovac	51%	Inactivated Virus	x2 shots 2 – 4 weeks apart	>18 years	2 to 8°C (12 months)	Headache, fatigue and muscle pain	Blood clots, stroke

Source: WHO, Yale Medicine, AWR Lloyd Analysis, 1The adverse effects that the FDA has warned about are very rare, and the benefit of vaccines greatly outweighs the risks, *Reduced efficiency against recent variants such as Delta. The effectiveness of all vaccines wanes over time

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COVID-19 Vaccines: herd immunity

Herd immunity is achieved when enough people are immune to the disease to the point where that disease can no longer spread within a population

As a result, the **whole community becomes protected**—not just those who are immune.

Initial estimates were that **60-70%** of the population would need to have immunity to **stop SARS-CoV-2 transmission** but much is still being learned as vaccinations roll out, new variants emerge and cases surge

IMMUNITY IS ACHIEVED THROUGH

INFECTION   **VACCINATION**

Source: WHO, CDC, Nature

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COVID-19 Vaccines: herd immunity (2)

FACTORS HAMPERING EFFORTS TO REACH HERD IMMUNITY

Inability of vaccines to prevent infection

Uncertainty about the duration of protection of infection or vaccination

Inequitable vaccine availability

SARS-CoV-2 variants affecting transmission dynamics and vaccine efficacy

Vaccine hesitancy

Source: FHI 360

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Willingness and hesitancy towards the vaccine

Despite efforts to increase vaccination coverage, people in some Southeast Asian countries are still hesitant towards getting vaccinated. The chart below shares the trend of COVID-19 vaccination willingness in these Southeast Asian Countries based on surveyed samples' response to whether they will get vaccinated when the vaccines are ready to be administered.

COVID-19 VACCINATION WILLINGNESS IN SOUTHEAST ASIAN COUNTRIES
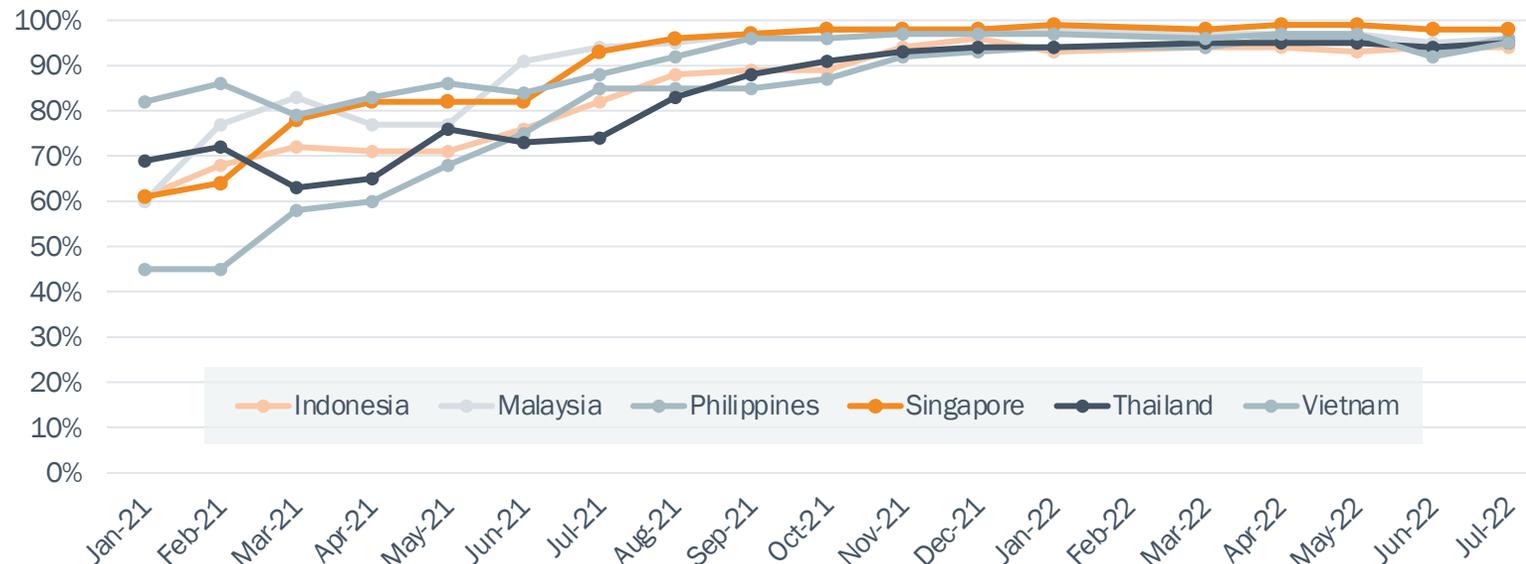
COVID-19 Vaccination Willingness (as of July 2022)

Singapore **98%**	*Vietnam* **95%**
Thailand **95%**	*Malaysia* **96%**
Indonesia **94%**	*Philippines* **96%**

Source: YouGov UK, AWR Lloyd Analysis

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Willingness and hesitancy towards the vaccine (2)

MAIN REASONS FOR HESITANCY

Government

In Thailand, the government's vaccination strategy caused delays in vaccine roll outs. People are also doubting the government's reliance on Sinovac and locally-produced AstraZeneca doses as well.

COUNTRY:

Religious beliefs

In Indonesia, Muslim citizens expressed concerns against Sinovac vaccines, classifying them as 'haram' vaccines, due to no official statement by the company on the matter. The vaccines were later deemed 'halal'.

COUNTRY:

Vaccine side effects

In the Philippines, people expressed fear on the possible side effects of the vaccines. In 2016, the same happened when a study indicated that dengue vaccines increases the risk of severe dengue.

COUNTRY:

Source: YouGov UK, AWR Lloyd Analysis

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Mixing Vaccines

A widespread policy of mixing different vaccines are implemented in some countries to ease pressure on vaccine supply and may even boost immune response.

ASTRA ZENECA - PFIZER

Combination between Pfizer & AstraZeneca seemed to jolt the immune system. There is an increase of antibodies that were able to recognize and inactivate SARS-CoV-2 in laboratory tests.

Com-Cov Study

In June 2021, a study done in UK to 850 volunteers (aged >50) given the combination of Pfizer – AstraZeneca vaccines doses four weeks apart.

Result

- AZ followed by Pfizer induced higher antibodies and T cell responses than Pfizer followed by AZ

- Both of these mixes induced higher antibodies than two doses of AZ

- The highest antibody response was seen after two doses of Pfizer, and the highest T cell response from AZ followed by Pfizer

Source: Bangkok Post, AWR Lloyd Analysis

Mixing Vaccines (2)

JOHNSON & JOHNSON – MODERNA/PFIZER

Johnson & Johnson – Moderna

National Institutes of Health, found:

J&J - Moderna 〉 Antibody levels rise 76-fold in 15 days

2 Shots of J&J 〉 Antibody levels rise a fourfold in 15 days

Johnson & Johnson – Pfizer

The study also suggested that Johnson & Johnson recipients might benefit from a shot of the Pfizer-BioNTech vaccines, where it also raised the antibody levels of Johnson & Johnson recipients more than Johnson & Johnson did, although not as much as Moderna did.

Source: Bangkok Post, AWR Lloyd Analysis

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Mixing Vaccines (3)

CASE STUDY: THAILAND

Thailand was the first nation to start administering the Sinovac-then-Astra Zeneca combo, with the goal of increasing protection against the more contagious delta variant and addressing vaccine shortages.

Binding Antibody Units (BAU) per milliliter:

- Sinovac-Pfizer 2,181.8 BAU/ml

- Sinovac-Astra 1,049.7 BAU/ml

- Two doses of Astra 278.5 BAU/ml

- Astra-Sinovac 172.1 BAU/ml

- Two doses of Sinovac 164.4 BAU/ml

Sinovac - Astra Zeneca
Elicited a weaker immune response than a Sinovac-Pfizer or Astra Zeneca-Pfizer

Mixing and matching vaccines will increase options for physicians and patients, enhancing vaccination programs. Result of early study demonstrate that boosters work effectively against some of the stronger variants. Studies are still ongoing, currently there are still insufficient data to conclusively determine the risk and other possible combinations.

Source: Siraraj Institute of Clinical Research, 2021

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Vaccine Boosters

WHAT IS A BOOSTER VACCINE?

Immunity from vaccination and infection wanes over time, especially among the elderly. A COVID-19 booster shot is an additional dose of a vaccine given after the protection provided by the original shot(s) has begun to decrease over time. The booster is designed to help people maintain their level of immunity for longer.

Global vaccine supply and global and national equity

National vaccination program policy decisions to add a booster dose should take into account the strength of evidence regarding the need for these doses, their safety and effectiveness, as well as the global availability of vaccines. Prioritization of booster doses over speed and breadth in the initial dose coverage may damage the prospects for global mitigation of the pandemic, with severe implications for the health, social and economic well-being of people globally.

Sources: WHO, AWR Lloyd Analysis

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Vaccine Boosters (2)

WHO CAN GET BOOSTER VACCINES?

Booster vaccine doses are essential to protect against Omicron and will be available for people most at risk from COVID-19 who have had a second dose of a vaccine at least 6 months ago[1]. This includes:

- People aged 50 and over

- People who live and work in care homes

- Frontline health and social care workers

- People > 16 y/o with a health condition that puts them at high risk of getting seriously ill from COVID-19

- People > 16 y/o who are a main caretaker for someone at high risk from COVID-19

- People > 16 y/o who live with someone who is more likely to get infections, such as someone who has HIV, has had a transplant or is having certain treatments for cancer, lupus or rheumatoid arthritis

Source: WHO, AWR Lloyd Analysis, Note: (1) Booster vaccinations will depend on the country's policy (e.g., The US has approved boosters for every > 18 y/o)

Vaccine Boosters (3)

THE EFFECT OF BOOSTER VACCINES

The FDA has authorized three vaccine boosters. Evidence continues to accumulate. These vaccines are determined safe for individuals to receive a COVID-19 vaccine booster or additional dose that is a different brand than the initial dose or doses.

Pfizer-BioNTech

Moderna

Johnson & Johnson[1]

Third Vaccine Dose Effectiveness

x3 — 93%

95% Against Hospitalization

92% Against Severe Disease

81% Against COVID-19 Related Death

Source: WHO, AWR Lloyd Analysis, Note: (1) Two months after J&J single dose

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Employee Vaccination Guidelines

THE 3C MODEL FOR EMPLOYEE VACCINATIONS

Conviction

Convenience

Costlessness

Source: McKinsey, CDC, AWR Lloyd Analysis

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Employee Vaccination Guidelines (2)

CONVICTION

Educate on the facts
Share credible, accessible information on the safety, efficacy, and side effects of available vaccines

Engage relevant experts and community leaders
Bring in key experts to address the workforce to provide scientific information, answer employee questions, and address concerns

Highlight role models
Create an atmosphere where COVID-19 vaccinations are supported by creating a network of vaccinated 'employee ambassadors' or by having executives or managers share their vaccination experiences with workers

Source: McKinsey, CDC, AWR Lloyd Analysis

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Employee Vaccination Guidelines (3)

CONVENIENCE

Share practical information
Provide updated details about local vaccination sites, scheduling sites, or best practices for securing an appointment

Simplify the experience
- Reserving appointment slots at nearby vaccination sites to minimize wait and travel times
- Partner with medical organizations to help with vaccine questions and scheduling

Increase proximity
Setting up on-site COVID-19 vaccination clinics for employees to help accelerate vaccine rollout, broadening the reach to include eligible family members, if feasible

Source: McKinsey, CDC, AWR Lloyd Analysis

Employee Vaccination Guidelines (4)

COSTLESSNESS

Create direct and structural support
- Bring vaccinations to the company and/or provide group vaccination
- Provide incremental sick days and any needed recovery time
- Adjust shift times to accommodate to employee vaccination appointments

Cover direct costs
- Pay for transportation or offer free rides to vaccination sites
- Work with healthcare providers, or directly with employees to reimburse any vaccine administration costs incurred

Offer rewards and recognition
- Financial rewards include cash bonuses, retirement contributions, and other gifts
- Nonfinancial incentives include prioritization of vaccinated employees to return on-site

Source: McKinsey, CDC, AWR Lloyd Analysis

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Employee Vaccination Guidelines (5)

WORKPLACE VACCINATION PROGRAM

Potential benefits to employers

Keep the workforce healthy by preventing employees from getting infected

Help protect clients and visitors

Reduce employee absences due to COVID-19

Improve productivity

Improve morale, build trust, and be responsive of employee needs and cultural norms

Potential benefits to employees

Prevent COVID-19 illness and long-term complications

Reduce absences and doctor visits due to COVID-19

Help protect family and household members from COVID-19 illness

Improve individual morale

Source: McKinsey, CDC, AWR Lloyd Analysis

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Promising COVID-19 Treatments

The FDA has authorized treatments that may be used for people who have been hospitalized with COVID-19 and other medications to curb the progression of COVID-19 in people who are not hospitalized but who are at risk for developing severe illness. Researchers are taking a wide range of approaches to find effective and safe drugs. The three main approaches are: antivirals, anti-inflammatory drugs and antibody treatments.

Antivirals
Virus particles multiply inside the body

Antiviral drugs prevent virus from multiplying

Anti-inflammatories
Immune system dangerously overreacts to virus

Anti-inflammatory drugs calms immune system

Antibody Treatments
Antibody specific to coronavirus binds to it and kills it

Source: Wellcome

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Promising COVID-19 Treatments (2)

REMDESIVIR

Type of drug: Oral antiviral drug

Mechanism of Action: Remdesivir binds to the viral RNA-dependent and inhibits viral replication

Methods of use: Infused (injected slowly) into a vein over 30 to 120 minutes

Recommended for: Hospitalized adult and pediatric patients (aged ≥12 years and weighing ≥ 40 kg).

> WHO issued a conditional recommendation against its use in hospitalized patients, regardless of disease severity – "currently no evidence that remdesivir improves survival and other outcomes in these patients"

DEXAMETHASONE

Type of drug: Anti-Inflammatory type of steroids

Mechanism of Action: Mimics the action of the compounds that body produces to quell inflammation, naturally.

Methods of Use: Taken orally or Injection/Infusion (drip) into vein

Recommended for: Adults and adolescents (>12 y/o & weighing > 40 kg) who require supplemental oxygen therapy.

> The WHO suggests not to use corticosteroids in the treatment of people with non-severe COVID-19 (conditional recommendation, based on low certainty evidence).

Source: NEJM, FDA, NIH, NEJM, WHO, Press Release

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Promising COVID-19 Treatments (3)

Interleukin-6 receptor blockers, recommended by WHO (July 2021) for patients who are severely or critically ill with COVID-19, especially when administered alongside corticosteroids.

Casirivimab-imdevimab, a monoclonal antibody cocktail conditionally recommended by WHO (September 2021) for treating mild or moderate COVID-19 in patients at high risk of hospitalization (older, immunocompromised, diabetes, hypertension, obesity, unvaccinated).

Baricitinib, a Janus kinase (JAK) inhibitor, strongly recommended by WHO (January 2022) for patients with severe or critical COVID-19, recommended to be given with corticosteroids.

Sotrovimab, a monoclonal antibody drug, conditionally recommended by WHO (January 2022) for treating mild or moderate COVID-19 in patients at high risk of hospitalization.

Source: NEJM, FDA, NIH, NEJM, WHO, Press Release

Promising COVID-19 Treatments (4)

INVESTIGATIONAL ANTIVIRAL THERAPY

MOLNUPIRAVIR

- **Type of drug:** Oral antiviral Drug
- **Produced by:** Merck & Ridgeback Biotherapeutics
- **Current Status:** Some countries have granted approval. Recently approved by FDA
- **Recommended for:** People with high risk of bad outcomes from COVID-19,
- **Mechanism of Action:** Orally administered form of potent ribonucleoside analog that Inhibits the replication of SARS-CoV-2.
- **Clinical Trial:** At the interim analysis, molnupiravir reduced the risk of hospitalization or death by approximately 50%

PAXLOFID

- **Type of drug:** Oral antiviral Drug
- **Produced by:** Pfizer Inc.
- **Current Status:** Recently approved by FDA
- **Recommended for:** People that shows first sign of COVID-19 infection.
- **Mechanism of Action:** Block the activity of the SARS-CoV-2-3CL protease, an enzyme that the coronavirus needs to replicate.
- **Clinical Trial:** Paxlofid found to reduce the risk of hospitalization or death by 89% compared to placebo in non-hospitalized high-risk adults with COVID-19

Source: NEJM, FDA, NIH, NEJM, WHO, Press Release

Disputed COVID-19 Treatments

THE FOLLOWING HAVE NOT BEEN APPROVED AS EFFECTIVE TREATMENTS FOR COVID-19 BY WHO OR CDC

HYDROCHLOROQUINE	IVERMECTIN	AZITHROMYCIN	CONVALESCENT PLASMA
A drug used to treat malaria and rheumatology conditions.	Anti-parasitic drug used to treat diseases caused by parasitic worms.	Amacrolide antibiotic that can be used systemically and topically for the treatment of susceptible bacterial infections.	Convalescent plasma (or hyperimmune plasma) contains specific antibodies that are generated after being exposed to a certain pathogen.
⚠ NIH treatment guidelines **recommend against the use of hydroxychloroquine** for COVID-19, in both hospitalized and non-hospitalized patients.	⚠ The World Health Organization (WHO) recommends **that ivermectin should not be used to treat COVID-19 outside of clinical trials** because there isn't enough evidence about its benefits.	⚠ Randomized trials have found that **azithromycin is not an effective treatment** for patients who are **admitted to hospital with COVID-19,** either alone or in combination with hydroxychloroquine	⚠ Recovery Trial found **no convincing evidence of its effect on clinical outcomes** in patients admitted to hospital with COVID-19.

Source: NIH, American Therapeutics, The Lancet, Autoimmunity Reviews

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Additional Information

Please refer to the following toolkit sections for more information about:

- <u>Vaccine myth busting</u>

- <u>Steps to addressing misinformation on vaccines</u>

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SECTION TWELVE

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THE SCIENCE OF IMPROVING LIVES

AWR Lloyd

Post COVID-19 Era – The 6 threats we still face

The COVID-19 pandemic has exposed fragilities and inequalities in economies and societies around the world. It has also exposed our preparedness in responding to other emerging threats:

CLIMATE CHANGE
ASEAN countries are geographically located in one of the most disaster-prone regions of the world

MAJOR CONFLICT
Cyber-attacks (e.g., on critical infrastructure) have been shown to wreak havoc in developed economies

FINANCIAL CRISIS
How much will COVID-19 cost, and how will we pay for it?

GLOBAL PANDEMIC
Will the next pandemic be worse?

CIVIL UNREST & REGIME CHANGE
Inequalities will continue to grow, stoking more civil unrest

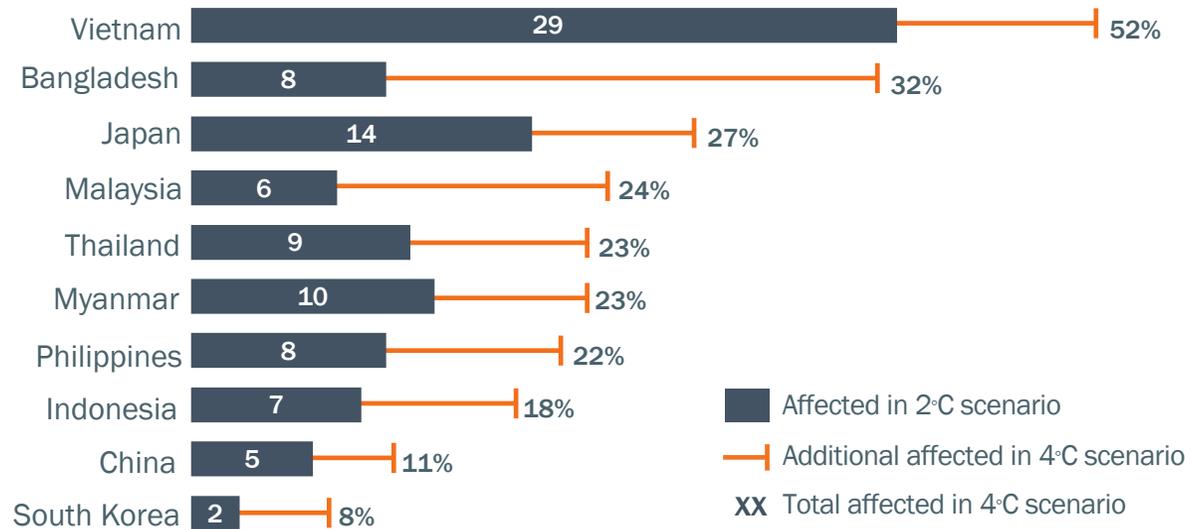**ENERGY TRANSITION**
Market forces lead to fossil fuel demand peaking and the energy transition accelerates

Source: AWR Lloyd Analysis

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Spotlight I – Natural Disasters

Rising sea-levels have been driven by greenhouse gas emissions, climate change, and an accelerating pace of ice melting from continued urbanization and economic growth

TOTAL POPULATION (%) AFFECTED BY SEA LEVEL RISE FOR APAC

Country	Affected in 2°C scenario	Total affected in 4°C scenario
Vietnam	29	52%
Bangladesh	8	32%
Japan	14	27%
Malaysia	6	24%
Thailand	9	23%
Myanmar	10	23%
Philippines	8	22%
Indonesia	7	18%
China	5	11%
South Korea	2	8%

Affected in 2°C scenario

Additional affected in 4°C scenario

XX Total affected in 4°C scenario

The figure above indicate that at least 18% of the population are affected by rising sea levels in ASEAN countries

PROBLEMS

- Some of the population live in riverine plains, low-lying coastal plain, and deltas, where **flood mortality risk is much higher** in those areas
- **Flood risk is expected to increase** significantly in the future with further increases in population density in the low-lying area which are prone to floods
- Sea-levels are expected to **increase flood risk** that can lead to **high socio-economic losses**

Source: Press, UNDRR & Climate Central | Note: Countries in bold are in ASEAN | Data is based off 2010 population baseline | Data not available for Cambodia & Laos

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Spotlight I – Natural Disasters (2)

FLOOD DISASTER MANAGEMENT CYCLE

3 Emergency Response

2 Readiness

4 Recovery & Rehabilitation

1 Preparedness for Prevention & Mitigation

THAILAND FLOOD (2011) DISASTER RESPONSE

Invested **USD 10 billion** on a new **flood management project** in the **Chao Phraya Basin**, which includes:

- Reforestation and construction of reservoirs
- Retention facilities with a capacity of 3 Business Continuity Management
- Rehabilitation of fold river channels for flood diversion
- Construction of bypass channels and 2 main flood channels

Source: Press, UNDRR & Climate Central | Note: Countries in bold are in ASEAN | Data is based off 2010 population baseline | Data not available for Cambodia & Laos

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Spotlight II – Cyberthreats

Due to an increase in online transactions due to work-from-home, more cyberthreat trends were identified to be facing southeast Asian countries in 2020.

CYBERTHREAT TRENDS

Compromising business email: Scams which target companies conducting wire transfers and have suppliers in foreign countries

Cyber fraud: Most common and threatening form of fraud perpetrated internationally via computer or computer data

Ransomware: Malwares preventing or limiting users from accessing their system by locking system's screen or users' files unless ransom is paid

Source: Interpol & A.T. Kearney analysis

Spotlight II – Cyberthreats (2)

CYBERTHREAT TRENDS (CONTINUTED)

Phishing: Scammers use authentic-looking emails from legitimate businesses to trick recipients into giving out confidential and personal information

PROBLEMS

- Cybercriminals are exploiting widespread use of global communications on COVID-19 related information to **deceive unsuspecting victims**
- Cybercriminals targeting **hospitals, medical centers, and public institutions** for ransomware attack increased rapidly
- Some **impersonate governmental and health authorities**, providing COVID-19 phishing schemes to lure victims into providing **personal information** and **downloading malicious content**

Source: Interpol & A.T. Kearney analysis

Spotlight III: Monkeypox

RECENT UPDATE (June 2022)

Total Cases: 3413 Cases
(1 January – 22 June 2022)

Death: 1 Case

Location : 50 Countries

- This is the first multi-country outbreak of monkeypox (MPX) and the largest on record

- The current outbreak of MPX continues to primarily affect men who have sex with men who have reported recent sex with new or multiple partners.

- Many affected people have no epidemiological links to areas that have historically reported MPX, which could indicate a period of undetected transmission.

> ⊙ The World Health Organization has assessed the risk at the global level as **Moderate**.

Source: WHO, NHS, CDC

CONFIRMED CASES OF MONKEYPOX (May 2022 – June 2022)

Almost all the cases (98%) have been reported since May 2022.

■ Europe Region
■ Region of Americas
■ Eastern Mediterranean Region
■ Wetern Pacific Region

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Spotlight III: Monkeypox (2)

Monkeypox (MPX) is a rare disease caused by infection with the monkeypox virus, an Orthopoxvirus.
It is a zoonotic disease that can spread from animals to humans, but it can also spread between people.

TRANSMISSION

Human-to-Human
Contact with bodily fluids, lesions (skin, mouth or throat), respiratory droplets, contaminated objects.

Animal-to-Human
Being scratched or bitten by an infected animal or by preparing or eating meat or using products from an infected animal (fur, skin, etc.)

SIGNS AND SYMPTOMS

Fever

Headache

Intense Fatigue

Muscle Pain

Skin Rash/ Lesions

Swollen Lymph Nodes

Source: WHO, NHS, CDC

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Spotlight III: Monkeypox (3)

DIAGNOSIS

- Polymerase chain reaction (PCR). The best diagnostic **specimens** are directly **from the rash** – skin, fluid or crusts, or biopsy.

- **Antigen and antibody** detection methods are not as useful as they **do not distinguish** between **orthopoxviruses.**

PREVENTION

Quick identification of exposure and **contact tracing** to identify infected people and **limit further spread**
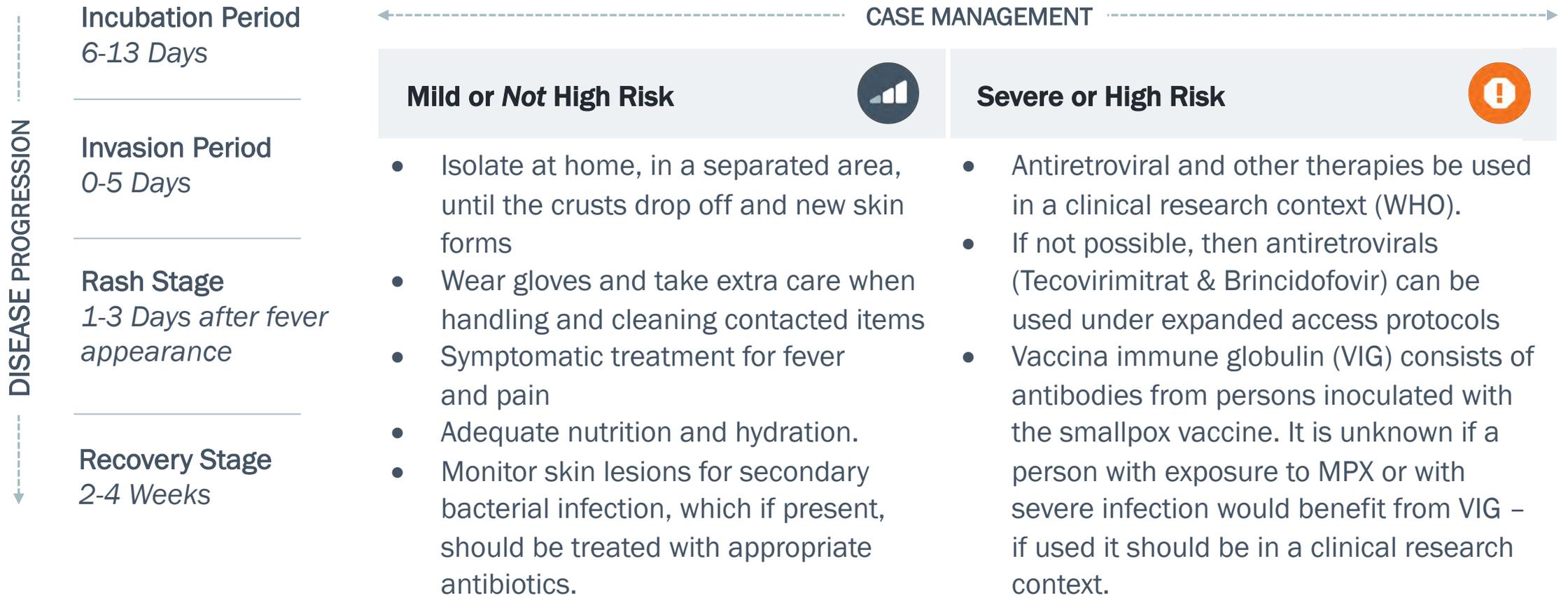
Training and reinforcement in healthcare facilities to **prevent healthcare** acquired **infections**

Community education about IPC practices

Basic **sanitation** procedures

Source: WHO, NHS, CDC

1	2	3	4	5	6	7	8	9	10	11	12
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Spotlight III: Monkeypox (4)

DISEASE PROGRESSION

Incubation Period
6-13 Days

Invasion Period
0-5 Days

Rash Stage
1-3 Days after fever appearance

Recovery Stage
2-4 Weeks

CASE MANAGEMENT

Mild or *Not* High Risk	Severe or High Risk
• Isolate at home, in a separated area, until the crusts drop off and new skin forms • Wear gloves and take extra care when handling and cleaning contacted items • Symptomatic treatment for fever and pain • Adequate nutrition and hydration. • Monitor skin lesions for secondary bacterial infection, which if present, should be treated with appropriate antibiotics.	• Antiretroviral and other therapies be used in a clinical research context (WHO). • If not possible, then antiretrovirals (Tecovirimitrat & Brincidofovir) can be used under expanded access protocols • Vaccina immune globulin (VIG) consists of antibodies from persons inoculated with the smallpox vaccine. It is unknown if a person with exposure to MPX or with severe infection would benefit from VIG – if used it should be in a clinical research context.

Source: WHO, NHS, CDC

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Accessibility Features Guideline

The SE Asia Business Resilience Toolkit can be listened to using Adobe Acrobat, JAWS, or other screen-reading devices. The tab order is set in a logical sequence. Relevant images include alt text and links have been highlighted. Below are additional features contained in this document.

1 Navigation features

PDF contains bookmarks.

Go to **View < Show/Hide > Navigation Panes > Bookmarks** to access.

You can also navigate by chapter using links in the footer on most pages.

Accessibility Features Guideline (2)

2 Links are denoted using underline and will open a new browser window.

3 Form fields are interactive.

SE ASIA BUSINESS RESILIENCE TOOLKIT
A framework for COVID-19 risk mitigation

Please help us improve this resource by responding to this feedback survey
Contact PBRR: businessresilience@fhi360.org, shruti@awrlloyd.com

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