



Border Health Strategies to Contain the Spread of COVID-19

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COVID-19 Response

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Objectives

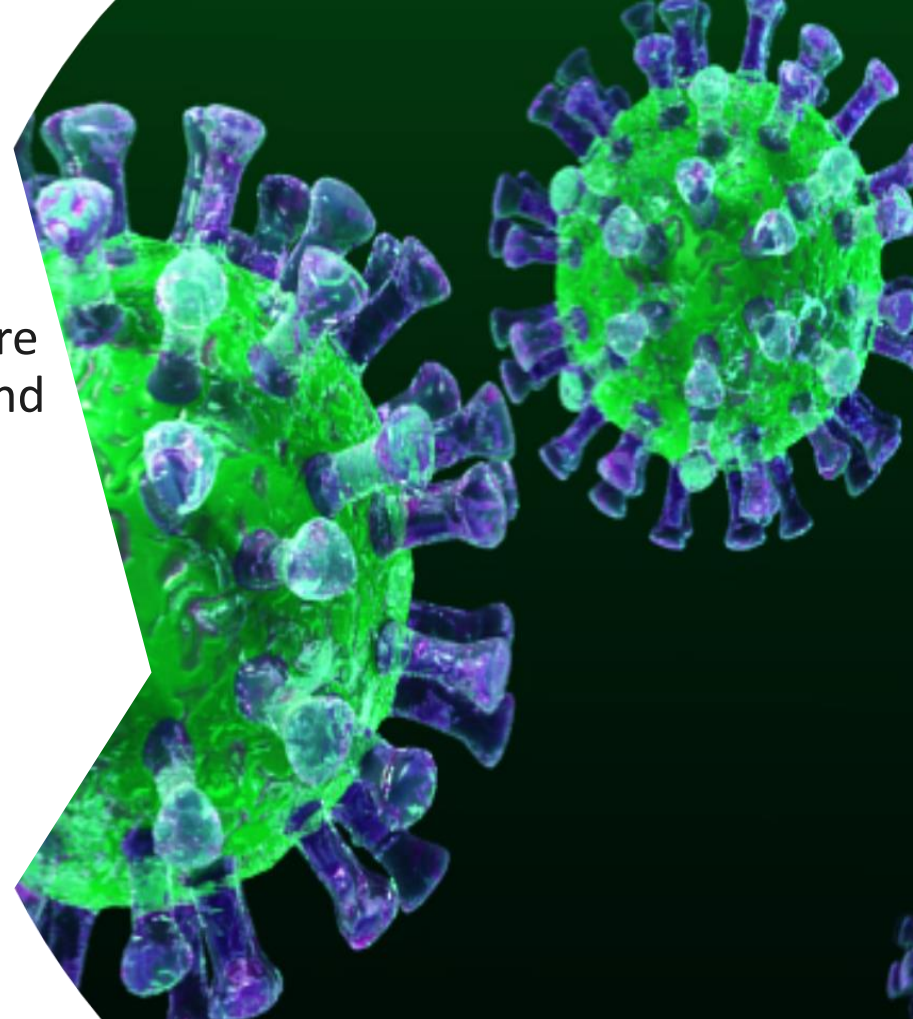
- Discuss border health strategies to stop the spread of coronavirus disease 2019 (COVID-19)
- Discuss benefits and limitations of screening at points of entry (POE)

Background on COVID-19

Coronaviruses

Coronaviruses are a family of viruses named after the crown-like outer structure of the virus. They have zoonotic origins and have caused the following recent epidemics:

- Severe acute respiratory syndrome (SARS)
 - 2002-2003
- Middle East respiratory syndrome (MERS)
 - 2012, 2015, 2018
- Coronavirus disease 2019 (COVID-19)
 - December 2019 to present

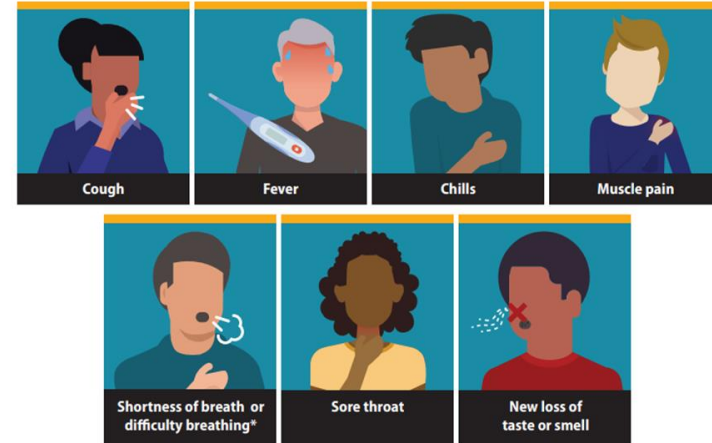


Signs and symptoms of COVID-19

- Reported symptoms of COVID-19 range from mild to severe
- Symptoms may appear 2-14 days after exposure to the virus and include:
 - Fever or chills
 - Cough
 - Shortness of breath or difficulty breathing
 - Fatigue
 - Muscle or body aches
 - Headache
 - New loss of taste or smell
 - Sore throat
 - Congestion or runny nose
 - Nausea or vomiting
 - Diarrhea

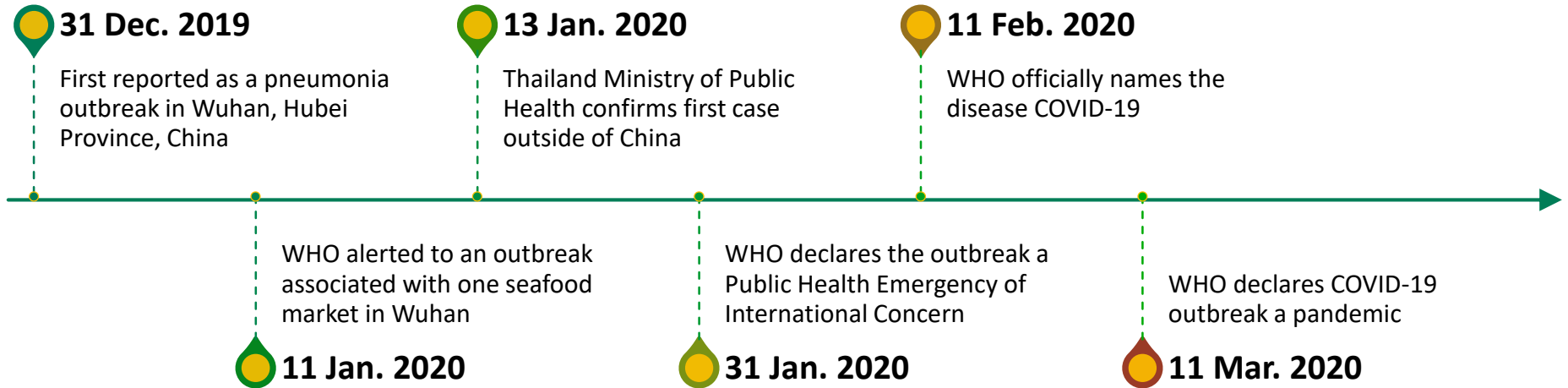
Symptoms of Coronavirus (COVID-19)

Know the symptoms of COVID-19, which can include the following:



Symptoms can range from mild to severe illness, and appear 2-14 days after you are exposed to the virus that causes COVID-19.

COVID-19 background



COVID-19

- Primary signs and symptoms
 - Fever (**not always present**)
 - Cough
 - Difficulty breathing
- Most people with COVID-19 have mild symptoms
- Clear evidence for human-to-human transmission
- Incubation period is up to 14 days post-exposure (ranges from 2-14 days)

Countries with COVID-19 cases as of 22 June 2020



Travel-associated cases

- “Travel-associated” refers to a probable case of COVID-19 in which:
 - The person recently travelled from or had contact with travellers from another country
 - The person could have acquired the disease in another country or could have been in an outbreak country during the incubation period and be contagious now
 - The person could have been exposed in another country
 - The person has imminent plans to travel to another country
 - The collaboration of other countries is required for investigation and control of the disease



Travel-associated case surveillance and reporting

- Responses that should alert travel surveillance system:
 - Responds yes to having travelled to another country
 - Responds yes to having contact with someone who has recently travelled to another country
 - Has imminent plans to travel to another country
- Steps to follow if above criteria are met:
 - Surveillance officer conducts a follow-up interview to gather more information about travel history or intent to travel
 - Regional and/or national authorities are notified, when appropriate
 - Counterparts in other countries are notified, when appropriate

WHO recommendations for screening at POE

- Travel measures (e.g., travel restrictions) that interfere with international traffic for more than 24 hours may have a public health rationale at the beginning of an outbreak
 - May allow affected countries time to implement sustained response measures
 - May allow non-affected countries time to initiate and implement preparedness measures
- Restrictions should ideally last a short time and be proportionate to public health risks; re-evaluate as situation evolves
- Countries should undertake active surveillance, early detection, isolation and case management, and contact tracing to prevent onward spread of COVID-19
- Countries should share data with WHO and must inform WHO about additional health protection measures that significantly interfere with international traffic

Why conduct screening at POE?

It is a flexible, scalable intervention that can be rapidly deployed or shifted based on the needs and resources of the POE.

Objectives of screening:

- Reduce the international spread of communicable diseases
- Educate travellers about the signs and symptoms of diseases, like COVID-19
- Ensure travellers know what to do if they get sick
- Inform travellers whom to call if they get sick



Sample CDC Travel Health Alert Notice for COVID-19

Screening protocols

- Assess travellers for signs of COVID-19 using pre-established criteria
- Ensure correct personal protective equipment (PPE) use based on role in screening
- Primary screening:
 - Maintain at least 1m distance
 - Observe travellers for obvious signs of illness
 - Measure temperature
 - Use POE screening form
 - Educate travellers about COVID-19
- Secondary screening:
 - Separate travellers and conduct a medical evaluation and interview
 - Follow standard operating procedures for POE regarding isolation and alerts

Screening protocols- primary screening

Review answers on primary screening form

- Note any 'yes' answers, travel history, or visible signs of illness that would indicate the traveller needs to be referred to secondary screening
- Measure the traveller's temperature
 - Not all people with COVID-19 present with fevers, and temperature should not be the only determining factor for letting travellers continue
- If criteria are met, refer the traveller to secondary screening
- Collect contact information for the traveller's companions
- Refer contacts to secondary screening for further evaluation, if needed

Example primary screening form

TRAVELLER PUBLIC HEALTH DECLARATION

Please complete this form. The information is being collected as part of the public health response to the outbreaks of Ebola in West Africa. The information will be used by public health authorities in accordance with applicable national laws.

Traveller Information:

Flight/ship/train/ground vehicle number/name: Seat/cabin/coach number/name:
 Last (family) name: First (given) name:

Passport country: Passport number:

Arrival date: Day..... Month..... Year..... Birth date: Day..... Month..... Year.....

Sex: Male..... Female..... E-mail address:

Telephone number (include country code or country name):

Home address:

Address for next 21 days:

Public Health Information:

Today or in the past 48 hours, have you had any of the following symptoms? Yes No

a. Fever (38° C / 100° F or higher), feeling feverish, or having chills?		
b. Vomiting or diarrhea?		
c. Severe headaches or body aches?		
d. Unexplained bruising or bleeding?		

In the past 21 days, have you done any of the following? Yes No

e. Lived in the same household or had other contact (e.g. friends, relatives) with a person sick with Ebola?		
f. Worked in a health care facility treating Ebola patients or a laboratory analysing Ebola specimens, or touched a dead body in a country with an Ebola outbreak, without using personal protective equipment?		

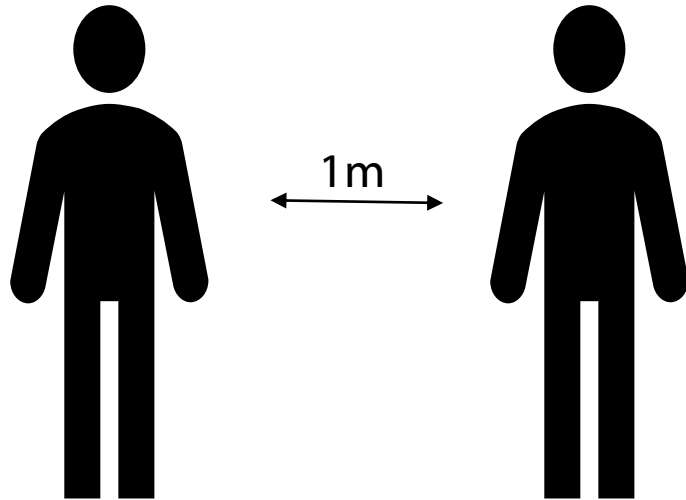
Countries Visited:

List all countries where you have been in the past 21 days (including airport and port transits and where you live). List the most recent country first (where you boarded). If you need more space, please use the back of the page.

1..... 3.....
 2..... 4.....

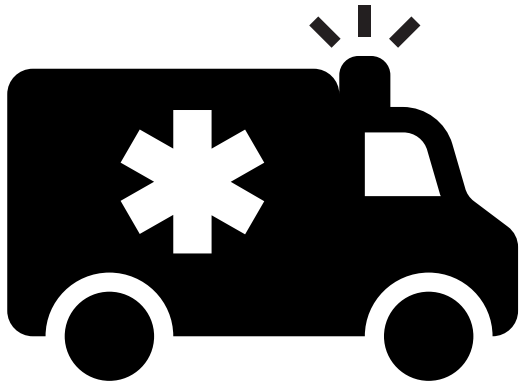
Preventative measures for primary screeners

WHO recommendations as of 21 May 2020



- Maintain physical distance of at least 1m
- Have a glass or plastic screen to create a barrier between screener and traveller
- No required PPE unless physical distance is not possible, then use mask and eye protection
- Perform hand hygiene

Screening protocols- secondary screening



- Observe the traveller for signs and symptoms
- Retake temperature at least 15 minutes after initial temperature was taken
- Conduct a risk assessment
- Determine if the traveller needs to be referred to a healthcare facility

Preventative measures for secondary screeners

WHO recommendations as of May 21, 2020

- Maintain physical distance of at least 1m
- Wear personal protective equipment (PPE)
 - Medical mask
 - Gloves
- Perform hand hygiene



Limitations of screening

- Can detect only overtly ill travellers
 - May miss infected people who are asymptomatic or have only mild symptoms
 - Will miss people who are currently incubating infection and do not have symptoms (2-14 days incubation period)
- Reliable temperature reading are affected by multiple factors
 - If the environment is extremely hot or cold
 - If the thermometer has not been properly calibrated
 - If the screener is using the thermometer improperly, per manufacturer standards
 - If the traveller has take fever-reducing medication (e.g., paracetamol, ibuprofen)
- People need to behave in a manner that may be outside their personal interest
 - Travellers may not reveal their illness, may take medicine to mask it, or may not disclose exposure history

Limitations of screening for COVID-19

- Large-scale screening may not be the most effective way to prevent the spread of COVID-19
- Screening is only one tool for responding to COVID-19; other tools include traditional epidemiology and community mitigation
- Asymptomatic transmission can occur; travellers may not have any signs of COVID-19 but can still be spreading the virus
- COVID-19 is widespread globally and travellers are likely to be coming from an affected area, have come in contact with someone from an affected area, or have passed through an affected area
- Worldwide travel restrictions have greatly limited the number of people travelling and the places they can travel to and from

Combining screening and education

- Screening:
 - Identifies travellers with visible signs; however, it may not catch the majority of people with COVID-19 as they frequently experience no or mild symptoms, but can still spread disease
 - Requires coordination between POE and health authorities
- Education:
 - Alerts travellers to signs and symptoms of COVID-19 and what to do if they are sick
 - Provides an opportunity to educate travellers on how to protect themselves and others
 - Informs travellers how to reach local health resources
 - Ensures travellers receive accurate information

Education strategies: communication

- Distributing Travel Health Alert Notices (T-HAN) to arriving and departing travellers
- Displaying health messages at POE
- Audio and video messages about signs, symptoms, and what to do if sick
- Social media to share information about current guidance for travel

GLOBAL HEALTH ALERT: COVID-19

FOR 14 DAYS AFTER YOUR TRIP

Stay home.

Monitor your health.

IF YOU GET SICK, call ahead before seeing a doctor.

www.cdc.gov/coronavirus



Traveller Health Alert Notice from CDC regarding COVID-19

Regulatory considerations

- Does the country have legal and regulatory authority to detain, isolate, or quarantine travellers passing through the POE?
- Do authorities have an established, controlled pathway to direct travellers to specific airports for systematic screening?
- Is there a way that travellers can bypass the screening location?
 - Screening at POEs slows travel and it can be easy to bypass by detouring around a screening location
- Is it safe to screen at this location?
 - Screening should only be implemented at POE where the safety and security of travellers and screening personnel can be assured



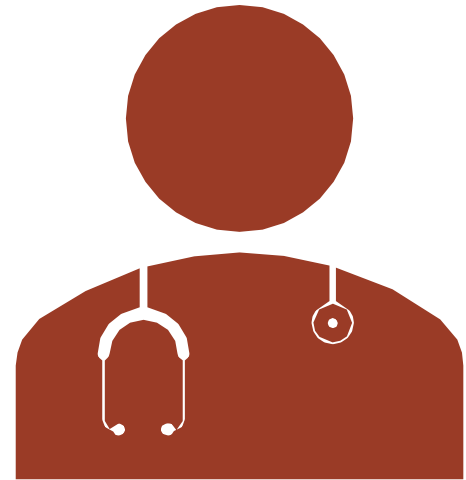
Context-specific considerations

- What is the volume of travellers at the POE?
- What kind of travellers use the POE? Mostly foreign? Mostly domestic? What languages do they speak?
- Is the POE connected to a geographic area where there has been community spread of COVID-19?
- Are there cases nearby the POE?
- Does the POE meet previous regulatory considerations?



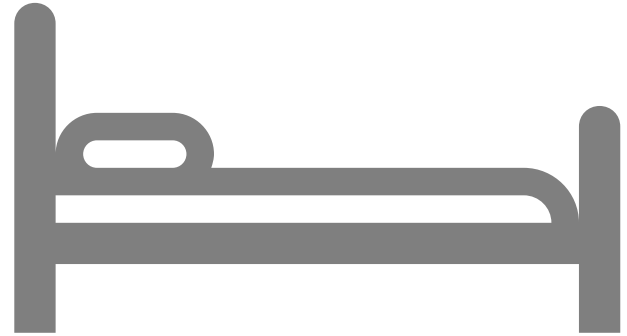
National-level resource considerations

- Funding to pay for screening and follow-up actions?
Short-term and long-term?
 - Screeners' salaries
 - Supplies and equipment for screening
 - Food, water, and other necessities for quarantined travellers
 - Ability to follow up on travellers who may have been exposed
- Location for prolonged quarantine of travellers?
- Ability to procure and provide necessities to quarantined travellers?
- Referral to designated healthcare facilities where ill travellers will be sent for diagnosis and care?
- Funding to produce educational/communication materials?
- Mechanism to send traveller information to health departments for follow-up?




POE resource considerations

- Does the POE have protocols for primary and secondary screening?
 - A clear definition for suspected cases
 - Ability to follow up when a suspected case or exposed person is identified
- An adequate number of trained primary and secondary screeners who demonstrate competency in screening tasks and appropriate use of PPE?
- Adequate personal protective equipment (PPE) and screening tools?
- Ability to isolate suspected cases safely and away from other travellers and POE personnel?
- An isolation area with access to potable water, toilet, handwashing facilities, and a place to sit or lie down?
































Risk assessment and movement restrictions of travellers

- Risk assessment of who is most likely to introduce or spread the disease
 - Traveller arriving from or recent travel to a country with widespread transmission
 - Traveller from a country with community transmission
- Considerations for restricting movement into or out of country
- Considerations for restricting movement of travellers to facilitate surveillance once admitted into the country
 - Stay home for 14 days after arrival and maintain a distance of 1m from others
 - Self-monitor for symptoms (check temperature twice daily, watch for cough, shortness of breath, and other symptoms of COVID-19)
 - Avoid contact with people at higher risk for severe infection

Your 14-Day Log for Temperature and Symptoms 

Write your symptoms and temperature in the space below every day for 14 days.

DAY	DATE	SYMPTOMS	TEMP
DAY 0		Day 0 is the day you left an international country or returned home from a cruise.	
DAY 1		 	
DAY 2		 	
DAY 3		 	
DAY 4		 	
DAY 5		 	
DAY 6		 	
DAY 7		 	
DAY 8		 	
DAY 9		 	
DAY 10		 	
DAY 11		 	
DAY 12		 	
DAY 13		 	
DAY 14		 	

 **If you get sick:** - Stay home. Avoid contact with others. - You might have COVID-19; most people are able to recover at home without medical care. - If you have trouble breathing or are worried about your symptoms, call or text a health care provider. Tell them about your recent travel and your symptoms. - Call ahead before you go to a doctor's office or emergency room.

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www.cdc.gov/coronavirus

Temperature log used by CDC

Summary

- Screening can reduce the international spread of communicable diseases - one of many tools
- Limitations exist for detecting COVID-19 cases through POE screening
- Screening provides an opportunity to educate travellers
- Designing the best use of border health resources involves many considerations
- Border health strategies are one of many tools that can complement other measures (e.g., epidemiology, community mitigation)

Contact information

- Presentation created by the Global Border Health Team, Centers for Disease Control and Prevention, April 2020
- Point of Contact: Sadie Ward- seward1@cdc.gov

For more information, contact CDC
1-800-CDC-INFO (232-4636)
TTY: 1-888-232-6348 www.cdc.gov

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

