

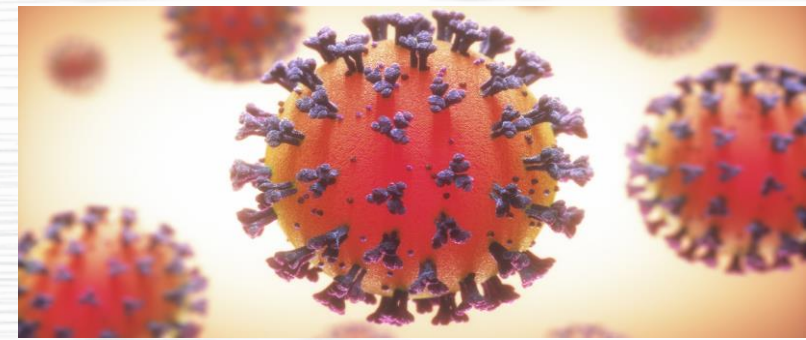
# Novel Coronavirus (COVID-19) - preparedness and response

Pan American Health Organization /  
World Health Organization  
(PAHO/WHO)



**PAHO**

# What is COVID-19?



## Coronaviruses

- Large family of viruses
- Can cause illness in animals (common) or humans
- In humans, they cause respiratory infections
- E.g.s.: Common cold; Middle East Respiratory Syndrome (MERS); Severe Acute Respiratory Syndrome (SARS); Coronavirus disease COVID-19

## COVID-19:

- Infectious respiratory disease caused by the most recently discovered coronavirus
- This new virus and disease were unknown before the outbreak began in Wuhan, China, in December 2019
- Animal source under investigation

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# CURRENT SITUATION

# Global situation as at 19 March 2020

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## Total (new) cases in last 24 hours

### Globally:

- 209,839 confirmed (16,556)
- 8,778 deaths (828)

### European region

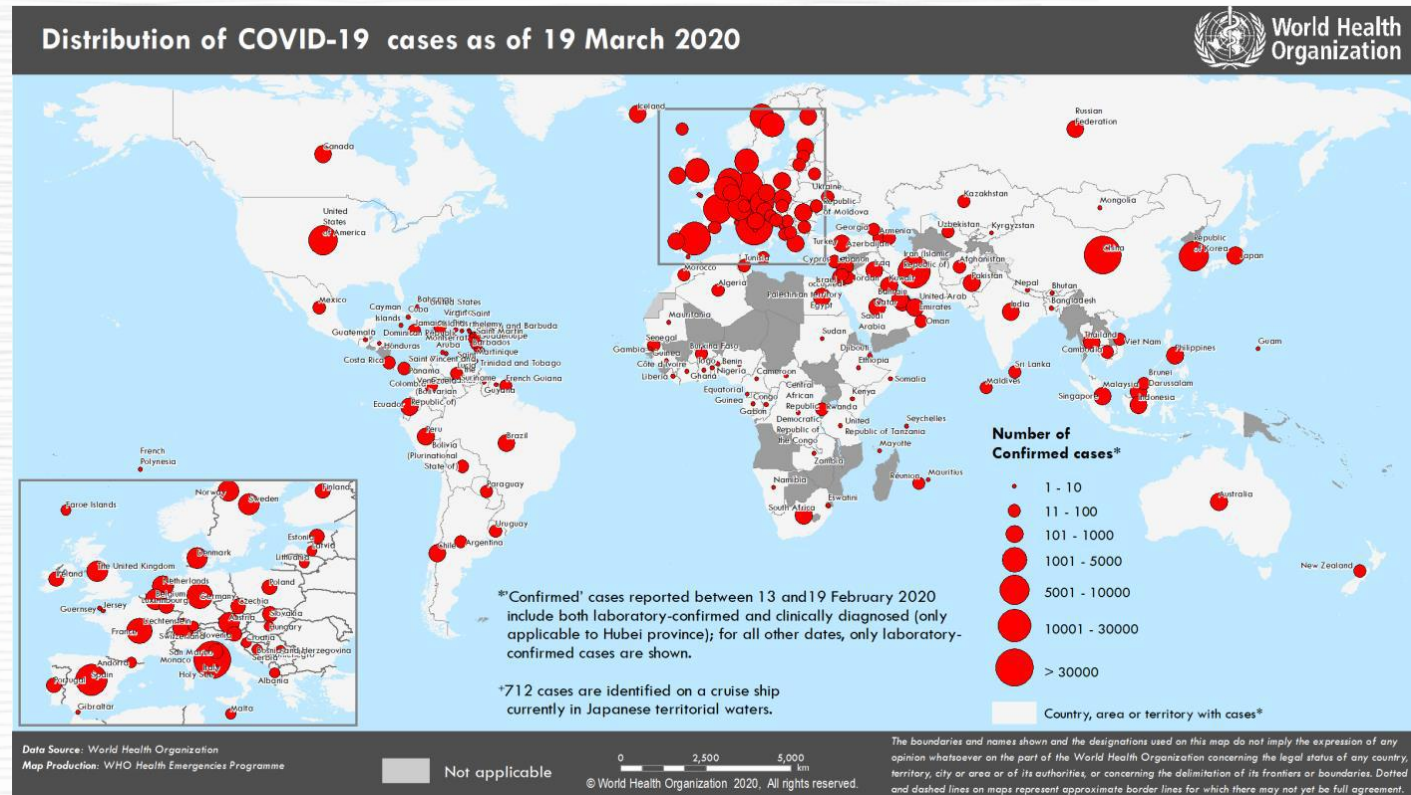
- 87,108 confirmed (10,221)
- 4,084 deaths (591)

### Western Pacific Region

- 92,333 confirmed (488)
- 3,377 deaths (20)

### Region of the Americas

- 9,144 confirmed (4,166)
- 119 deaths (50)



# Number of COVID-19 cases in the region of the Americas as of 19 March 2020

Country	Confirmed	Deaths	Country	Confirmed	Deaths
United States of America	10,442	150	Uruguay	79	0
Canada	690	9	Costa Rica	69	1
Brazil	428	4	Venezuela (Bolivarian Republic of)	36	0
Chile	342	0	Bolivia (Plurinational State of)	15	0
Ecuador	168	3	Honduras	12	0
Peru	155	0	Paraguay	11	0
Mexico	118	1	Guatemala	7	1
Panama	109	1	El Salvador	1	0
Colombia	108	0	Nicaragua	1	0
Argentina	97	2			

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# Number of COVID-19 cases in the region of the Americas as of 19 March 2020

Countries	Confirmed	Deaths	Territories	Confirmed	Deaths
Dominican Republic	34	2	Guadeloupe	33	0
Jamaica	15	1	Martinique	24	0
Cuba	11	1	French Guiana	11	0
Trinidad and Tobago	9	0	Puerto Rico	6	0
Guyana	5	1	Saint Barthelemy	3	0
Bahamas	3	0	Aruba	5	0
St Lucia	2	0	Curacao	3	0
Barbados	2	0	US Virgin islands	3	0
Antigua and Barbuda	1	0	St Martin	2	0
St Vincent & Grenadines	1	0	Bermuda	2	0
Suriname	1	0	Cayman Islands	1	1
			Montserrat	1	0
			St Maarten	1	0

# WHO Grade 3 Emergency Response



Early January 2020: COVID-19 declared grade 3

## GRADE 3 DEFINITION:

- A single or multiple country event with substantial public health consequences that **requires a substantial WHO Country Office (WCO) response** and/or substantial international WHO response.

# PAHO/WHO Public Health Emergency of International Concern (PHEIC)

- 30 January 2020 WHO Director General declared COVID-19 a PHEIC
- PHEIC is defined in the IHR (2005) as “an extraordinary event which is determined, as provided in these Regulations:
  - to constitute a public health risk to other States through the international spread of disease and
  - to potentially require a coordinated international response”. This definition implies a situation that: is serious, unusual or unexpected; carries implications for public health beyond the affected State’s national border; and may require immediate international action



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# Public Health Emergency of International Concern (PHEIC)

...

- Requires convening of a committee of experts (IHR Emergency Committee) to advise the WHO Director General
- PHEIC declared by WHO Director-General
- Temporary recommendations issued include health measures to be implemented by the State Party experiencing the PHEIC, or by other States Parties, to prevent or reduce the international spread of disease and avoid unnecessary interference with international traffic

# Pandemic



- 11 march WHO DG declared a COVID-19 pandemic
- Definition: a worldwide epidemic/outbreak
- First pandemic by a coronavirus
- We have never controlled pandemic before
- Needs a whole-of-government, whole-of-society approach, based on a comprehensive strategy to prevent infections
- **Aim: Save lives and minimize impact**

# COVID-19 symptoms



- Most common: fever, tiredness, and dry cough



- Also aches and pains, nasal congestion, runny nose, sore throat, diarrhea
- Symptoms usually mild and begin gradually
- Some infected persons don't develop any symptoms and don't feel unwell
  
- Persons usually develop symptoms 1-14 days (mostly around 5 days) after catching the virus

# COVID-19 symptoms (cont'd)



- **Most people, about 80%, recover without needing medical treatment**
- About 14% become severely ill, some with difficulty breathing
- About 6% require critical care
- About 2% of people with the disease have died
- Those at risk of more severe illness:
  - Older people
  - Those with underlying medical problems (e.g. high blood pressure, heart problems, diabetes)

**People with fever, cough and difficulty breathing should seek medical attention**

# Treatments and vaccines for COVID-19



## Antibiotics:

- Antibiotics only work on infections caused by bacteria, NOT those caused by viruses
- COVID-19 is caused by a virus, so antibiotics cannot work on COVID-19
- If hospitalized for COVID-19, a person may receive antibiotics for co-infection with a bacteria

## Vaccine:

- There is currently no vaccine to prevent COVID-19
- Flu vaccine does not protect against COVID-19

# Treatments and vaccines for COVID-19



- Currently there is no vaccine and no antiviral medicine to prevent or treat COVID-2019
- Persons are treated to relieve symptoms
- People with serious illness should be hospitalized and most recover with supportive care
- Possible vaccines and treatments are currently under investigation

# How to protect against COVID-19



The most effective ways to protect yourself and others against COVID-19 are:

- Frequently clean your hands with soap and water or alcohol-based hand rub
- Maintain a distance of at least 1 meter (3 feet) from people who are coughing or sneezing
- Avoid touching mouth, nose and eyes
- If ill, cover your cough or sneeze with the bend of elbow or tissue and throw the tissue away
- Stay home if unwell
- If you have a fever, cough and difficulty breathing, seek medical attention as soon as possible
- Stay informed on the latest developments about COVID-19

# Use of masks



- Well people do not need to wear a mask
- Masks are useful for:
  - People who have symptoms of COVID-19 (coughing or sneezing)
  - Those caring for ill persons, e.g. health workers and other people taking care of ill persons or suspected COVID-19 cases
- Irrational use of masks will result in wastage and risk of unavailability for those who need them and increased risk of spread



# Myth busters



The following may help you to feel better;

but they **DO NOT PREVENT** you from getting COVID-19 and the **DO NOT CURE** COVID-19:

- Bush bath
- Bush tea
- Vitamin C / Zinc
- Hot toddy
- Garlic and other spices
- Keeping your mouth moist
- Using oils or gels in nostrils or on the body
- Using disinfectant or bleach on the body

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# How to protect myself

Protect yourself and others from getting sick

## Wash your hands



- after coughing or sneezing
- when caring for the sick
- before, during and after you prepare food
- before eating
- after toilet use
- when hands are visibly dirty
- after handling animals or animal waste

# Protect others from getting sick



Avoid close contact when you are experiencing cough and fever

Avoid spitting in public



If you have fever, cough, and difficulty breathing **seek medical care early** and share previous travel history with your health care provider.

# Protect others from getting sick

When coughing and sneezing **cover mouth and nose** with flexed elbow or tissue – throw tissue away immediately and wash hands.



Throw tissue into a closed bin immediately after use

**Clean hands** with alcohol-based hand rub or soap and water after coughing or sneezing and when caring for the sick



# PAHO



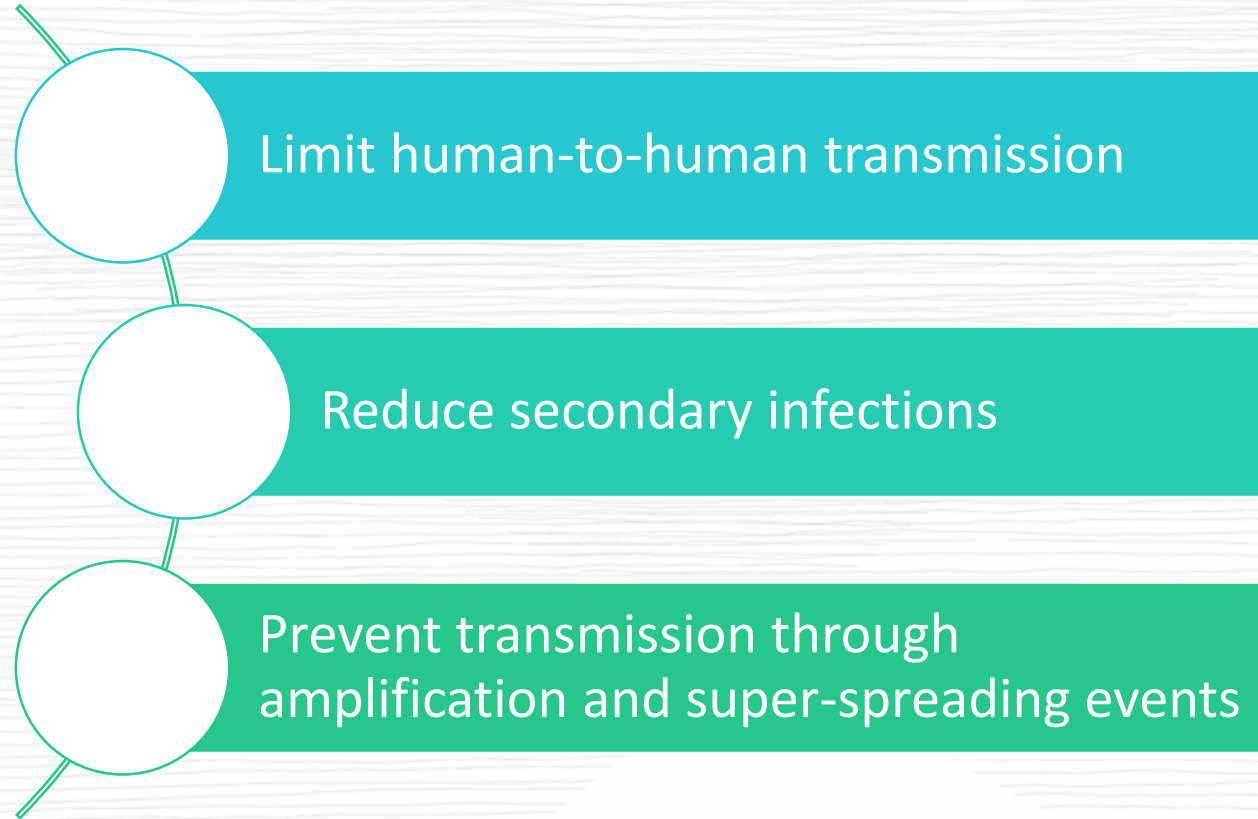
# PAHO

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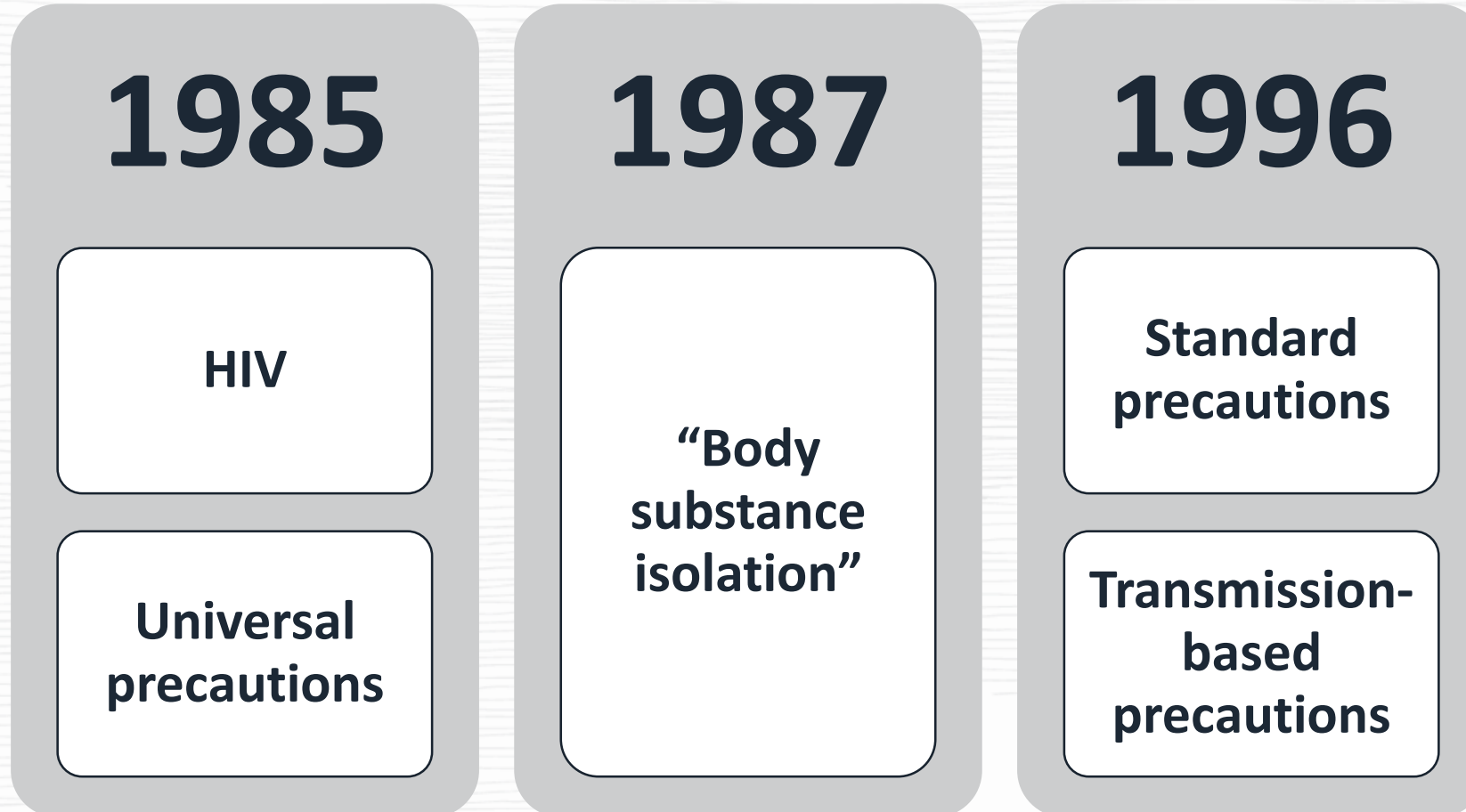


# Infection Prevention and Control

# Infection Prevention and Control and COVID-19



# Standard precautions





## Standard precautions

*“(...) A **set of practices** that are applied to the care of patients, **regardless of the state of infection** (suspicion or confirmation), in any place where health services are provided. (...)”*

# Standard precautions



**Hand hygiene (water and soap or alcohol-based solutions)**



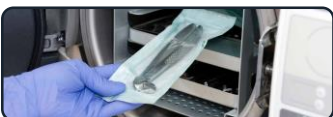
**Use of personal protective equipment (PPE) according to risk**



**Respiratory hygiene (or cough etiquette)**



**Safe injection practices**



**Sterilization / disinfection of medical devices**



**Environmental cleaning**

## Transmission-based precautions



Contact precaution



Droplet precaution

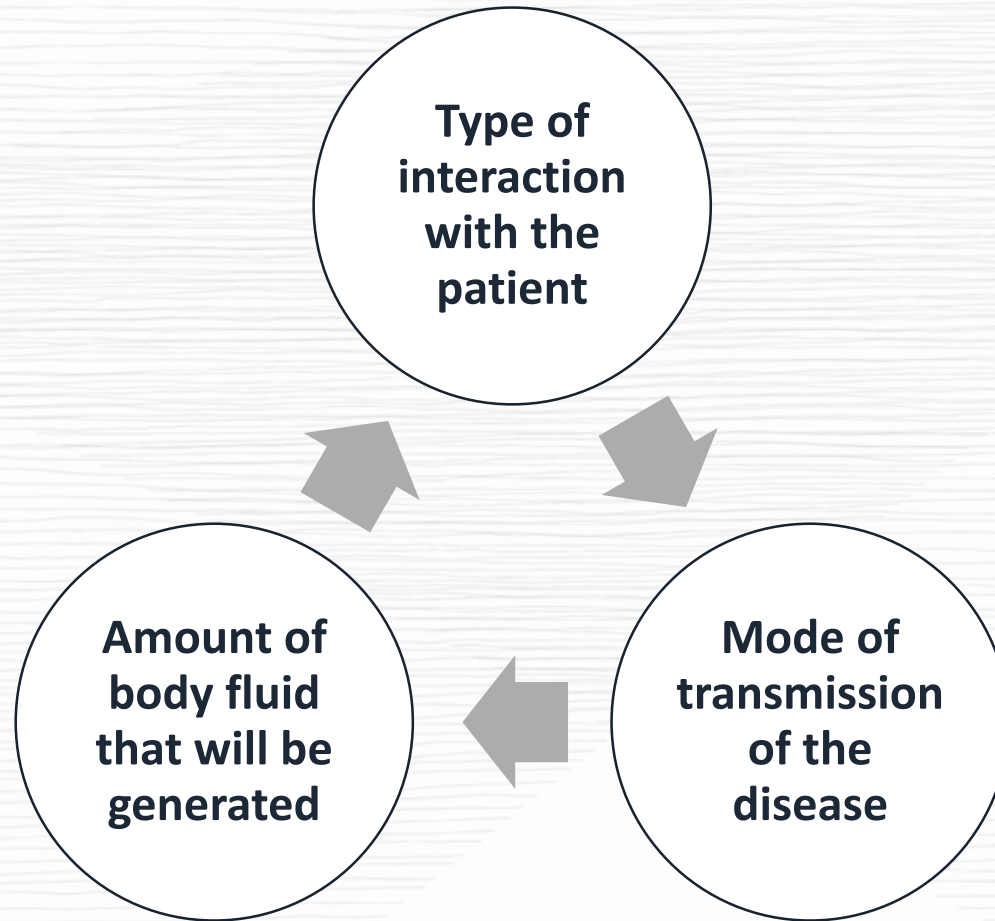


Airborne precaution

# Transmission-based precautions and COVID-19

Scenario	Precaution
For any suspected or confirmed case of COVID-19	<b>Standard + contact + droplet precautions</b>
For any suspected or confirmed case of COVID-19 and aerosol-generating procedure (AGP)	<b>Standard + contact + airborne precautions</b>

# Risk evaluation and PPE



# Some questions to consider . . .



**Does the patient fulfill case definition criteria for the disease?**



**What is the infectious agent and its mode of transmission?**



**What type of procedure will the patient be undergoing?**



**Is there any risk of contamination?**



**Where should the patient be located?**



**What type of PPE will need to be used?**

General  
principles of  
PPE



Hand hygiene should always be performed despite PPE use.



Remove and replace if necessary any damaged or broken pieces of re-usable PPE as soon as you become aware that they are not in full working order.



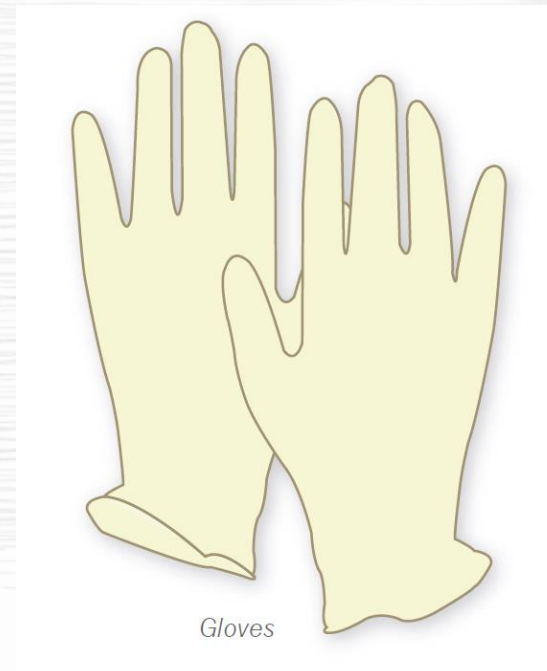
Remove all PPE as soon as possible after completing the care and avoid contaminating the environment outside the isolation room; any other patient or worker; and yourself.



Discard all items of PPE carefully and perform hand hygiene immediately afterwards.

# Gloves (sterile / nonsterile)

- Used to prevent the healthcare worker from being exposed to direct contact with the blood or body fluid of an infected patient
- Gloves DO NOT replace hand hygiene





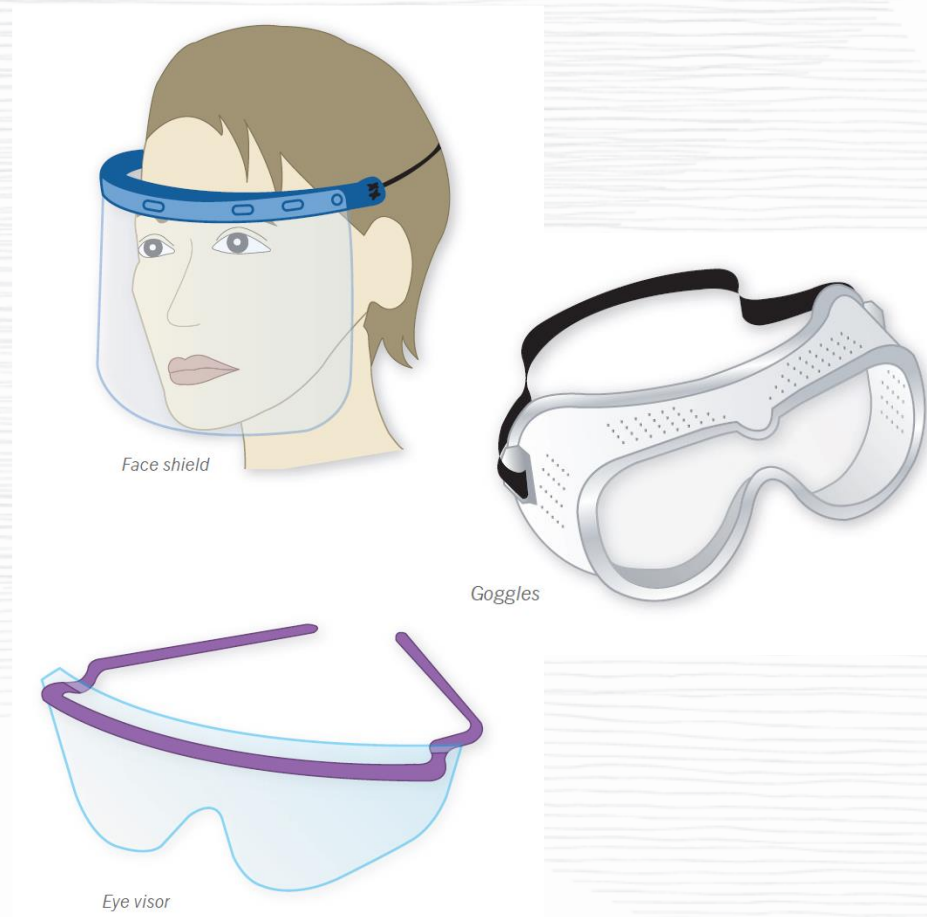
# Gowns (and aprons)

- ❑ Used in addition to gloves if there is **risk of fluids or blood** from the patient splashing onto the healthcare worker's body
- ❑ The same gown can be used when providing care to more than one patient, but only those patients in a cohort area and only if the gown does not have direct contact with a patient
- ❑ Plastic aprons should be used in addition to gowns if the material of the gown is not fluid repellent and the task to be performed may result in splashes onto the healthcare worker's body



# Facial mucosa protection (face shield, eye visor, goggles)

- Eye protection, used to protect the eyes, nose or mouth mucosa of the health-care worker from any risk of contact with a patient's respiratory secretions or splashes of blood, body fluids, secretions or excretions



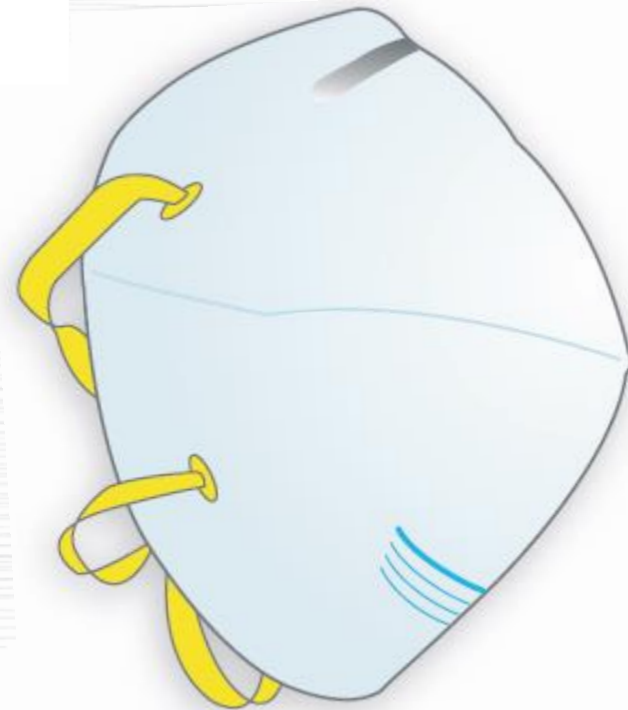
## Medical masks (droplet precaution)

- Wear a medical mask when within a 1 metre range of the patient
- Put the patient in a single room or in a room that contains only other patients with the same diagnosis, or with similar risk factors, and ensure that every patient is separated by at least one metre
- Ensure that the transportation of a patient to areas outside of the designated room is kept to a minimum
- Perform hand hygiene immediately after removing the medical mask

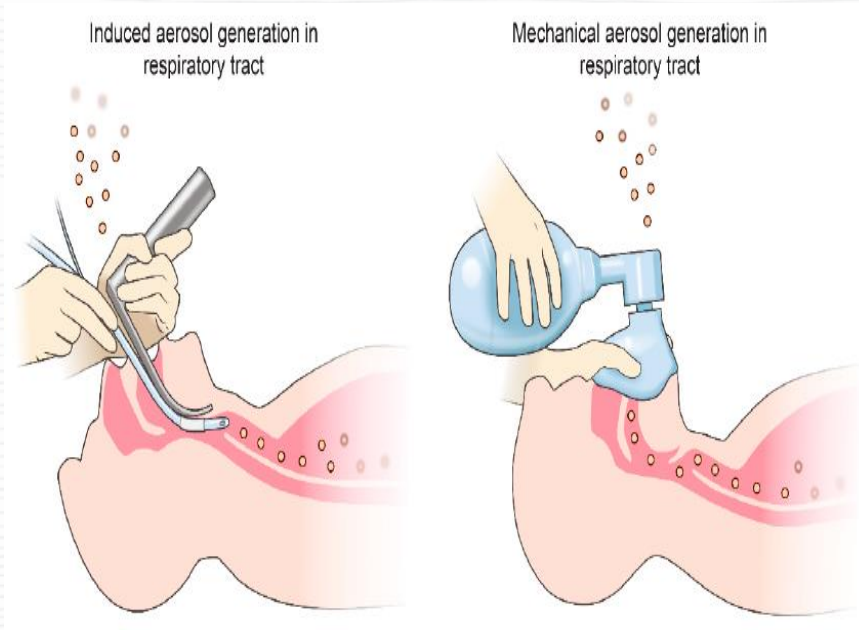


## Respirator [N95] (airborne precaution)

- Use a respirator whenever entering and providing care within patient isolation facilities ensuring that the seal of the respirator is checked before every use
- Perform hand hygiene immediately after removing the respirator
- Use when doing aerosol-generating procedures



# Aerosol-generating procedures (AGP)



**Number of healthcare providers  
exposed should be limited**

## Aerosol-generating procedures (AGP)

**Bronchoscopy**

**Cardiopulmonary resuscitation**

**Noninvasive ventilation (BiPAP, CPAP, HFOV)**

**Surgery**

**Tracheal intubation**

**Manual ventilation**

**Sputum induction**

**Suctioning**

**Laser plume**

**Necropsy**

# Use of PPE according to level of care

Level of care	Hand hygiene	Gown	Medical mask	Respirator (N95 or FFP2)	Goggle (eye protection) OR Face shield (facial protection)	Gloves
Triage (more than 1 metre)	X					
Triage (within 1 metre)	X		X			
Collection of specimens for laboratory diagnosis	X	X		X	X	X
Suspected or confirmed case of COVID-19 requiring healthcare facility admission and NO aerosol-generating procedure	X	X	X		X	X
Suspected or confirmed case of COVID-19 requiring healthcare facility admission and WITH aerosol-generating procedure	X	X		X	X	X

# Use of PPE (cont'd)

Level of care	Hand hygiene	Gown	Medical mask	Respirator (N95 or FFP2)	Goggle (eye protection) OR Face shield (facial protection)	Gloves
Cleaner entering the room of COVID-19 patients	X	X	X		X (if risk of splash)	X (heavy duty)
Visitors entering the room of COVID-19 patients	X	X	X			X
Other areas of patient transit (e.g., wards, corridors) without contact with COVID-19 patient	X					
Administrative areas that do not involve contact with COVID-19 patients	X					

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Coordination

Information

Logistics  
and  
operations

Leadership

# HOSPITAL READINESS

Administration  
and Finance

Infection  
prevention  
and control

Rapid  
identification

Case  
management

Isolation

Diagnosis



## In summary,

- The use of **personal protective equipment (PPE)** by healthcare workers requires an **evaluation of the risk** related to healthcare-related activities;
- The following precautions are recommended for the care of patients with suspected or confirmed cases of COVID-19:
  - For any suspected or confirmed cases of COVID-19
    - **standard + contact + droplet precautions**
  - For any suspected or confirmed cases of COVID-19 and AGP
    - **standard + contact + airborne precautions**

# Stay informed



- World Health Organization (WHO):

[www.who.int](http://www.who.int)

- Pan American Health Organization (PAHO/WHO):

[www.paho.org](http://www.paho.org)



THANK  
YOU!