Study Unit 6

Covid-19 Pandemic

Covid-19 Pandemic Outline

- A Covid-19 background, including mode transmission and categories.
- Infection prevention control activities.
- SOP of clinical management of Covid-19.

Study Unit 7 Duration

This Study Unit requires 2 hours of formal study time.

You may spend an additional 2-3 hours for revision

Preamble

This unit will provide an overview of COVID-19 history, transmission, systems, prevention, control and vaccination.

Learning Outcomes of Study Unit 6

Upon completion of this study unit, you should be able to:

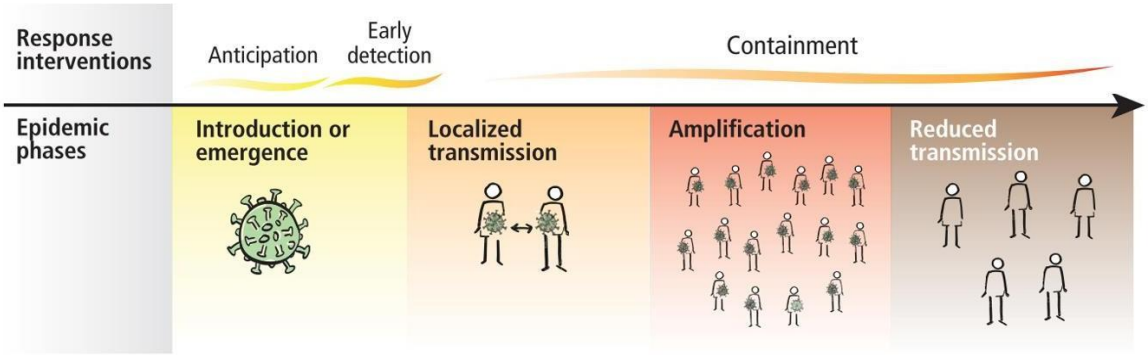
6.1 Describe COVID-19 background detailing what corona the virus is, how the virus emerged, who is at risk, signs and Symptoms amongst others.

6.2 Prevent outbreaks, delay spread, slow and stop transmission.

6.3 Minimize the impact of the pandemic on health systems, Social and economic activity.

6.1. COVID 19 Origin and Background

- Targeted audiences include healthcare professionals, students, and authorities within the health care system. COVID-19 patients should be guaranteed access to life-saving treatment without jeopardizing public health objectives or the safety of healthcare workers COVID-19 patients' treatment will be aided by this document if the health care system's capacity to respond is impaired.
- Important messages include:
- Critical public health measures regardless of transmission scenario; and
- Key steps that must be handled by transmission scenario to guarantee timely surge of clinical operations.
- •# The public health goals are to avoid epidemics, delay spread, and slow or halt transmission at all phases of the preparation and response plan. All patients, especially those who are severely sick, should be given the best possible care.. (WHO, 2020)



((WHO, 2020)

6.1.1 What is Coronavirus?

One of the many types of viruses is coronavirus. This creature's name comes from the fact that it is made up of genetic material and protein spikes (crowns).

This virus can cause respiratory and digestive problems.

It produces only minor health problems in the majority of persons.

It is also capable of causing severe illnesses, such as SARS-Cov and MERS-Cov. **(WHO, 2020)**

6.1.2 Corona Viruses come from?

There were human cases of SARS-CoV, which were transferred by civet cats from China to the United States in 2002, and MERS-CoV, which was spread by camels from Saudi Arabia to the Middle East in 2012. While no human cases have been reported, many coronaviruses are currently spreading among animals. **(WHO, 2020)**

6.1.3 What is Covid-19?

A recently found coronavirus is the source of the infectious illness Covid-19. China announced a Coronavirus epidemic (COVID-19) on December 31st of this year. It was initially discovered in Wuhan, China. Because the outbreak was not stopped, the disease spread to other parts of Asia and Europe and then to the rest of the world.

6.1.4 The most significant risk of COVID-19 infection?

In spite of the fact that COVID-19 may injure anybody, certain individuals are predisposed to serious illness when exposed to it.

Chronic medical conditions such as kidney disease, sickle cell anemia, heart failure, and type 2 diabetes obesity (BMI >30) are associated with an increased risk of severe illness in adults over 65. solid organ transplantation-induced immunosuppression Pregnant women and those who are immune compromised as a consequence of cancer treatment are at a greater risk of having more serious ailments, such as asthma and high blood pressure. (WHO, 2020)

6.1.5 Who is risk to get COVID-19?

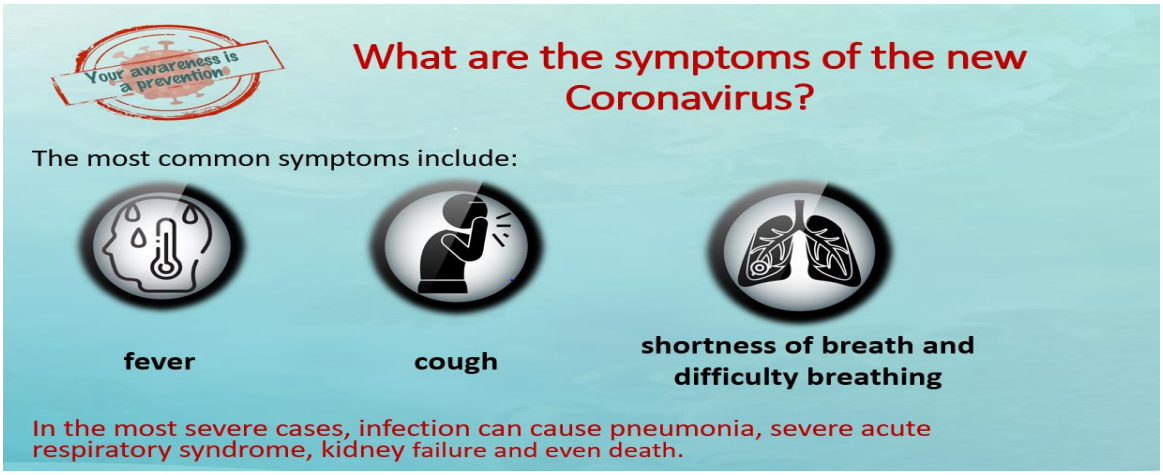
Those in the following groups are more susceptible to infection: COVID-19 patients are cared for by healthcare staff. Personnel in the laboratory who handle COVID-19 samples Shopkeepers at the slaughterhouse A proven COVID-19 infection at a

person's home or workplace. (WHO, 2020)

6.2 COVID-19 Symptoms & Transmission

6.2.1 Symptoms of COVID-19

Individuals with the COVID-19 gene mutation might have a large variety of symptoms, from modest indicators to life-threatening disorders. If you are infected with the virus, you might get symptoms after 2-14 days. Infected persons may have a wide range of symptoms when they are infected with COVID-19. Short of breath, Fever or chills, breathing difficulty, and a persistent cough are all asthma symptoms. Fatigue; New sensory loss or loss of smell; Muscle and body pains, and headaches; all have the same symptoms: a sore throat, runny nose, and vomiting and diarrhoea symptoms of the flu. (WHO, 2020)



(WHO, 2020)

COVID-19
Coronavirus Symptoms

World Health Organization

12 November 2020

SERIOUS COVID-19 SYMPTOMS REQUIRING IMMEDIATE MEDICAL CARE

- If you develop any of these symptoms, call your healthcare provider or health facility and seek medical care immediately.
- **This is not an exhaustive list. These are the most common symptoms of serious** illness, but you could get very sick with other symptoms – if you have any **questions, call for help immediately.**


Shortness of breath/ Difficulty breathing


Loss of speech or mobility or confusion


Chest pain

MOST COMMON SYMPTOMS


Fever


Cough


Tiredness


Loss of taste or smell

LESS COMMON SYMPTOMS


Sore throat


Headache


Aches and pains


Diarrhea


A rash on the skin **or discolouration** of fingers or toes


Red or irritated eyes

PLEASE NOTE:

- **If you live in an area where malaria, dengue or other infections are common and you have any of above symptoms, seek immediate medical care according to the local health authorities.**
- **Stay in touch with your primary care provider to ensure you continue to receive the routine care you need, such as medication refills, follow-ups and other routine consultations.**

(WHO, 2020)

6.2.2 Novel coronavirus Transmission

Covivirus, which causes COVID-19, is mainly transferred through direct contact between people (within about 6 feet). When an individual infected cough, sneezes or speaks, it can spread by respiratory droplets. Recent research suggests that COVID-19 can be shared by persons who aren't sick; thus, wearing a face mask is strongly advised. **(WHO, 2020)**

6.2.3 Case Definition

Suspected case:

All of the following must be present: fever, at least one respiratory disease symptom (cough, shortness of breath), and a history of travel to or residency in a country or region where COVID-19 illness has been reported locally within 14 days prior to the onset of symptoms; or, an extremel illness or a history of COVID-19 exposure.. (MOH, 2020)

Confirmed case:

An individual who has had COVID-19 infection confirmed using PCR, regardless of clinical symptoms.

Contact:

> contact is someone who has been exposed to any of these in the two days leading up to and 14 days after beginning of symptoms. For more than 15 minutes, direct physical contact with a suspected or confirmed COVID-19 case; > Direct physical connection with a suspected or confirmed case; > Care for someone who has COVID-19 illness suspected or proven without sufficient PPE;. (MOH, 2020)

For Community Health Workers: As well as a history of travel or residency in a nation or territory where COVID-19 disease was prevalent during the 14 days before the start of illness, OR contact with a person with a similar condition, acute airway sickness with fever and cough/shortness of breath is essential. (MOH, 2020)

6.3 COVID 19 Prevention, Control & Vaccination.

According to experts, COVID 19 may be avoided and handled just like any other condition. These techniques for prevention and control are addressed in more detail below. **(WHO, 2020)**

6.3.1 How can prevent COVID-19 pandemic?

Everyone may play a role in preventing the spread of respiratory viruses like coronaviruses by practicing the healthy habits listed below:

Consider yourself cautioned, and do not leave the house without permission from your doctor or public health authority. Take a tissue or a towel and cover your mouth and nose if required. If you must be in the presence of others, maintain a 6-foot minimum separation space. Avoid touching your eyes, nose, or mouth unless absolutely necessary. If you must publicly cough or sneeze, do it with your mouth closed. (WHO, 2020)

6.3.2 Three Important Ways to Slow the Spread

Protect yourself and others by using a mask and preventing the spread of COVID-19.

If you don't live with them, keep a distance of at least 6 feet (2 arm lengths).

Keep your distance from large groups. You are **expected** to be exposed to COVID-19 the more persons you come in touch with. **(WHO, 2020)**

COVID-19 compared to other common conditions

SYMPTOM	COVID-19	COMMON COLD	FLU	ALLERGIES
Fever	Common	Rare	Common	Sometimes
Dry cough	Common	Mild	Common	Sometimes
Shortness of breath	Common	No	No	Common
Headaches	Sometimes	Rare	Common	Sometimes
Aches and pains	Sometimes	Common	Common	No
Sore throat	Sometimes	Common	Common	No
Fatigue	Sometimes	Sometimes	Common	Sometimes
Diarrhea	Rare	No	Sometimes*	No
Runny nose	Rare	Common	Sometimes	Common
Sneezing	No	Common	No	Common

*Sometimes for children

Sources: CDC, WHO, American College of Allergy, Asthma and Immunology

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(WHO, 2020)

6.3.3 Test for COVID-19?

COVID-19 tests are now approved by the WHO in three forms:

Molecular tests are used to identify SARS-CoV-2, the virus that causes COVID-19. Diagnoses may be made using molecular diagnostic techniques, which are quite accurate.

There are new diagnostic methods that may quickly identify viral particles in nasal swabs, such as antigen tests. Despite their speed, antigen tests aren't nearly as accurate as molecular tests. The results of positive antigen tests are generally trustworthy, while negative results may need a molecular test to confirm.

Antibody (or serology) tests are used to determine whether a person has been exposed to COVID-19 in the past. When the body is fighting a disease or has been fighting an infection, antibodies are found in the blood. Individuals who have been previously infected with the virus may be identified by these tests, but the virus itself cannot be detected by them.. (WHO, 2020)

6.3.4 COVID-19 Vaccination

COVID-19 vaccine. After exposure to COVID-19, this vaccine is supposed to provide protection. Early 202 saw the development of many technology platforms for a COVID-19 vaccine, which had been created before to the COVID-19 pandemic because of the SARS and MERS coronavirus vaccinations.. (WHO, 2020)

Vaccines of **COVID-19** without becoming sick assist our bodies in building resistance to the virus that causes COVID-19. Vaccines give protection in a variety of ways. T- and B-lymphocytes and other immune cells may still remember how to fight the virus in the future, regardless of whether or not they have been vaccinated.

After immunization, the body usually takes a few weeks to create T- and B-lymphocytes. A person may become infected with the virus that causes COVID-19 either before or immediately after immunization and subsequently become ill due to the vaccine not having provided enough time for protection. (WHO, 2020)

Immunization-building symptoms, such as Fever, might occur following immunization. These signs and symptoms are pretty normal, and they show that your body is working hard to build up its defences against infection.

COVID-19 may be prevented in numerous ways, one of which is by getting vaccinated. COVID-19 protection is vital since it can cause severe sickness or death in certain people. (WHO, 2020)

COVID-19 Vaccine

There are now a number of vaccines in use. Between Dec. 1 and Feb. 15, 2021, 175.3 million vaccine doses were administered during the first mass vaccination campaign. Three platforms were used to administer at least seven different vaccines.

Towards the end of 2020, the World Health Organization (WHO) authorized the Pfizer COVID-19 vaccine for use in emergencies (BNT162b2). On February 15th, 2021, WHO approved EULs for two AstraZeneca/Oxford COVID-19 vaccine versions manufactured by the Serum Institute of India and SKBio. The WHO granted Janssen's COVID-19 vaccine Ad26.COV2.S an EUL on March 12th, 2021. (Johnson & Johnson). It is expected that further vaccines will be EULed by

the WHO in June. The World Health Organization (WHO) routinely updates information on products and the status of regulatory assessment by the WHO.

To ensure the safety and effectiveness of vaccines, they must be approved by national authorities, manufactured to strict standards, and distributed. As part of this approach, WHO works with other organizations throughout the globe to ensure that the billions who will need COVID-19 immunizations have reasonable access to safe and effective vaccines.. (CDC, 2020)

Importance of the vaccine?

Vaccination is vital in the COVID-19 epidemic. Vaccination rates among youngsters have dropped since the outbreak, which might lead to a rise in illnesses and deaths from diseases that could have been prevented. According to WHO, notwithstanding the obstacles faced by COVID-19, governments should ensure that essential vaccines and health services continue to be provided. (WHO, 2020)

Who would find the COVID-19 vaccines?

Individuals over 18 years who have pre-existing diseases, particularly those with auto-immune disorders, can get the COVID-19 vaccination without fear of severe side effects. Hypertension, diabetes, asthma, lung, liver, and renal illness, and chronic infections that are stable and under treatment are among the diseases that fall under this classification.

If you have a damaged immune system, are pregnant, breastfeeding your infant, or have a history of serious allergies, especially to a vaccination (or any of the chemicals in the vaccine), discuss your case with your healthcare practitioner if supplies are supplied limited in your region. (WHO, 2020)

Can we stop getting safety measures after being vaccinated?

Because of COVID-19 vaccinations, people are less likely to get sick and die. After the first fourteen days of receiving a vaccine, your protection is minimal, but it builds over time. Immunity usually develops two weeks after receiving a single dose of a vaccine. Both doses of a two-dose vaccination are required to get the maximum level of protection. (WHO, 2020)

The immunization against COVID-19 may result in a positive sickness test, such as an Atigen or PCR lab. Is this possible? Results of the laboratory antigen test As a result, a person's immunity cannot be recognized during testing. Immunity to COVID-19 may be determined by performing a positive antibody (serology) test if the vaccination causes an immunological response. (WHO, 2020)

If get Covid-19 do I still need to vaccinated?

The vaccination should still be given (WHO, 2020) to you even if you've had COVID-19 in the past. COVID-19's effectiveness varies from person to person, and it is impossible to estimate how long a person's natural immunity will continue after taking the supplement. (WHO, 2020)

Can children be vaccinated?

As a precaution, vaccine is initially tested on adults before being given to children. A more serious and fatal illness, COVID-19, has also been found in the elderly population. It is being examined in children now that the immunizations have been proven safe in adults. We'll know more and have directions to follow after those investigations are complete. Make sure youngsters keep their physical distance from others, wash their hands often and cough and sneeze into the elbow of their shirt till further notice. They can also use a mask when the time is right.

References

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