

## Evaluation Study: Epidemiological Trends of COVID 19

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### Abstract

Coronavirus Disease or COVID-19 is still a concern around the world. The latest COVID-19 case situation is still showing a fairly high number or case, so the potential for transmission is great. there is still a great deal of contention encompassing it. As indicated by Brian Mahoney from the Related Press, Ron Artest is sending off a that will be shown the occurrence in this whole interestingly during Kickoff. Consequently, we drove an overview of studies associated with Covid 19, which were comprehensively applied in mid 2020 to the farthest furthest reaches of August 2020. As of recently, conclusive treatment for Coronavirus has not been found, patients with Coronavirus are just given supportive treatment. The method used in this research is a literature study, which is a study whose research object is in the form of library works, either in the form of scientific journals, books, articles in the mass media, as well as statistical data so as to describe the epidemiological trend of COVID 19. The purpose of writing this article is to knowing the distribution trend of COVID-19, which is still a pandemic issue.

**Keywords:** COVID-19; World Health Organization (WHO); Virus

### Introduction

The beginning of 2020 the world was shocked by an ailment that caused downfall with such straightforward transmission, explicitly through the respiratory plot. This disorder is brought about by an infection called crown, this sort of infection is another variant of an assortment of infections that can taint the respiratory framework and cause passing. By and large, the Covid was first recognized as causing the normal cold in 1960 [1]. The World Health Organization (WHO) in 2020 interpreted the Covid as an infection that will make the normal cold more serious diseases like Middle East Respiratory Syndrome (MERS-CoV) and Severe intense respiratory condition (SARSCoV) [2].

From December 31, 2019 to January 3, 2020, this case expanded quickly, set apart by the revealed 44 cases. In under a month, the

illness has spread to different areas in China, Thailand, Japan and South Korea. The example under concentrate on shows the etiology of the new Covid. At first, this infection was briefly named as 2019 novel Covid (2019-nCoV), then, at that point, WHO declared another name on February 11, 2020, to be specific Coronavirus Disease (COVID-19) brought about by the Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-CoV-2) infection [3]. The infection can be passed from one individual to another and has spread generally in China and in excess of 190 different nations and regions. On March 12, 2020, WHO proclaimed COVID-19 a pandemic. 6 As of March 29, 2020, there were 634,835 cases and 33,106 passages around the world. Meanwhile in Indonesia, 1,528 cases have been confirmed positive for COVID-19 and 136 deaths [4].

One of the important issues facing Indonesia, which has attracted the attention of other countries 1 as well as international

organizations, is the limited information regarding COVID-19 sufferers as well as data on actual fatalities. This situation may be caused by several things. First, the limited capacity of relevant institutions in gathering important and relevant information gives the impression that the government is not transparent in providing information related to COVID-19. Furthermore, with the rapid development of the spread of the virus, this limitation seems to worsen the synchronization of data collected between the central and local governments [5]. Second, the lack of a number of tests related to the limitations of the lab and test-kits causes information about the infection rate and spread of COVID-19 to be incomplete. Both of these have serious implications for understanding the situation of the spread of COVID-19. In a rapidly spreading pandemic situation, information, especially related to the epidemiological characteristics of the disease, is the key to non-medical health interventions [6].

Covid is important for a group of infections that cause illness in creatures as well as in people. In Indonesia, the principal instance of COVID-19 showed up in March 2020. From that point forward, the spread of COVID-19 has been progressively far and wide as of recently. Right now, the quantity of positive COVID-19 cases in Indonesia has contacted 4.07 million individuals with the loss of life arriving at 132,000 [7]. In Indonesia, actually battling the Corona Virus as of recently, as well as in different nations. The quantity of Corona Virus cases keeps on developing with some revealing recuperations, yet not a rare sorts of people who have passed on. Taking care of and avoidance endeavors keep on being done to battle COVID-19 with influenza like side effects [8].

The case started with pneumonia or puzzling pneumonia in December 2019. Instances of this puzzling pneumonia contamination were for sure viewed as in a significant number of these creature markets. The Corona infection or COVID-19 is believed to be conveyed by bats and different creatures that are eaten by people until transmission happens. Covid is no more unusual to the universe of creature wellbeing, yet a couple of types are fit for tainting people to become pneumonia. This case is thought to be connected with the Huanan creature market in Wuhan, which sells different sorts of creature meat, including those that are not generally consumed like snakes, bats, and different kinds of rodents. With this foundation, the Corona Virus isn't the main time that the world's residents are overreacting. Having the

same symptoms as the flu, the Corona Virus grows rapidly to cause a more severe infection and organ failure [9].

The very fast transmission of COVID-19 has a very broad impact on all people from countries around the world. Until now there is no vaccine or definite treatment for COVID-19, various public health interventions (non-pharmaceutical) have been used to control the spread of COVID-19. According to the WHO, preventive measures that can be taken are washing hands with soap or hand sanitizer, not touching the face area and wearing a mask [10]. The virus is spread mainly through droplets of saliva or out of the nose when an infected person coughs or sneezes, so it is important for everyone to practice cough etiquette by coughing into a bent elbow or with a tissue and throwing the residue in the trash and washing hands [11].

Based on the reviews that have been described, this literature review aims to find out the latest updates on epidemiology, virology, transmission, clinical symptoms, diagnosis, treatment, risk factors and prevention of COVID-19. This literature review is said to be necessary to collect the latest information about COVID-19 to make it easier for researchers and readers to conduct other research studies.

## Methods

The method used in this research is a literature study, which is a study whose research object is in the form of library works, either in the form of scientific journals, books, articles in the mass media, as well as statistical data so as to describe the epidemiological trend of COVID 19. The literature will be used as a reference. references in this article related to the distribution of COVID 19. This study aims to build and construct a stronger conception based on empirical studies that have been carried out.

## Results and Discussion

### Spread of COVID 19

As we know, the development of the spread of COVID-19 is happening so fast. The first and second instances of COVID-19 were declared by the Central Government on March 2, 2020, and the third and fourth cases were reported on March 6, 2020. In the mean time, Presidential Decree (Keppres) No. 7/2020 concerning the arrangement of a Rapid-Response Team drove by the Head of the National Disaster Management Agency (BNPB) was just given

on March 13, 2020, when the quantity of positive COVID-19 patients in Indonesia was recorded at 69 individuals [12]. The Head of BNPB further declared COVID-19 as a non-normal emergency, around the same time that the Minister of Transportation Budi Karya was reported to have contracted COVID-19 on March 14, 2020, when the quantity of positive COVID-19 patients in Indonesia was recorded as 96 individuals. The next day, the President and all individuals from the bureau went through a test, on the day when the quantity of positive crown patients in Indonesia had expanded to 117 individuals [13].

The first and second cases in Indonesia were members at a party club occasion in Jakarta. Both were associated with contracting COVID-19 from an unfamiliar public partaking in the club occasion who was tracked down certain for COVID-19 abroad subsequent to going to the occasion. The Health Service and Police did a tracing and found that at least 80 people were exposed to the first and second patients in the event. After testing, two people tested positive for the corona, then became the third and fourth cases. It was later discovered that the fifth case was still related to the Jakarta cluster/dance club [14].

After the fifth case, imported cases began to be found, such as in the sixth case, which was an Indonesian crew member (ABK) from the Diamond Princess cruise ship who was previously quarantined for 14 days in Japan because the passengers were positive for COVID-19 [15]. At that time, many other imported cases began to be found, from Indonesian citizens who had returned from traveling abroad. What seemed simple in the initial five cases, it was discovered later that it was only the tip of the iceberg as the growth of new cases moved exponentially. Epidemiology of COVID-19 was declared a global pandemic on March 11, 2020 by WHO. It was first reported in the Chinese city of Wuhan, then in less than a year it has spread to all countries in the world [16].

### Global

The first case of COVID-19 was discovered in December 2019 in Wuhan, China. After that, the SARS-Cov-2 virus spread to all parts of China within a few weeks, and to other countries within a few months. As of July 2021, COVID-19 has been found in 216 countries, with a total of more than 190,000,000 confirmed cases. The United States is the country with the most COVID-19 cases, with more than 33,000,000 cumulative cases. This is followed by India with around 31,000,000 cases and Brazil with around 19,000,000 cases [17].

**Figure 1**

Sumber: Kompas, 2021.

### Indonesia

The first confirmed case of COVID-19 in Indonesia was reported on March 2, 2020, with 2 patients. Until July 2021, COVID-19 in Indonesia has approached 3,000,000 confirmed cases and is ranked 14<sup>th</sup> in the cumulative total of COVID-19 cases in the world [18]. Additional COVID-19 cases in Indonesia are slowly starting to fall compared to the peak in mid-February 2022. Indonesia, the number of COVID-19 cases is still quite high, as can be seen in figure 2.

**Figure 2**

Sumber: Kompas, 2021

## Mortality

Death from COVID-19 can be associated with acute respiratory distress syndrome (ARDS) or septic shock. As of July 2021, the global mortality due to COVID-19 is more than 4,000,000. The case fatality rate (CFR) of COVID-19 in the world is 2.15%. However, mortality in the pediatric population is reported to be lower. Meanwhile in Indonesia, the death toll from COVID-19 in July 2021 was around 76,000 cases. So that the CFR of COVID-19 in Indonesia is higher than the world, which is 2.58% [19].

## Corona virus symptoms

Early side effects of Corona infection contamination or COVID-19 can look like influenza side effects, in particular fever, runny nose, dry hack, sore throat, and migraine. From that point forward, the side effects might vanish and mend or even deteriorate. Patients with extreme side effects might encounter high fever, hack with mucus and even blood, windedness, and chest torment. These side effects seem when the body responds to the Corona infection. As a rule, there are 3 general side effects that can demonstrate an individual is tainted with the Corona infection, in particular: 1. Fever (internal heat level over 38 degrees Celsius) 2. Dry hack 3. Windedness There are a few different side effects that can likewise show up in Corona infection disease albeit less oftentimes, to be specific: a. loose bowels b. Cerebral pain c. Conjunctivitis d. Loss of capacity to taste or smell e. Rash on the skin These side effects of COVID-19 for the most part show up in somewhere around 2 days to about fourteen days after the patient is presented to the Corona infection [20].

## Causes of corona virus infection

Coronavirus infection is caused by the corona virus itself. Most corona viruses spread like other viruses in general, such as: 1. Splashes of the sufferer's saliva (coughing and sneezing). 2. Touching the hands or face of an infected person. 3. Touching the eyes, nose, or mouth after handling items that have been splashed by the saliva of a person with the corona virus. 4. Feces or feces (rare) Especially for COVID-19, the incubation period is not known for certain. However, the average symptom that appears after 2-14 days after the first virus enters the body. In addition, the method of transmission of COVID-19 is also not known with certainty. Initially, the COVID-19 type of corona virus was thought to have originated from animals. The COVID-19 coronavirus is a virus that circulates in several animals, including camels, cats and bats [21].

Transmission of COVID-19 transmission is divided into several types, including the following: a. Contacts and droplets Transmission of COVID-19 occurs through direct, indirect or close contact with people infected with COVID-19 through saliva and droplets that come out of people with COVID-19 when talking, singing, coughing and other activities. Transmission through droplets can occur at a distance of approximately 1 meter (WHO, 2020). b. Airborne transmission is defined as an infectious agent caused by the spread of droplets that float and are still in an infectious state and can move far (WHO, 2020). c. Fomit is transmission caused by contamination of surfaces and objects exposed to droplets from people infected with COVID-19 (WHO, 2020) [22].

## Risk factor

Based on the research conducted, comorbid hypertension, diabetes mellitus, male gender and smoking are risk factors for COVID-19. Patients with male sex are thought to be due to the high prevalence of smoking in men (Cai, 2020). Other vulnerabilities also occur in cancer patients and chronic liver disease. Cancer is associated with immunosuppressive reactions, while chronic liver disease has a decreased immune response, increasing the risk of contracting COVID-19 [23].

## Prevention

WHO issued the following recommendations for preventing COVID-19 (WHO, 2019): a. Diligently wash your hands with alcohol as well as soap and water to kill the virus b. Maintain a distance of 1 meter from other people c. Avoid crowded places and allow contact with other people d. Do not touch eyes, nose and mouth directly before cleaning hands e. Stay at home to avoid contact with other people f. If you experience the general symptoms of COVID-19, seek medical help immediately. g. Always access verifiable and reliable information regarding COVID-19. Cases of infection with the Corona virus or COVID-19 that are still endemic can be prevented in a simple way. Here are four ways to prevent the Corona virus or COVID-19 [24].

## Conclusion

COVID-19 is a new type of disease with high transmission and can cause severe effects and even death. So that much further research is needed to clarify all aspects of this disease.

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