



THE GLOBAL IMPACT OF COVID-19 PANDEMIC ON MATERNAL AND CHILD HEALTH SERVICES AND THEIR HEALTH STATUS

Satrinawati Berkat

Associate Professor

Jurusan Kebidanan (Department of Midwifery)

Poltekkes Kemenkes Aceh (Health Polytechnic of Aceh), Aceh Besar, Aceh Province, Indonesia

Abstract: Coronavirus disease (Covid-19) is an infectious disease caused by the SARS-CoV-2 virus. Globally, as of 23 December 2021, there were 276,436,619 people infected with COVID-19, and 5,374,744 of them died. Covid-19 not only has an impact on the health crisis but also affects and causes economic, social, and political crises. Globally, maternal and child health services (MCH) have also been impacted by the COVID-19 pandemic. The purpose of this study was to analyze the global impact of the Covid-19 pandemic on maternal and child health services and its effect on their health status. This study was a literature review. During the pandemic, the coverage of MCH services has decreased, children born during the COVID-19 pandemic have decreased verbal, motoric, and cognitive abilities compared to the children who were born before the pandemic, which increased the maternal mortality ratio (MMR). stillbirth, ruptured ectopic pregnancies, and depression in mothers.

Keywords: Covid-19, MCH services, health status

I. INTRODUCTION

Coronavirus disease (Covid-19) is an infectious disease caused by the SARS-CoV-2 virus. This disease was first found in Wuhan, China, in January 2020 and has spread worldwide. The health impact of Covid-19 on everyone is different. Many people infected with COVID-19 experience mild to moderate symptoms and recover without being hospitalized, but this disease causes them to be hospitalized and causes death for others. Covid-19 patients usually suffer fever, cough, fatigue, loss of taste and smell. Less common symptoms are sore throat, headache, joint aches and pains, diarrhea, skin rash, changes in fingers and toes, red and irritated eyes. Meanwhile, severe symptoms suffered by Covid-19 patients include difficulty breathing to shortness of breath, loss of voice and inability to move, confusion, chest pain that can lead to death.¹

The SARS-CoV-2 virus that causes Covid-19 changes over time. Most of the changes have little impact on the properties of the virus. However, some changes can affect the nature of the virus, such as how easily it spreads, the severity of the associated disease, the vaccine's effectiveness against it, the effectiveness of the drugs used, the validity of diagnostic and treatment tools. Until November 2021, this virus has developed into several variants. In Wuhan, China, the first encountered variant was the alpha variant, and the last identified by the World Health Organization (WHO) in November 2021 was the omicron variant.² Figure 2 shows the development of the Covid-19 variant observed by WHO.

WHO label	Pango lineage*	GISAID clade	Nextstrain clade	Additional amino acid changes monitored*	Earliest documented samples	Date of designation
Alpha	B.1.1.7	GRY	20I (V1)	+S:484K +S:452R	United Kingdom, Sep-2020	18-Dec-2020
Beta	B.1.351	GH/501Y.V2	20H (V2)	+S:L18F	South Africa, May-2020	18-Dec-2020
Gamma	P.1	GR/501Y.V3	20J (V3)	+S:681H	Brazil, Nov-2020	11-Jan-2021
Delta	B.1.617.2	G/478K.V1	21A, 21I, 21J	+S:417N +S:484K	India, Oct-2020	VOI: 4-Apr-2021 VOC: 11-May-2021
Omicron*	B.1.1.529	GRA	21K, 21L 21M	+R346K	Multiple countries, Nov-2021	VUM: 24-Nov-2021 VOC: 26-Nov-2021

Figure 1: Variants of concern (VOCs) SARS-CoV-2 by WHO

Globally, as of 23 December 2021, there were 276,436,619 people infected with COVID-19, and 5,374,744 of them died. The highest spread of Covid-19 cases is in the Americas, with more than 100 million cases. The ten countries in the world with the highest number of Covid-19 instances are the United States, India, Brazil, England, Russia, Turkey, France, Germany, Iran, and Spain.³ Meanwhile, the number of people infected with Covid-19 in Indonesia until December 25, 2021, was 4,261,667 people, and 144,053 of them died.^{4,5} Figure 2 shows the global situation of the spread of Covid-19 in 2021

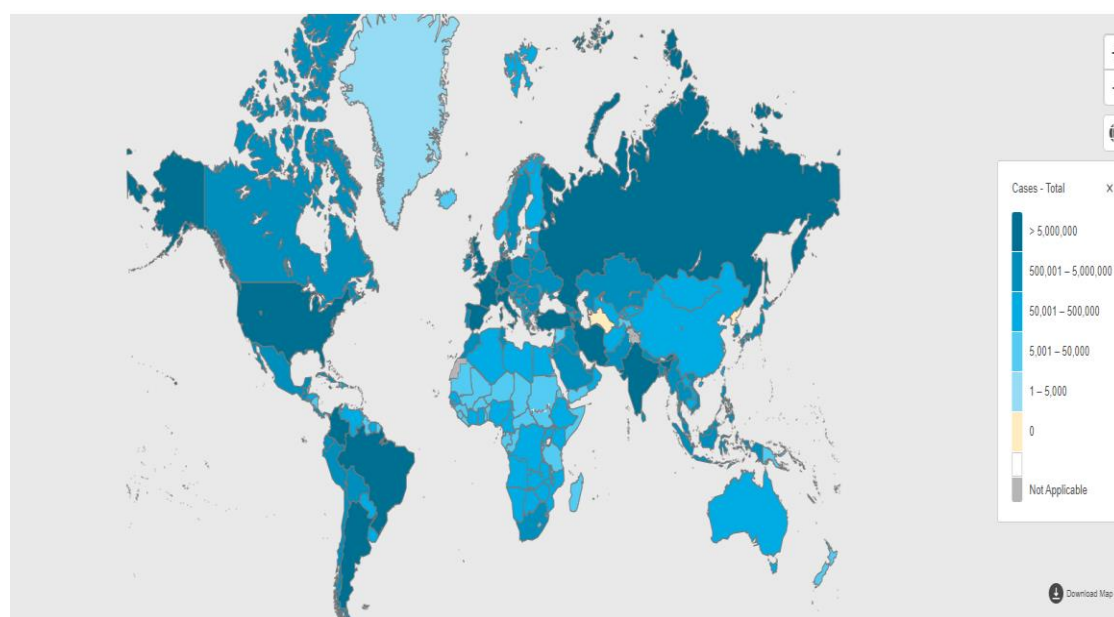
Figure 2: Global situation of Covid-19.³

Figure 3 shows the number of cases of Covid-19 based on the WHO working area. America is the region with the highest number of Covid-19 sufferers globally, more than 100 million sufferers. The European continent ranks second with the number of Covid-19 sufferers of more than 19 million people

Situation by WHO Region

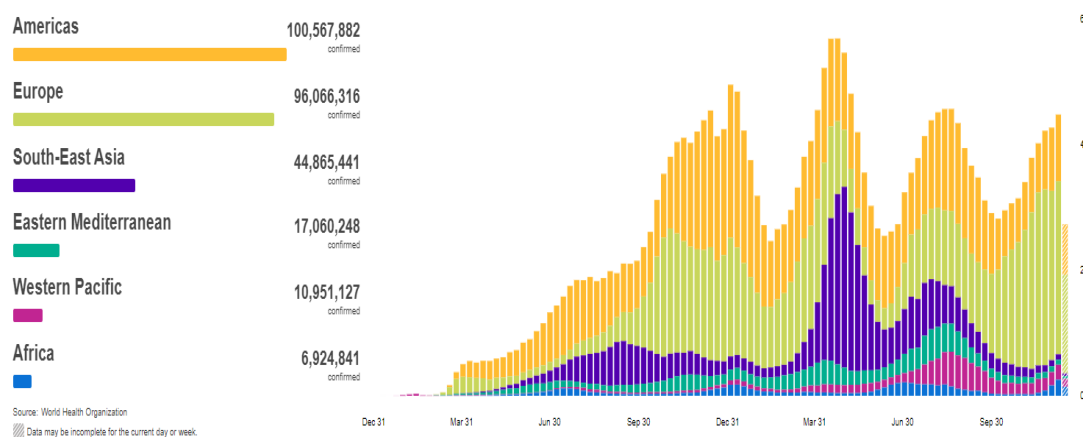
Figures 3: Incident rate of Covid-19 based on Area.³

Figure 4 shows a list of the ten countries with the highest Covid-19 incidence rates in the world. The United States has the highest number of Covid-19 sufferers globally, followed by India and Brazil.

Country	Total Cases	New Cases	Deaths	Recoveries	Metric 1	Metric 2
United States of America	52,543,602	1,646,613	812,577	10,913	146.61	60.36
India	34,808,886	50,405	480,592	2,267	100.65	40.52
Brazil	22,246,276	30,420	618,534	661	148.28	66.11
The United Kingdom	12,338,680	615,425	148,021	585	187.9	69.13
Russian Federation	10,458,271	165,288	307,022	6,753	96	43.58
Turkey	9,364,508	154,768	81,917	1,139	147.1	61.53
France	9,070,254	600,652	120,605	1,215	177.3	72.4
Germany	7,066,412	187,703	111,219	1,895	171.1	70.29
Iran (Islamic Republic of)	6,188,857	13,075	131,474	307	138.36	60.95
Spain	6,032,298	383,197	89,253	242	165.4	74.86

Figures 4 Ten countries with the highest number of Covid-19 cases in the world:³

Several recent research results conclude that several risk factors can cause severe conditions in patients with Covid-19, to cause death, including old age (> 65 years), cancer, chronic lung, chronic kidney, chronic liver, dementia. Or other neurological diseases, diabetes type 1 & 2, down syndrome, heart disease, HIV, autoimmune, mental illness, overweight & obesity, pregnancy, smoking, and tuberculosis.⁶

The Covid-19 pandemic is a severe global health crisis and is the biggest problem facing the world since the second world war, and we do not know when it will end. Covid-19 not only has an impact on the health crisis but also affects and causes economic, social, and political crises.⁷ Globally, the Covid-19 pandemic has caused world inflation to reach 3.2% (2020) and 3.5% (2021)⁸ and in general world economic growth in 2021 is estimated to decrease by only 5.9%.⁹ The poverty rate in Indonesia has also increased from 9.22% (September 2019) to 10.14% in March 2021.¹⁰ The Covid-19 pandemic has also affected world politics, such

as schedule changes general elections, changes in the frequency of legislative sessions, demonstrations due to disappointment with the government to the occurrence of a coup.¹¹

In addition to causing an increase in the mortality rate, Covid-19 also causes an increase in the number of sufferers of diseases that are long-term effects (long Covid-19) that were not previously suffered by Covid-19 survivors, such as hypertension, respiratory disorders, metabolic disorders, psychological disorders, etc. . In addition, the Covid-19 pandemic has also hampered the management of various diseases that are very susceptible to transmission in the community, such as tuberculosis, malaria, HIV/AIDS, etc. The Covid-19 pandemic has also disrupted the health system and changed health services usually carried out in health facilities because they must follow the procedures for preventing the transmission of Covid-19 set by WHO and the government.¹²

Globally, maternal and child health services (MCH) have also been impacted by the COVID-19 pandemic. Some MCH and health care services in Indonesia are carried out online until services are postponed, such as: if there are no danger signs, second trimester ANC can be done by teleconsultation, classes for pregnant women are carried out online, newborns from mothers who are confirmed to have Covid-19 do not receive an IMD. , family planning acceptors (IUD, Implant, MOW, and MOP) do not need to be re-controlled unless there are complaints, marriage counseling is postponed/abolished, etc.¹³ The purpose of this study was to analyze the global impact of the Covid-19 pandemic on maternal and child health services and its effect on their health status.

II. RESEARCH METHODOLOGY

This study was a literature review, by reviewing scientific articles published in international journals and data from the website of the world organizations between 2020-2021 regarding Covid-19, the impact of the Covid-19 pandemic on maternal and child health services, and the impact of Covid-19 on maternal and child health status. Analysis of data using analytical methods, namely through the process of analyzing data or information by providing arguments through logical thinking and then drawing a conclusion

III. RESULTS AND DISCUSSION

3.1. Result

According to the results of a review of 25 articles, it was found that the global impact of the pandemic Covid-19 on maternal and child health services and their health status were:

a. Maternal and child services

The coverage of MCH services has decreased. The disruption or change in the MCH service system impacts program coverage. Several studies conducted around the world concluded this, such as a study conducted in Mozambique which concluded that family planning visits fell by 28% and first visit of antenatal care (ANC) fell by 26%⁽¹⁴⁾. A study in Indonesia concluded that during the Covid-19 pandemic, there was a decrease in ANC visits by up to 30%, basic immunization coverage and weighing for toddlers also decreased due to the cessation of posyandu (MCH service activities made by the community and health workers in each village for each month).⁽¹⁵⁾

In India, there has been a decrease in the number of deliveries in health facilities, a reduction in ANC rates by 23%, and basic immunization by more than 20%.⁽¹⁶⁾ Many breastfeeding counseling services in the USA are abolished or replaced by using telemedicine.⁽¹⁷⁾ and in Italy, there has been a decline in the number of exclusive breastfeeding.⁽¹⁸⁾ In some countries, the pandemic Covid-19 has also resulted in an increase in the number of deliveries carried out at home and assisted by the traditional shamans.⁽¹⁹⁾ MCH services in several countries in Africa were wholly paralyzed for several months, and after MCH services were reopened, the rate of ANC, postnatal care and immunization decreased sharply.⁽²⁰⁾

b. Maternal and child health status

The United Nations Children's Fund (UNICEF) reports that nearly 80 million children and adolescents in Indonesia have been affected by the Covid-19 pandemic, including those related to education, nutrition, economics, and security. ⁽²¹⁾ A study conducted in Rhode Island (USA) concluded that children born during the COVID-19 pandemic have decreased verbal, motoric, and cognitive abilities compared to the children who were born before the Covid-19 pandemic. ⁽²²⁾

Besides changing MCH programs and activities, the pandemic Covid-19 has also increased the maternal mortality ratio (MMR). The MMR in Mexico will increase by almost 60% between 2020-2021. ⁽²³⁾, and MMR in Brazil increased by almost 60% in 2020, compared to the previous year. ⁽²⁴⁾ Globally, the pandemic COVID-19 has caused an increase in MMR, stillbirth, ruptured ectopic pregnancies, and depression in mothers ⁽²⁵⁾

3.2. Discussion

The pandemic Covid-19 that has hit the world has caused a complexity of health problems and has developed into economic, political, and social issues. Toward coming out or reducing the impact of the Covid-19 pandemic, a comprehensive solution is needed to overcome the problems. It is still difficult for all countries in the world, even WHO to find the right solution to end this pandemic, especially with the emergence of new variants so it is impossible to predict when this pandemic will be the end. It is because Covid-19 is a newly developing disease, and there is still a lack of existing evidence-based so that treatment for patients and policies to overcome its effects are not optimal and even tend to change all the time. Nevertheless, every country and organization concerned about this must still make policies that can reduce the impact of Covid-19 on society.

Regarding MCH services, the development of digital health must be a priority for all countries to reduce transmission and overcome the impact of Covid-19 on mothers and children. Digital health methods must also be balanced with the development of internet networks, especially in poor and developing countries. In addition, improvements to Covid-19 service facilities and infrastructure, including the use of primary health care as a Covid-19 treatment center for mothers and children, are also urgently needed so that pregnant and postpartum women who suffer from Covid-19 receive optimal care. The standard operational procedure (SOP) for treating Covid-19 patients must also be better following evidence-based, which continues to be carried out by researchers, and policies related to the prevention and reduction of the impact of Covid-19 must also be reviewed based on evidence-based.

IV. CONCLUSION

By the end of 2021, around 276 million people worldwide will have been infected with Covid-19 and around 5 million of them have died. The global impact of the Covid-19 pandemic on maternal and child health services as well as maternal and child health status includes a decrease in the coverage of MCH services, an increase in maternal mortality, and stillbirth. To avoid the transmission of Covid-19 and maintain the continuity of MCH services, the development of digital health must be the government's priority

V. REFERENCES

1. World Health Organization, Corona Virus Diseases (Covid-19), Available at: https://www.who.int/health-topics/coronavirus#tab=tab_2
2. World Health Organization, Tracking SARS-CoV-2, Available at: <https://www.who.int/en/activities/tracking-SARS-CoV-2-variants/> Updated: December 2021
3. World Health Organization, WHO Corona Virus (Covid-19) dashboard, Available at: <https://covid19.who.int/>. Updated: 23 December 2021
4. Satuan Tugas Penanganan Covid-19. Data Sebaran Covid-19. Available at: <https://covid19.go.id/>. Updated: 25 Desember 2021.
5. World Health Organization, Covid-19- Indonesia. Available at: <https://covid19.who.int/region/searo/country/id>. Updated: 25 Desember 2021
6. Centers for Diseases Control and Prevention (CDC). Covid-19: People with Certain Medical Conditions. Available at: <https://www.cdc.gov/coronavirus/2019-ncov/need-extra-precautions/people-with-medical-conditions.html>. Updated: 14 Desember 2021.

7. United Nations Development Programme (UNDP). Covid-19 Pandemic. Available at: https://www.my.undp.org/content/malaysia/en/home/coronavirus.html?utm_source=EN&utm_medium=GSR&utm_content=US_UNDP_PaidSearch_Brand_English&utm_campaign=CENTRAL&c_src=CENTRAL&c_src2=GSR&gclid=Cj0KCQIAwqCOBhCdARIsAEPyW9kYFyFRgkco2vwi5KsvefafVBXVieAC15d_rlcJggqMX0_XywwrvoIaAtH9EALw_wcB.
8. Statista. Global inflation rate from 2016 to 2026. Available at: <https://www.statista.com/statistics/256598/global-inflation-rate-compared-to-previous-year/>. Updated: 16 Juni 2021
9. International Monetary Fund (IMF). World Economic Outlook October 2021. Available at: <https://www.imf.org/en/Publications/WEO/Issues/2021/10/12/world-economic-outlook-october-2021#Gdp>.
10. Badan Pusat Statistik (BPS). Persentase Penduduk Miskin Maret 2021 turun menjadi 10,14 persen. Available: <https://www.bps.go.id/pressrelease/2021/07/15/1843/persentase-penduduk-miskin-maret-2021-turun-menjadi-10-14-persen.html>.
11. Stasavage D, Democracy, Autocracy, and Emergency Threats: Lessons for COVID-19 From the Last Thousand Years. 2020. Cambridge University Press. Available at: <https://www.cambridge.org/core/journals/international-organization/article/democracy-autocracy-and-emergency-threats-lessons-for-covid19-from-the-last-thousand-years/C4A106463606BE4C0310E56A3A15F5B7>
12. Bill & Melinda Gates Foundation. COVID-19 A Global Perspective. Available from: <https://www.gatesfoundation.org/goalkeepers/report/2020-report/#GlobalPerspective>
13. Kemenkes RI, Pedoman bagi Ibu Hamil, Bersalin, Nifas dan Bayi Baru Lahir, di Era Pandemi Covid-19. Jakarta. 2020
14. Pires,P, H., Abdirazak,C.M.A., Mucufu,J, R., Mupueleque,M, A., Zakus,D., Siemens, R & Belo, C, F. 2021. Covid-19 pandemic impact on maternal and child health services access in Nampula, Mozambique: a mixed methods research. BMC Health Services Research. Vol 21; 860
15. Saputri, N.S., Anbarani, M.D., Toyamah, N., Yumna, A.,2020. dampak pandemic Covid-19 terhadap Layanan Gizi dan KIA; Studi Kasus di Lima Wilayah Indonesia. Smeru Research Institute.
16. Singh, A, K., Jain, P,K., Singh, N, P., Kumar, S., Bajpai, P, K., Singh, S., Jha, M.2021. Impact of COVID-19 pandemic on maternal and child health services in Uttar Pradesh, India. J Family Med Prim Care. 10(1): 509–513.
17. Ruwisch, J, S., & Philips, K, E. 2021. Breastfeeding During a Pandemic: The Influence of COVID-19 on Lactation Services in the Northeastern United States. Journal of Human Lactation. Vol 37.
18. Latorre, G., Guida, P., Martinelly, D., Masi, E., Benedictis, R and Maggio, L.2021. Impact of COVID-19 pandemic lockdown on exclusive breastfeeding in non-infected mothers. International Breastfeeding Journal, Vol: 16/ 36.
19. Omber, S, O., 2021. Access to Maternal Health Services During the COVID-19 Pandemic: Experiences of Indigent Mothers and Health Care Providers in Kilifi County, Kenya. Frontier and Sociology. 7;6:613042
20. Shapira, G., Ahmed, T., Drouard, S,H,P., Fernandez, P,A., Kandpal, E., Nzelu, et al.2021. Disruptions in maternal and child health service utilization during COVID-19: analysis from eight sub-Saharan African countries. Health Policy Plan. 36(7):1140-1151
21. United Nations International Children's Emergency Fund (UNICEF), 80 million children in Indonesia face widespread impact from COVID-19 pandemic. Available at: <https://www.unicef.org/indonesia/press-releases/80-million-children-indonesia-face-widespread-impact-covid-19-pandemic>.
22. Deoni, S,C,L., Beauchemin, J & Volpe, A. 2021. Impact of the COVID-19 Pandemic on Early Child Cognitive Development: Initial Findings in a Longitudinal Observational Study of Child Health. medRxiv..08.10.21261846.
23. Dominguez, N,M., Zaldivar, K, S., Carro, S,G., Banik, S,D., Carrillo, G. 2021. Maternal mortality during the COVID-19 pandemic in Mexico: a preliminary analysis during the first year. BMC Public Health.Vol 21; 1297
24. Sauer, R,C,O., Costa, M, C,N., Teixeira,M, G., Nascimento, E,M,R, Silva, E,M., Barbosa, M,L. 2021. Impact of COVID-19 pandemic on time series of maternal mortality ratio in Bahia, Brazil: analysis of period 2011-2020. BMC Pregnancy Childbirth. 10;21(1):423
25. Chmielewska,B., Barratt, I.,Townsend, R.2021. Effects of the COVID-19 pandemic on maternal and perinatal outcomes: a systematic review and meta-analysis. The Lancet Global Health. Vol 9/6.