Al-Risalah

forum Kajian Hukum dan Sozial Kemazyarakatan

Vol. 22 No. 2, December 2022 (pp. 241-257)

p-ISSN: 1412-436X e-ISSN: 2540-9522

# THE PROBLEM OF NON-COMMUNICABLE DISEASE SERVICE POLICY DURING COVID-19 IN INDONESIA AND MALAYSIA

# Budiarsih\*, Yovita Arie Mangesti, Muhammad Chaidar

Universitas 17 Agustus 1945 Surabaya Jl. Semolowaru 45, Surabaya, Jawa Timur 60118 \*email: budiarsih@untag-sby.ac.id

#### Anisah Che Ngah

Taylor's University, Malaysia No. 1 Jalan Taylor's 47500 Subang Jaya, Selangor Darul Ehsan, Malaysia

DOI: 10.30631/alrisalah.v22i2.1270

Submitted: September 28, 2022; Revised: December 25, 2022; Accepted: December 30, 2022

Abstract: This research aims to highlight the problem of NCD during the Covid 19 pandemic. In both Indonesia and Malaysia, NCDs are the number one killer that has caused tremendous stress on the healthcare system. Policies that focused on Covid only at that time created new problems for NCD. Restrictions on coming to the hospital made NCD patients not helped or try to treat themselves, this certainly had a negative and positive impact on NCD patients during Covid 19 in Indonesia and Malaysia. The research method used in this study is a socio-legal approach by examining various primary and secondary sources in the form of comparative studies with sources of legislation, books, journals, and online sources as well as interviews conducted at random among NCD patients to measure their response during the pandemic. Covid -19. The findings show that policies and management in Indonesia and Malaysia for NCD patients during COVID -19 have a negative and positive impact. Learning from the pandemic, both countries need to make regulations or laws during a pandemic or epidemic emergency so that people are protected.

**Keywords:** Policies, Services, Non-Communicable Diseases

Abstrak: Penelitian ini bertujuan menyoroti masalah NCD selama pandemi Covid -19. Baik di Indonesia maupun Malaysia, PTM adalah pembunuh nomor satu yang menyebabkan tekanan luar biasa pada sistem perawatan kesehatan. Kebijakan yang hanya fokus pada Covid pada saat itu menimbulkan masalah baru bagi NCD. Pembatasan datang ke rumah sakit membuat pasien PTM tidak tertolong atau berusaha untuk mengobati dirinya sendiri, hal ini tentunya berdampak negatif dan positif bagi pasien PTM selama Covid 19 di Indonesia dan Malaysia. Metode penelitian yang digunakan dalam penelitian ini adalah pendekatan sosiolegal dengan mengkaji berbagai sumber primer dan sekunder berupa studi banding dengan sumber peraturan perundang-undangan, buku, jurnal, dan sumber online serta wawancara yang dilakukan secara acak kepada pasien PTM untuk mengukur tanggapan mereka selama pandemi. Covid 19. Temuan

menunjukkan bahwa kebijakan dan manajemen di Indonesia dan Malaysia untuk pasien PTM selama COVID -19 memiliki dampak negatif dan positif. Belajar dari pandemi, kedua negara perlu membuat regulasi atau undang-undang di masa darurat pandemi atau wabah agar masyarakat terlindungi

Kata Kunci: Kebijakan, Layanan, Penyakit Tidak Menular

### Introduction

The policy is a political decision that guides action which is usually in the form of a rule of law, while the purpose of the policy is used for the success of a goal. In this context, it is the policy of setting rules to overcome the Covid pandemic, all decisions related to the pandemic have been issued by the government to overcome the problem of death due to the Covid disaster at that time. Decisions in emergencies or force majeure are certainly taken quickly to overcome the pandemic.1 Of course, we really cannot judge whether the policy decision at that time was the right choice or the wrong one because at that time the conditions were tense with the number of deaths from Covid-19. Is a global pandemic that has an impact on financial, psychological, physical, and relationships around the world.<sup>2,3,4</sup> Including the health systems in Indonesia and Malaysia.

All the efforts of the two countries to focus on handling and overcoming Covid patients turned out to have policies that impact the treatment of services and the handling of other diseases, and in this context are patients with non-communicable NCDs. Diverting the focus on NCD patients to delay the disease which during Covid disrupted access to NCD health services and treatment.<sup>5</sup> And on the contrary, large funds are allocated to overcome the Covid-19 outbreak.<sup>6</sup> Based on this policy decision, is considered a policy decision that on the one hand brings the concept of injustice to some people who feel they have the same right to get the right basic health services.

Various policies at that time such as the implementation of social distancing, quarantine, and total lockdown strategies. spending billions on imported vaccines, medical devices, and allowances for health workers. Which in the end temporarily ignores NCD management being second and considers services to be suspended and suspended for a while.

NCDs have been recognized globally as the leading cause of death worldwide.<sup>7</sup> The World Health Organization (WHO) reports that 63% of middle-income countries and 80% occur in low-income countries. Must

Roxana Filip and others, 'Global Challenges to Public Health Care Systems during the COVID-19 Pandemic: A Review of Pandemic Measures and Problems', Journal of Personalized Medicine, 12.8 (2022), 1295.

<sup>&</sup>lt;sup>2</sup> Bee-Lia Chua and others, 'Impact of Health Risk Perception on Avoidance of International Travel in the Wake of a Pandemic', Current Issues in Tourism, 24.7 (2021), 985–1002.

Syed Mustafa Ali Shah and others, 'Prevalence, Psychological Responses and Associated Correlates of Depression, Anxiety and Stress in a Global Population, during the Coronavirus Disease (Covid-19) Pandemic', Community Mental Health Journal, 57.1 (2021), 101–10.

<sup>&</sup>lt;sup>4</sup> Vikram Thakur and Anu Jain, 'Covid 2019-Suicides: A Global Psychological Pandemic', *Brain, Behavior, and Immunity*, 88 (2020), 952.

<sup>&</sup>lt;sup>5</sup> Linda M Mobula and others, 'Protecting the Vulnerable during Covid-19: Treating and Preventing Chronic Disease Disparities', *Gates Open Research*, 4 (2020).

<sup>&</sup>lt;sup>6</sup> Catherine Arsenault and others, 'Covid-19 and Resilience of Healthcare Systems in Ten Countries', *Nature Medicine*, 2022, 1–11.

Hebe N Gouda and others, 'Burden of Non-Communicable Diseases in Sub-Saharan Africa, 1990–2017: Results from the Global Burden of Disease Study 2017', The Lancet Global Health, 7.10 (2019), e1375–87.

bear the burden of NCD which must be addressed immediately because it has serious impacts on society and death.<sup>8,9</sup>

The World Health Organization (WHO) in 1946 stated that health is a right that is highly upheld<sup>10</sup> it is the obligation of the state to seek proper health efforts for its citizens as stated in the Alma Ata Declaration conference and UNICEF<sup>11</sup> The WHO and UNICEF declaration affirmed the right to health which is part of human rights so that the fulfillment of the right to health is the responsibility of the state and is a goal of the whole world which must also be supported by various sectors.

In Indonesia, several regulations and health policy provisions have been regulated, among others, in the provision of the right to health services which is a basic right that has been regulated in Article 28H paragraph (1) and Article 4 of Law Number 36 of 2009 concerning Health. As well as Article 28I paragraph (4) of the 1945 Constitution, <sup>12</sup> Article 4 of Law Number 36

World Health Organization, 'The Impact of the COVID-19 Pandemic on Noncommunicable Disease Resources and Services: Results of a Rapid Assessment', 2020. the Year 2009 concerning Health,<sup>13</sup> and Article 28I paragraph (4) of the 1945 Constitution.

So the responsibility of the state to maintain public health is getting heavier. The state must optimize the allocation of state finances, and existing regulations, without neglecting other health sectors. However, at the level of implementation of health services, there is still a lot of discrimination <sup>14</sup> where many NCD patient care is delayed, canceled, or rejected.

Malaysia is a country with a federal system in the form of a kingdom, the kingdom imposes an obligation on the Federal Government to provide medicines and health facilities, namely hospitals, pharmacies, clinics, and the like.<sup>15</sup>

Malaysia has a dual health care system consisting of the public and private sectors as well as non-profit health care which is usually managed by a charity known as PUSRAWI. During the Covid-19 pandemic together they allied to fight Covid-19 by helping hand in hand to ensure that the basic health needs of the population are protected<sup>16</sup>.

<sup>9</sup> Robert Beaglehole and Ruth Bonita, 'Priority Actions for the Non-Communicable Disease Crisis-Authors' Reply', The Lancet, 378.9791 (2011), 565-66.

attaining the highest possible standard of health is a human right" (enjoying the highest attainable standard of health is one of the basic rights of every human being)."

The Conference reaffirmed that health is a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity, is a fundamental human right and that the achievement of the highest possible level of health is the most important social goal worldwide, the realization of which requires action. from many other social and economic actions.

<sup>&</sup>quot;...everyone has the right to live in physical and spiritual prosperity, to have a place to live, and to have the right to a good life and a healthy environment and is entitled to pela: stating that "everyone has the right to health". The right to a healthy life for the population,

including for the poor and underprivileged, so that it cannot be denied that health has become a legal right that is guaranteed, protected, respected, and must be fulfilled by the government..

<sup>&</sup>lt;sup>13</sup> The protection, promotion, enforcement and fulfillment of human rights is the responsibility of the state, namely the government

Lisa A Marchiondo, Ernest Gonzales, and Larry J Williams, 'Trajectories of Perceived Workplace Age Discrimination and Long-Term Associations with Mental, Self-Rated, and Occupational Health', The Journals of Gerontology: Series B, 74.4 (2019), 655–63.

Malindawati Mohd Fadzil and others, 'Specialists' Dual Practice within Public Hospital Setting: Evidence from Malaysia', in *Healthcare* (MDPI, 2022), x, 2097.

Ching Siang Tan and others, 'Public and Private Sectors Collective Response to Combat COVID-19 in Malaysia', *Journal of Pharmaceutical Policy and Practice*, 14.1 (2021), 1–4.

Malaysia also follows the provisions of WHO and the Alma-Ata Declaration, so the kingdom also has a responsibility to ensure that the health system provides equitable and accessible healthcare to the public. The vision and mission of the Ministry of Health (KKM) have long-term and medium-term goals and plans, including Preventing, controlling, eliminating, and eradicating the disease. To rehabilitate and promote healthy living. As well as realizing sustainable, responsive, equitable, accessible, reliable and affordable health services.

The number of hospitals, community clinics, and other facilities such as Specialized Medical Institutions (National Heart Institute, Pediatric Institute, and Respiratory Medicine Institute) has been increasing year by year.<sup>17</sup>

In Malaysia the rapid spread of Covid-19, so there is no alternative but to prioritize and deploy the majority of health services and facilities including health workers and hospital personnel to combat the disease. This raises considerable problems and especially in tackling challenges, noncommunicable diseases which are the number 1 killer in Malaysia. Laws and Policies are temporary measures that need to be prepared to accommodate urgent needs, but the health system must always be ready for any possibility or emergency that has the potential to become a health disaster for the nation. Like the case of Covid-19 which has a significant impact on all aspects of life, especially for those who suffer from NCD. Seeing all the descriptions above, this research provides a focus on how the problem of NCD policy during the Covid -19 pandemic in Indonesia and Malaysia is. This research is expected to be able to provide an analysis based on empirical data found in research so that the results can be an evaluation of a policy in handling noncommunicable diseases and then become a policy recommendation if a similar condition occurs, this recommendation is very important as readiness in future.

The research method used in this study is a socio-legal approach and a comparative study as well as in-depth interviews with several random respondents. The socio-legal approach is carried out by analyzing various primary and secondary sources in the form of laws and regulations, books, journals, and online sources as relevant sources of information according to the situation in which the law applies. In this study, the legal situation in question is the policy during the Covid pandemic against NCD both in Indonesia and Malaysia, whether the existing policies are sufficient to strengthen the policy system against NCD in both Indonesia and Malaysia and to ensure that basic rights to health, especially for citizens with NCD load. The Comparison Method was carried out to see if there were important differences and similarities between Indonesia and Malaysia. As we are, Indonesia and Malaysia as allied countries must have many similarities whether there are differences in the same problem with NCD services during Covid-

However, Indonesia and Malaysia with legal systems that can be interesting comparative studies with the character and uniqueness of each country as part of a comparative law study. Through literature review through various journals on Google Scholar and some data from official websites.

From the various kinds of literature found by the researcher, the researcher analyzed the comparison between Indonesia and Malaysia to use the similarities and differences of a legal system and policy, especially regarding health management in terms of NCD. The results of the comparative analysis can certainly be a reference for practical

\_\_\_

Susan Thomas, LooSee Beh, and Rusli Bin Nordin, 'Health Care Delivery in Malaysia: Changes, Challenges and Champions', Journal of Public Health in Africa, 2.2 (2011).

and theoretical recommendations in the future and reference material for making further research. In addition, the analysis of comparative studies of Indonesia and Malaysia is also a correction or comparative evaluation of different policies and solutions in various countries in dealing with NCD during Covid-19.

In-depth interview techniques with several respondents were conducted randomly through discussions with several relevant experts or relevant experts in NCD service policies during Covid-19 in Indonesia and Malaysia. So it is hoped that further research can be carried out to obtain and explore problems in Indonesia and Malaysia.

#### **Result and Discussions**

# NCD Supporting Death during the Covid-19 Pandemic

Non-communicable diseases (NCDs), particularly cardiovascular disease, cancer, diabetes, and chronic respiratory disease, are the leading cause of death and disability globally, affecting more people each year than all other causes combined<sup>18</sup>. NCDs are responsible for more than 70% of all deaths, with nearly 80% of these deaths occurring in lowand middle-income countries.<sup>19</sup>

Because of its chronic and sometimes lifelong nature, NCD patients often require repeated interactions with the health system over a long period. This includes disease management that involves access to essential medicines or rehabilitation services. Not receiving proper care for NCD patients often has a detrimental effect on people living with NCD. The burden of NCD patients that

is not met properly will have consequences for both health and economic aspects globally, for countries, households, and the impact on individuals can result in severe disability, premature death, and economic losses of billions of dollars every year.<sup>20</sup> With the rapid spread of Covid-19 throughout the world, the ability of countries to deal with Covid-19 as well as non-communicable diseases has been affected. The Covid-19 virus has caused widespread disruption to healthcare services while at the same time drawing attention to the burden on countries with NCDs, as those living with NCDs are at higher risk of becoming seriously ill from the virus. People with NCD are more prone to getting seriously ill or even dying than people with Covid-19, which has been proven in previous stud $ies.^{21}$ 

Disruption of health services is especially a problem for those living with NCDs who require routine care. Several examples from countries show how the disruption of NCD services has a direct impact on society. For example, screening, case identification, and referral systems for cancer have all been affected by the Covid-19 pandemic resulting in a substantial reduction in cancer diagnoses<sup>22</sup>. Reduced hospital admissions for patients with acute coronary syndromes often result in increased out-of-hospital mortality and long-term complications from myocardial infarction.<sup>23</sup>

Julianne Williams and others, 'A Systematic Review of Associations between Non-Communicable Diseases and Socioeconomic Status within Low-and Lower-Middle-Income Countries', Journal of Global Health, 8.2 (2018).

<sup>&</sup>lt;sup>19</sup> World Health Organization.

<sup>&</sup>lt;sup>20</sup> World Health Organization.

Farha Musharrat Noor and Md Islam, 'Prevalence and Associated Risk Factors of Mortality among Covid-19 Patients: A Meta-Analysis', Journal of Community Health, 45.6 (2020), 1270–82.

Brian R Englum and others, 'Impact of the Covid-19 Pandemic on Diagnosis of New Cancers: A National Multicenter Study of the Veterans Affairs Healthcare System', Cancer, 128.5 (2022), 1048–56.

Matteo Cameli and others, 'Covid-19 and Acute Coronary Syndromes: Current Data and Future Implications', Frontiers in Cardiovascular Medicine, 7 (2021), 593496.

Disruptions in rehabilitation services for people with NCD have the potential to impact their functional outcomes and consequently increase the burden of care.<sup>24,25</sup> No comprehensive information has yet been collected on countries where NCD-related service disruptions have occurred or the extent of such disruptions and the factors associated with such disruptions (as included in the Covid-19 Strategic Plan). This information is important for understanding how countries need to be supported during the response to Covid-19, planning how to rebuild a better health system with integrated NCD services after the pandemic, and explaining the consequences of the disruption in people's lives.

Low- and lower-middle-income countries are significantly less likely to include NCDs in their Covid-19 response plans than upper- and middle-income countries. Of the 107 countries that have included NCDs in their list of essential services in their national Covid-19 response plans, more than 90% reported including cardiovascular disease services, cancer services, and diabetes services.

WHO found that during the Covid-19 pandemic three-quarters (75%) of countries reported a sizable level of disruption from NCD services with urgent dental care, rehabilitation, and palliative care services most likely to be completely disrupted.<sup>26</sup> The most common reasons for the disruption of NCD services during the Covid-19 period are cancellation of effective care, lack of transportation due to the lockdown, insufficient health personnel, and closure of hospital services.

With the rapid spread of Covid-19 around the world, the ability of countries to deal with and respond to non-communicable diseases has been affected. Management of NCD services such as hypertension, diabetes, or cancer has been disrupted, leaving millions of people unattended. People with NCD are at a disadvantage. In addition, the fear of infectious persons experiencing NCDs reduces the likelihood of these people seeking medical care, leading to poorer health outcomes<sup>27</sup>. However, disruption to health services is particularly problematic for those living with NCDs that require regular or long-term care.

Inpatient care is one of the services that has been severely affected due to the Covid-19 service, the termination of receiving inpatient and outpatient rehabilitation services as well as early discharge and reduction of activities not only have a large individual impact on people with NCDs but also have an impact on the health system. The government's policy of reducing inpatient services due to an emergency is very unfair. Health services are essential, especially in rural and remote areas.<sup>28</sup>

People with NCDs are more prone to becoming seriously ill with the Covid -19 virus, and they need access to treatment to manage their illness.<sup>29</sup> Therefore, health care services for people living with NCDs must be included in the national response and preparedness plans for Covid-19. Only through including people with NCDs in their plans can countries "build back better" and strengthen their health services so that they are better

World Health Organization, 'The Impact of the Covid-19 Pandemic on Noncommunicable Disease Resources and Services: Results of a Rapid Assessment', 2020.

<sup>&</sup>lt;sup>25</sup> Salma Azzouzi and others, 'The Impact of the Covid-19 Pandemic on Healthy Lifestyle Behaviors and Perceived Mental and Physical Health of People Living with Non-Communicable Diseases: An International Cross-Sectional Survey', International Journal of Environmental Research and Public Health, 19.13 (2022), 8023.

<sup>&</sup>lt;sup>26</sup> World Health Organization.

<sup>&</sup>lt;sup>27</sup> Sintha Pratiwi, 'Gambaran Tingkat Kecemasan Masyarakat Terhadap Pandemi Covid-19', *Jurnal Medika Usada*, 4.2 (2021), 21–32.

<sup>&</sup>lt;sup>28</sup> Karl Blanchet and others, 'Protecting Essential Health Services in Low-Income and Middle-Income Countries and Humanitarian Settings While Responding to the Covid-19 Pandemic', BMJ Global Health, 5.10 (2020), e003675.

F Lobbezoo and G Aarab, 'Medicine and Dentistry Working Side by Side to Improve Global Health Equity', Journal of Dental Research (SAGE Publications Sage CA: Los Angeles, CA, 2022), p. 00220345221088237.

equipped to prevent, diagnose, and provide care for future NCDs. More specifically, there is a critical need for concrete and practical guidance on the sustainability of essential health and community services for NCDs. Monitoring access and continuity of essential health services for NCDs will be necessary. This opportunity can be exploited to develop a systematic approach to digital health care solutions but the reality is also not easy due to the limitations of technology and internet networks, especially in rural areas.

NCD has a significant correlation with death from Covid-19. The increasing rate of Covid-19 cases is largely composed of older adults with early non-communicable diseases, including cardiovascular disease. Many Covid-19 related deaths in high-income countries are older individuals and residents of long-term care facilities 30 where a large number of people may have concurrent noncommunicable diseases and usually elderly individuals are in long-term care. 31 Restrictions on health services to patients suffering from non-communicable diseases during the pandemic have contributed to additional undiagnosed Covid-19 deaths and due to a lack of patient control over noncommunicable diseases. 32, 33

WHO states that "State of the evidence on Covid-19 and NCDs: a rapid review," People with comorbid NCD and metabolic, behavioral, and environmental risk factors are very vulnerable to transmission of Covid-19 and can increase the risk of severe illness and death from Covid-19; the Covid-19 pandemic has greatly disrupted access and health services for people with NCD, such as diagnostic, treatment, rehabilitation, and palliative services.

Postponement of NCD follow-up due to fear of being infected with Covid-19; transportation problems and unfriendly health facilities; stress related to fear of death and lack of social support; and reduced physical activity associated with staying at home. NCD is a silent killer during the Covid -19 period, for example, cases of hypertension, diabetes, heart, kidney, chronic lung, cancer, and so on.<sup>34</sup>

The waiver of the right to health care is contrary to the norms and mandates recommended by the Human Rights Protocol, article 12(2) letter d of the International Covenant on Economic, Social Cultural Rights (ICESCR), paragraph 12(b) General Comment no. 14 concerning Article 12 of the ICESCR, which Indonesia has ratified through Law no. 11 of 2005, which states that the state is obliged to strive for the improvement of all aspects of environmental and industrial prevention, treatment and control of all infectious, endemic and other diseases related to work, as well as the creation of conditions that will guarantee all medical services and attention. The right to health is also guaranteed in Article 4 of Law no. 36 of 2009 concerning Health (Health Law) and Article 9(3) of Law no. 39 of 1999 concerning Human Rights. This means that patients suffering from diseases other than Covid-19 must be protected, especially NCD which is the main cause of death in Indonesia. Furthermore, NCD is rampant among parents due to budget constraints. Whereas the protection of the elderly who are included in the vulnerable group is stated in

.

Temet M McMichael and others, 'Epidemiology of Covid-19 in a Long-Term Care Facility in King County, Washington', New England Journal of Medicine, 382.21 (2020), 2005–11.

<sup>&</sup>lt;sup>31</sup> John Appleby, 'What Is Happening to Non-Covid Deaths?', *Bmj*, 369 (2020).

<sup>&</sup>lt;sup>32</sup> Owen Dyer, 'Covid-19: Pandemic Is Having "Severe" Impact on Non-Communicable Disease Care, WHO Survey Finds' (British Medical Journal Publishing Group, 2020).

Hans Henri P Kluge and others, 'Prevention and Control of Non-Communicable Diseases in the Covid-19 Response', *The Lancet*, 395.10238 (2020), 1678–80.

<sup>&</sup>lt;sup>34</sup> Bezawit Ketema and others, 'Challenges and Coping Strategies in Non-Communicable Disease Management during Covid-19 in Addis Ababa, Ethiopia: A Qualitative Study', 2020.

Article 55 of Law no. 24 of 2007 concerning Disaster Management, vulnerable groups include the elderly; babies; toddlers; children; pregnant or lactating women, and people with disabilities become a violation when the policy only provides a large budget for the Covid -19 pandemic. The high Covid death rate from NCD comorbid contributes patients to the increasing number of Covid patients who die during the pandemic, it is necessary to evaluate the policy during Covid.

Before Covid Data, the prevalence of NCD was quite high due to unhealthy eating patterns, lack of physical activity, cigarette consumption, and alcohol consumption. <sup>35</sup> Therefore, prevention and control of NCDs must be carried out as early as possible considering that NCD patients have a low quality of life, causing an increase in the burden of health costs and even increasing mortality rates. <sup>36</sup> This is illustrated in the image below:

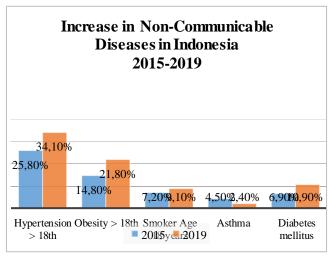


Figure 1. Health Research Data listed in the 2015-2019 RPJMN

<sup>35</sup> Cindy Cahya Adhania, Guswan Wiwaha, and Pandji Irani Fianza, 'Prevalensi Penyakit Tidak Menular Pada Fasilitas Kesehatan Tingkat Pertama Di Kota Bandung Tahun 2013-2015', Jurnal Sistem Kesehatan, 3.4 (2018). This shows that NCD is a national priority that must be handled cross-sectorally <sup>37</sup> and involve various components of society. The high costs incurred for NCD treatment which were successfully recapitulated from BPJS data in 2017, obtained the following data:

Of the total data on JKN participants, 10,801,787 million people, or 5.7% of the total data are recipients of catastrophic disease services that incur health costs of 14.6 trillion rupiahs or 21.8% of all health care costs. Where the funds are divided into a composition of 50.9% or 7.4 trillion for heart disease, and 17.7% or 2.6 trillion rupiahs for chronic kidney disease.

In Indonesia, the basic right to health is regulated in Article 28H paragraph (1), Article 4 of Law Number 36 of 2009 concerning Health, and Article 28I paragraph (4) of the 1945 Constitution which affirms that the protection, promotion, enforcement, and fulfillment of human rights is the responsibility of the state as recommended by the World (WHO) in 1946.38 The Alma Alta Declaration also states: "Health is a state of complete physical, mental and social well-being, and not merely the absence of disease or infirmity, is a fundamental human right and that the attainment of the highest level of health is one of the state's efforts to address public health. large. The right to health is regulated in Article 25 (1) of the UDHR, Article 12 of the ICESCR, and other regulations which state that everyone has the right to access health and medical services. So during COVID -19, the treatment of NCD patients is postponed, canceled, or rejected is a violation of human rights.

In Malaysia, the right to health as a legal right is not regulated by the Malaysian Constitution, which is the highest law of the

\_

<sup>36</sup> Hamidah Rahman and others, 'Promosi Kesehatan Untuk Meningkatkan Peran Aktif Masyarakat Dalam Pencegahan Penyakit Tidak Menular', BAKTI: Jurnal Pengabdian Kepada Masyarakat, 1.1 (2021), 1–11.

<sup>&</sup>lt;sup>37</sup> KemenKes RI, 'Rencana Aksi Nasional Penyakit Tidak Menular 2015-2019', Kementrian Kesehatan RI, 2017, pp. 1–166.

The government is responsible for the health of its citizens, which can only be achieved by providing appropriate health and social measures.

country. The right to health is only mentioned indirectly in Articles 5 and 8 of the Constitution, as mentioned above. However, the Constitution imposes an obligation on the federal government to provide medicines and medical facilities, such as hospitals, pharmacies, and clinics, to all states in Malaysia. Malaysia has a dual healthcare system consisting of a public sector and a private sector. Together, they work hand in hand to protect the basic health needs of the population and form an alliance to fight Covid -1939.

Malaysia strives to provide healthcare services that are sustainable, responsive, impartial, accessible, reliable, and affordable." Facilities such as hospitals, community clinics, and specialized medical institutions (National Heart Research Child Research Institute, Agency, Respiratory Medicine Research Institute) are increasing from year to year.<sup>40</sup>

Before the Covid -19 pandemic, the country was relatively successful, but some challenges need to be addressed and scaled up.41 However, with the rapid spread of Covid -19, Malaysia has no choice but to prioritize the majority of medical services and facilities, including healthcare workers and hospital workers, to support the fight against the disease. This poses significant problems and challenges, especially in tackling noncommunicable diseases, Malaysia's biggest killer. While laws and policies are temporary measures that must be put in place to meet urgent needs, the health care system must always be prepared for any potential emergency that could result in a national medical disaster. As with Covid-19, it has a major impact on every aspect of life, especially for those who suffer from NCD.

### Policy Problems During Covid -19 for NCD Services in Indonesia

In Indonesia, the reduction in NCD services resulted in basic treatment and daily care, activities such as Posyandu, communitybased education, and communal physical activities being postponed. This is due to the lack of facilities and personnel needed, both doctors, nurses, and front-line assistants to deal with the Covid-19 problem.

In addition, screening and monitoring programs for NCD patients have been postponed, raising concerns and exacerbating the disease. The statement shows that more than 50% of countries in the world are delaying NCD screening programs in the community, and more than 53% are facing challenges in the treatment of hypertension, diabetes, and cardiovascular disease. During the COVID -19 pandemic. 42 In countries with limited medical resources, such as Indonesia and Malaysia, treatment of NCD cases is on hold, reflecting the urgent need for Covid -19 treatment. On the other hand, NCD which can be expressed by stroke is still the best killer in the world. The risk of getting Covid -19 is very high due to uncontrolled NCD such as high blood pressure, a history of heart disease, and diabetes. This shows that the handling of NCD, especially aspects of promotion and prevention will remain very important in the era of the Covid -19 pandemic.

Some of the policies issued during Covid-19 include (1) Presidential Decree Number 11 of 2020 and Decree of the Public Health Emergency for Corona Virus Disease 2019 (Covid-19). (2) Presidential Decree Number 21 of 2020 and; (3) Corona Virus Disease (Covid-19) concerning Mass Social Restrictions Related to Accelerating Handling of Corona Virus Diseases in 2019. The national economy and/or finances are regulated by the government for system stability as

<sup>&</sup>lt;sup>39</sup> Tan and others.

<sup>&</sup>lt;sup>40</sup> Thomas, Beh, and Nordin.

<sup>&</sup>lt;sup>41</sup> Christopher Warren, 'Transformation Roadmap: Pivoting and the Emerging Trends in a Post-Pandemic World', Digital Transformation in a Post-Covid World, 2021, 69-94.

<sup>&</sup>lt;sup>42</sup> World Health Organization.

a substitute for the Government Financial Policy and the System Stability Law Finance (Perppu) Number 1 in dealing with pandemics and/or threats that are threatened with extinction.

The government has also launched the Stimulation Package III amounting to Rp. 405.1 trillion, with the first objective of saving lives and improving the quality of public health. Second, is the provision of a social safety net. And third, saving the economy and the business world, especially for the poor and MSMEs. In the health sector, it has allocated additional medical spending of IDR 75 trillion for health care, including the provision of medical equipment and personal protective equipment (PPE) to 132 referral hospitals and part of the funds allocated to central and regional incentives for 6 months medical personnel: health workers (1 5 billion rupiahs/month), doctors (1 billion rupiahs/month), nurses (750 million rupiahs/month) and other health workers. Workers (500 million rupiah / month) And compensation for the death of medical personnel (300 million rupiah/person). Third, spending for handling Covid-19 in the form of medical devices (PPE, rapid diagnosis, reagents), medical facilities and infrastructure, and staff support. Next is the economic and corporate bailout amounting to Rp 70.1 trillion, and finally the budget funding of Rp 150 trillion for the national economic recovery program<sup>43</sup>.

The fund has allocated additional medical spending of Rp 75 trillion for health care, including the provision of medical equipment and personal protective equipment (PPE) to 132 referral hospitals. From all the descriptions of the budget, it is clear that the focus is only on Covid patients so there is no atten-

tion to services. with NCD, this is a discriminatory treatment considering NCD disease contributes and death due to comorbid or congenital disease.

# Policy Problems during Covid-19 for NCD Services in Malaysia

Malaysia is also facing the problem of high mortality during Covid 19 due to patients with a history of NCD. 44 Therefore, the Kingdom of Malaysia through the Ministry of Health Malaysia has formulated the Strategic **National** Plan for Non-Communicable Diseases (NSP-NCD) 2010-2014 followed by the National Strategic Plan Non-Communicable Diseases NCD) 2016-2025. NSP-NCD 2016-2025 has incorporated WHO NCD global monitoring targets to create an effective surveillance system to track, monitor, and interpret trends in risk factors, morbidity and mortality, and responses to public health policies and interventions. 45 Almost the same as in Indonesia in dealing with NCD. The prevalence of people suffering from non-communicable diseases is one of the main challenges for Malaysia's current health system, which is why the government has launched the National Strategic Plan for Non-Communicable Diseases (NSP-NCD) 2016-2025<sup>46</sup>. Malaysia has the highest diabetes rate in the Western Pacific region and one of the highest in the world and costs around 600 million US dollars per year<sup>47,48</sup>. Diabetes

<sup>&</sup>lt;sup>43</sup> Nur Affifah Al Jannah, 'Pandemi Merekam Covid-19 Dan Memahami Kerja Pengawal APBN', 2022 <a href="https://dataindonesia.id/Kebijakan">https://dataindonesia.id/Kebijakan</a> & Regulasi/detail/buku-merekam-pandemi-Covid19-dan-memahami-kerja-pengawal-[Accesed June 18, 2022]

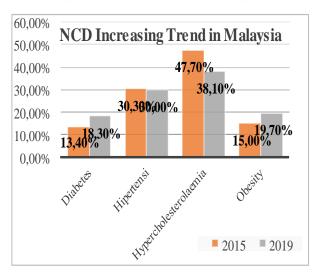
https://www.newsarawaktribune.com.my/ncd-main-cause-of-death/ Accesed June 20 2022

<sup>&</sup>lt;sup>45</sup> Arunah Chandran and others, 'Non-Communicable Disease Surveillance in Malaysia: An Overview of Existing Systems and Priorities Going Forward', Frontiers in Public Health, 9 (2021), 913.

https://www.moh.gov.my/moh/resources/Penerbi-tan/Rujukan/NCD/National%20Strategic%20Plan/FINAL\_NSPNCD.pdf, Accesed July 1, 2022.

<sup>&</sup>lt;sup>47</sup> Kurubaran Ganasegeran, Chee Peng Hor, Mohd Fadzly Amar Jamil, Hong Chuan Loh, and others,

prevalence increased from 11.2% in 2011 to 18.3% in 2019, with an increase of 68.3%.<sup>49</sup> According to a national survey report, in Malaysia in 2019, 3.6 million adults (18 years and over) had diabetes, and 49% (3.7 million)



cases were undiagnosed. Diabetes is estimated to affect 7 million Malaysian adults aged 18 and older by 2025, posing a major public health risk with a diabetes prevalence of 31.3%. <sup>50</sup> Diabetes prevalence in Malaysia, based on published articles, ranges from 7.3% to 23.8% <sup>51,52</sup>. This increasing trend is the

'A Systematic Review of the Economic Burden of Type 2 Diabetes in Malaysia', *International Journal of Environmental Research and Public Health*, 17.16 (2020), 5723.

- <sup>48</sup> Kurubaran Ganasegeran, Chee Peng Hor, Mohd Fadzly Amar Jamil, Purnima Devi Suppiah, and others, 'Mapping the Scientific Landscape of Diabetes Research in Malaysia (2000–2018): A Systematic Scientometrics Study', *International Journal of Environmental Research and Public Health*, 18.1 (2021), 318.
- <sup>49</sup> Institute for Public Health, 'National Health and Morbidity Survey (NHMS) 2019: Vol. I: NCDs-Non-Communicable Diseases: Risk Factors and Other Health Problems' (Ministry of Health Malaysia Setia Alam, Malaysia, 2020).
- <sup>50</sup> Institute for Public Health.
- 51 Hazriani Harris and others, 'Non-Communicable Diseases among Low Income Adults in Rural Coastal Communities in Eastern Sabah, Malaysia', BMC Public Health, 19.4 (2019), 1–13.
- 52 Shamzaeffa Samsudin, Norehan Abdullah, and Shri Dewi Applanaidu, 'The Prevalence of Diabetes Mellitus and Hypertension and Its Effects

result of various causes, including population growth, population aging, urbanization, and increasing rates of obesity and physical inactivity. The alarming prevalence of diabetes and its complications with other noncommunicable diseases in Malaysia is increasing year by year. The following is the data on the prevalence of non-communicable diseases in Malaysia.<sup>53,54</sup>

Figure 2. Increasing prevalence of NCD in Malaysia <sup>55</sup>

From the data above, the increase in NCD is very influential on the budgeting of health funds, with the Covid -19 case, the NCD management team faces many challenges, one of which is financial constraints where most of the NCD program activities have been cut by almost 50%.56 Budgets have also been cut for the treatment of noncommunicable diseases such as cancer, as well as cardiovascular and kidney diseases. The highest cut was made for nephrology with a budget cut of 77.61% compared to Budget 2020, as nephrology received RM56.5 million for 2021, compared to RM252.1 million for 2020.

Many people are afraid to go to the hospital because of the threat of Covid, besides that, many medical professionals focus on collecting data on Covid-19 patients, thus disrupting data collection and data entry in

on Healthcare Demand among Elderly in Malaysia', *International Journal of Public Health Research*, 2016, 741–49.

<sup>53</sup> Institute of Public Health Malaysia, 'Non-Communicable Diseases Healthcare Demand', 2019, 21–22.

Data Global Obesity Observatory <a href="https://data.worldobesity.org/country/malaysia-130/#data\_prevalence">https://data.worldobesity.org/country/malaysia-130/#data\_prevalence</a>. Accesed July 29, 2022

<sup>55</sup> Institute of Public Health Malaysia.

Ashwita Ravindran,' Pemerintah Pangkas Anggaran Medis, Kesehatan Masyarakat 2021 Di Tengah Krisis Covid', 16 Nov 2020: <a href="https://codeblue.galencentre.org/">https://codeblue.galencentre.org/</a>, Accesed July 2, 2022

primary health facilities.<sup>57</sup> This condition illustrates that during Covid-19, NCD patients' rights to health services and health care for Malaysians have been neglected even though Article 5(1) of the 1957 Malaysian Constitution states that "No one can be deprived of their personal life or liberty except according to the law" while Article 8(1)) reads "Everyone is equal before the law and has the right to legal protection."<sup>58</sup> These two articles are part of the fundamental freedoms that are used as the basis for guidelines in the Constitution relating to health.

Health is a part of life because any attempt to deprive a person of basic needs related to health is a violation of his right to life and equal protection of the law.<sup>59</sup> Item 14, Schedule 9 of the Constitution compels the Federal government to meet the health needs of its population. Therefore, the government of the Kingdom of Malaysia made several laws, policies, and directives to ensure the promotion and prevention of health.<sup>60</sup>

Item 14, Schedule 9 of the Constitution compels the Federal government to meet the health needs of its population. Therefore, the government of the Kingdom of Malaysia made several laws, policies, and directives to ensure the promotion and prevention of health.

The Malaysian government implements restrictive controls that are not much different from those carried out in Indonesia, known as the Movement Control Order (MCO). This order was issued according to Section 11 of the Prevention and Control of Infectious Diseases 1988 [Law 342] effective as of March 18, 2020. In the 2 years of the Covid -19 pandemic, various additional laws were issued to combat this deadly disease in all aspects of life be it the economy. , social, tourism, construction industry, and so on, and prevention of health<sup>61</sup>.

Movement Control Order (MCO) policy problems, such as disruptive monitoring and monitoring of NCD patient tracking and the lack of human resources, and the limited supply of basic hospital facilities, have a severe impact on NCD management.

The Malaysian government imposes quite strict sanctions on citizens who violate the law in the form of an RM1000 fine or alternative imprisonment. This has become effective because of the culture of compliance by Malaysians with royal orders and very afraid of violating the laws and royal orders so far. The application of fines is also applied to every citizen who violates other provisions such as refusal to comply with any directives by the authorized officer for treatment or immunization; or isolation, observation, or supervision, the period of which is determined according to the circumstances; or other measures deemed necessary by the competent authority to control the disease<sup>62</sup>.

For example, people who are restricted from going out cannot travel from their territory more than 10 kilometers, and only 1 or 2 people in one family will be checked by officers to find out the purpose and intent of

<sup>&</sup>lt;sup>57</sup> Chandran and others.

The Constitution of Malaysia is the supreme law of the land (Article 4) consisting of 183 provisions. For further reference read Abdul Aziz Bari and Farid Suffian, "Constitution of Malaysia: Text and Commentary, 3rd Edition", Pearson Prentice Hall 2009.

<sup>&</sup>lt;sup>59</sup> Tengku Noor Azira Tengku Zainudin and others, 'Legal Exploration of Right to Health.', *Pertanika Journal of Social Sciences & Humanities*, 29 (2021).

Anisah Che Ngah, Azlinda Baroni, and Zaleha Abdullah Mahdi, 'The Development Of Health Care Legislation In Malaysia: An Overview', 2017.

https://www.rahmatlim.com/publication/articles/17618/various-subsidiary-legislation-under-prevention-and-control-of-infectious-diseases-act-1988-issued-on-13-january-2021, Accessed July 29, 2022

<sup>62</sup> 

https://www.zicolaw.com/resources/alerts/mov ement-control-order-in-malaysia-immediateimplications/ Accesed July 29, 2022

leaving the house, according to information one family in the coastal area may only go to Subang Jaya should not be more than Shah Alam, which is more than 10 kilometers away. The Malaysian government also imposed restrictions on international movement, gatherings, and travel, and mandated the closure of businesses, industry, government, and educational institutions.

The implementation of the one-sided MCO policy is effective in preventing the transmission of Covid-19 but becomes a problem for freelancers who are forced to stay at home while before the pandemic they can work outside the home like private company workers. 63 During the pandemic, there were also concerns about the decline in health numbers due to limited access to tests and health facilities due to the closure of each country as well as the scarcity and high cost of vaccines at that time.<sup>64</sup> Furthermore, the Malaysian government on May 1, 2020, a prime minister announced a conditional movement control order or CMCO. The CMCO phase took effect on May 4, 2020, and began to relax activities where the economic sector was to start operating, subject to strict Standard Operating Procedures. Where the restrictions from a full lockdown program to a partial lockdown due to socio-economic and health factors are expected to run in balance.65

Just like Indonesia, the Malaysian government issued a sizeable budget for handling Covid patients and residents affected by the Covid pandemic at that time, and several social policies to meet the basic needs

Munarni Aswindo, Margaretha Hanita, and Arthur Josias Simon, 'Kerentanan Dan Ketahanan Pekerja Migran Indonesia Di Malaysia Pada Masa Pandemic Covid-19', Jurnal Kajian Lemhannas RI, 9.1 (2021), 442–52. of Malaysians issued additional assistance of RM 40 billion or more. IDR 138 trillion to help solve the problem. the impact of the two-week lockdown and the distribution of RM10 billion in cash for low-income groups B40 and M40 in light of the Covid-19 crisis.<sup>66</sup> The Ministry of Health has also run a temporary hospital in Agro Exposition Park Serdang (MAEPS) in coordination with the National Disaster Management Agency.<sup>67</sup> The emergency hospital, which was originally the largest convention center in Malaysia, is equipped with televisions, Wi-Fi connections, and other basic waiting areas for use by patients and medical personnel.

In addition, policies concerning the economy and business of Malaysia have also issued the Temporary Measures Act to Reduce the Impact of Covid-19 Disease 2020 on 23 October 2020 to provide temporary measures to stem the impact of the Covid-19 pandemic by modifying the provisions of 16 existing regulations, legislation<sup>68</sup>. This policy is also used to assure that the economy will not experience a shock and to ensure that existing contractual obligations and commercial businesses do not go bankrupt due to the impact of Covid-19.

From all these descriptions, it is clear that the Malaysian state at that time was concentrated on spending on the handling of Covid-19 so attention was very neglected to residents with conditions who had a history of other diseases. The kingdom has spent bil-

<sup>64</sup> Aswindo, Hanita, and Simon.

Masha Menhat and others, 'The Impact of Covid-19 Pandemic: A Review on Maritime Sectors in Malaysia', Ocean & Coastal Management, 209 (2021), 105638.

<sup>66</sup> https://www.malaysiakini.com/news/517169, Accesed July 29, 2022

<sup>67</sup> Siti Aisyah Muhammad, Tengku Fauzan Tengku Anuar, and N N H Hanafi, 'Visualization Process of Temporary Converted Facilities to Accommodate Quarantine and Treatment Centre (PKRC) Layouts in Malaysia Agriculture Expo Park Serdang (MAEPS)', Environment-Behaviour, General Psychology, and Quality of Life, 2021.

https://www.hg.org/legal-articles/malaysiatemporary-measures-for-reducing-the-impact-ofcovid-19virus-disease-2019-covid-19-act-2020-57526, Accesed July 29, 2022

lions of ringgits to offset the pandemic, but this policy has had serious consequences on other aspects of health, especially in the NCD field. Interviews were conducted randomly, indicating that the treatment of NCD patients was postponed or postponed to meet the more urgent needs of Covid-19 patients. Many government hospitals have been converted into Covid -19 hospitals. In the country of Sabah adjacent to Indonesian Borneo, elective cases have been suspended at specialist hospitals in Kota Kinabalu, Sandakan, Tawau, Keningau, and Lahad Datu, while normal wards at most Sabah hospitals have been converted into Covid wards. In addition, the movement restriction policy (lock-down) throughout Malaysia due to Covid -19 has contributed significantly to the increase in the number of NCD patients, and the movement restriction has disrupted the screening, treatment, self-care, and surveillance. of NCD patients.

## Conclusion

From the entire description of the series in the discussion above, it can be concluded that the NCD Policy Problems during the Covid-19 Pandemic in Indonesia and Malaysia have similarities where the focus of the Covid-19 pandemic policy is in the form of rules, decisions, and even laws that aim to combat and protect and prevent death due to Covid, it turns out that this policy has an impact on the decline in the health of citizens due to NCD. This condition is not necessarily the wrong policy because the country is indeed in a state of emergency war against Covid, but as a policy, it can certainly be returned as the goal was made, namely to protect the basic health rights of the whole community without discrimination and differences between Covid patients and NCD as a recommendation from various decisions of countries that are members of WHO. Learning from past pandemic events, the state during an emergency requires political policy decisions that are oriented and aimed at the wider community, for this reason, NCD management and strategies are needed. and often do. This requires openness and communication as well as a strong mission for public safety and health.

# **Bibliography**

#### **Iournals**

Appleby, John, 'What Is Happening to Non-Covid Deaths?', *Bmj*, 369 (2020)

Arsenault, Catherine, Anna Gage, Min Kyung Kim, Neena R Kapoor, Patricia Akweongo, Freddie Amponsah, and others, 'Covid-19 and Resilience of Healthcare Systems in Ten Countries', Nature Medicine, 2022, 1–11

Aswindo, Munarni, Margaretha Hanita, and Arthur Josias Simon, 'Kerentanan Dan Ketahanan Pekerja Migran Indonesia Di Malaysia Pada Masa Pandemic Covid-19', Jurnal Kajian Lemhannas RI, 9.1 (2021), 442– 52

Azira Tengku Zainudin, Tengku Noor, Mohd Zamre Mohd Zahir, Ahmad Azam Mohd Shariff, Ramalinggam Rajamanickam, Ong Tze Chin, Zainunnisaa Abd Rahman, and others, 'Legal Exploration of Right to Health.', Pertanika Journal of Social Sciences & Humanities, 29 (2021)

Azzouzi, Salma, Catherine Stratton, Laura Paulina Muñoz-Velasco, Kangxin Wang, Maryam Fourtassi, Bo-Young Hong, and others, 'The Impact of the Covid-19 Pandemic on Healthy Lifestyle Behaviors and Perceived Mental and Physical Health Living of People with Non-Communicable Diseases: An International Cross-Sectional Survey', International Journal of Environmental Research and Public Health, 19.13 (2022), 8023

Beaglehole, Robert, and Ruth Bonita,

- 'Priority Actions for the Non-Communicable Disease Crisis-Authors' Reply', *The Lancet*, 378.9791 (2011), 565-66
- Blanchet, Karl, Ala Alwan, Caroline Antoine, Marion Jane Cros, Ferozuddin Feroz, Tseguaneh Amsalu Guracha, and others, 'Protecting Essential Health Services in Low-Income and Middle-Income Countries and Humanitarian Settings While Responding to the Covid-19 Pandemic', BMJ Global Health, 5.10 (2020), e003675
- Cameli, Matteo, Maria Concetta Pastore, Giulia Elena Mandoli, Flavio D'Ascenzi, Marta Focardi, Giulia Biagioni, and others, 'Covid-19 and Acute Coronary Syndromes: Current Data and Future Implications', Frontiers in Cardiovascular Medicine, 7 (2021), 593496
- Chandran, Arunah, Shurendar Selva Kumar, Noran Naqiah Hairi, Wah Yun Low, and Feisul Idzwan Mustapha, 'Non-Communicable Disease Surveillance in Malaysia: An Overview of Existing Systems and Priorities Going Forward', Frontiers in Public Health, 9 (2021), 913
- Chua, Bee-Lia, Amr Al-Ansi, Myong Jae Lee, and Heesup Han, 'Impact of Health Risk Perception on Avoidance of International Travel in the Wake of a Pandemic', Current Issues in Tourism, 24.7 (2021), 985–1002
- Dyer, Owen, 'Covid-19: Pandemic Is Having "Severe" Impact on Non-Communicable Disease Care, WHO Survey Finds' (British Medical Journal Publishing Group, 2020)
- Englum, Brian R, Nikhil K Prasad, Rachel E Lake, Minerva Mayorga-Carlin, Douglas J Turner, Tariq Siddiqui, and others, 'Impact of the Covid-19 Pandemic on Diagnosis of New Cancers: A National Multicenter Study of the Veterans Affairs Healthcare System', Cancer, 128.5 (2022), 1048–56

Fadzil, Malindawati Mohd, Sharifa Ezat Wan

- Puteh, Azimatun Noor Aizuddin, and Zafar Ahmed, 'Specialists' Dual Practice within Public Hospital Setting: Evidence from Malaysia', in *Healthcare* (MDPI, 2022), X, 2097
- Filip, Roxana, Roxana Gheorghita Puscaselu, Liliana Anchidin-Norocel, Mihai Dimian, and Wesley K Savage, 'Global Challenges to Public Health Care Systems during the Covid-19 Pandemic: A Review of Pandemic Measures and Problems', Journal of Personalized Medicine, 12.8 (2022), 1295
- Ganasegeran, Kurubaran, Chee Peng Hor, Mohd Fadzly Amar Jamil, Hong Chuan Loh, Juliana Mohd Noor, Norshahida Abdul Hamid, and others, 'A Systematic Review of the Economic Burden of Type 2 Diabetes in Malaysia', International Journal of Environmental Research and Public Health, 17.16 (2020), 5723
- Ganasegeran, Kurubaran, Chee Peng Hor, Mohd Fadzly Amar Jamil, Purnima Devi Suppiah, Juliana Mohd Noor, Norshahida Abdul Hamid, and others, 'Mapping the Scientific Landscape of Diabetes Research in Malaysia (2000–2018): A Systematic Scientometrics Study', International Journal of Environmental Research and Public Health, 18.1 (2021), 318
- Gouda, Hebe N, Fiona Charlson, Katherine Sorsdahl, Sanam Ahmadzada, Alize J Ferrari, Holly Erskine, and others, 'Burden of Non-Communicable Diseases in Sub-Saharan Africa, 1990–2017: Results from the Global Burden of Disease Study 2017', The Lancet Global Health, 7.10 (2019), e1375–87
- Harris, Hazriani, Yasmin B H Ooi, Jau-Shya Lee, and Patricia Matanjun, 'Non-Communicable Diseases among Low Income Adults in Rural Coastal Communities in Eastern Sabah, Malaysia', BMC Public Health, 19.4 (2019), 1–13

Institute for Public Health, 'National Health

- and Morbidity Survey (NHMS) 2019: Vol. I: NCDs-Non-Communicable Diseases: Risk Factors and Other Health Problems' (Ministry of Health Malaysia Setia Alam, Malaysia, 2020)
- Institute of Public Health Malaysia, 'Non-Communicable Diseases Healthcare Demand', 2019, 21–22
- KemenKes RI, 'Rencana Aksi Nasional Penyakit Tidak Menular 2015-2019', Kementrian Kesehatan RI, 2017, pp. 1–166
- Ketema, Bezawit, Mirgissa Kaba, Adamu Addissie, and Eva Johanna Kantelhardt, 'Challenges and Coping Strategies in Non-Communicable Disease Management during Covid-19 in Addis Ababa, Ethiopia: A Qualitative Study', 2020
- Kluge, Hans Henri P, Kremlin Wickramasinghe, Holly L Rippin, Romeu Mendes, David H Peters, Anna Kontsevaya, and others, 'Prevention and Control of Non-Communicable Diseases in the Covid-19 Response', *The Lancet*, 395.10238 (2020), 1678–80
- Lobbezoo, F, and G Aarab, 'Medicine and Dentistry Working Side by Side to Improve Global Health Equity', *Journal of Dental Research* (SAGE Publications Sage CA: Los Angeles, CA, 2022), p. 00220345221088237
- Marchiondo, Lisa A, Ernest Gonzales, and Larry J Williams, 'Trajectories of Perceived Workplace Age Discrimination and Long-Term Associations with Mental, Self-Rated, and Occupational Health', *The Journals of Gerontology: Series B*, 74.4 (2019), 655–63
- McMichael, Temet M, Dustin W Currie, Shauna Clark, Sargis Pogosjans, Meagan Kay, Noah G Schwartz, and others, 'Epidemiology of Covid-19 in a Long-Term Care Facility in King County, Washington', New England Journal of Medicine, 382.21 (2020), 2005–11
- Menhat, Masha, Izyan Munirah Mohd

- Zaideen, Yahaya Yusuf, Nurul Haqimin Mohd Salleh, Meor Azry Zamri, and Jagan Jeevan, 'The Impact of Covid-19 Pandemic: A Review on Maritime Sectors in Malaysia', Ocean & Coastal Management, 209 (2021), 105638
- Mobula, Linda M, David J Heller, Yvonne Commodore-Mensah, Vanessa Walker Harris, and Lisa A Cooper, 'Protecting the Vulnerable during Covid-19: Treating and Preventing Chronic Disease Disparities', *Gates Open Research*, 4 (2020)
- Muhammad, Siti Aisyah, Tengku Fauzan Tengku Anuar, and N N H Hanafi, 'Visualization Process of Temporary Converted Facilities to Accommodate Quarantine and Treatment Centre (PKRC) Layouts in Malaysia Agriculture Expo Park Serdang (MAEPS)', Environment-Behaviour, General Psychology, and Quality of Life, 2021
- Ngah, Anisah Che, Azlinda Baroni, and Zaleha Abdullah Mahdi, 'The Development Of Health Care Legislation In Malaysia: An Overview', 2017
- Noor, Farha Musharrat, and Md Islam, 'Prevalence and Associated Risk Factors of Mortality among Covid-19 Patients: A Meta-Analysis', *Journal of Community Health*, 45.6 (2020), 1270–82
- Organization, World Health, 'The Impact of the Covid-19 Pandemic on Noncommunicable Disease Resources and Services: Results of a Rapid Assessment', 2020
- Pratiwi, Sintha, 'Gambaran Tingkat Kecemasan Masyarakat Terhadap Pandemi Covid-19', Jurnal Medika Usada, 4.2 (2021), 21–32
- Rahman, Hamidah, Ramli Ramli, Hairudin La Patilaiya, Monissa Hi Djafar, and Musiana Musiana, 'Promosi Kesehatan Untuk Meningkatkan Peran Aktif Masyarakat Dalam Pencegahan Penyakit Tidak Menular', BAKTI: Jurnal Pengabdian

*Kepada Masyarakat*, 1.1 (2021), 1–11

Samsudin, Shamzaeffa, Norehan Abdullah, and Shri Dewi Applanaidu, 'The Prevalence of Diabetes Mellitus and Hypertension and Its Effects on Healthcare Demand among Elderly in Malaysia', International Journal of Public Health Research, 2016, 741–49

Shah, Syed Mustafa Ali, Danish Mohammad, Muhammad Fazal Hussain Qureshi, Mohammad Zain Abbas, and Sameeha 'Prevalence, Psychological Responses and Associated Correlates of Depression, Anxiety and Stress in a Global Population, during Coronavirus Disease (Covid-19) Pandemic', Community Mental Health Journal, 57.1 (2021), 101-10

Tan, Ching Siang, Saim Lokman, Yao Rao, Szu Hua Kok, and Long Chiau Ming, 'Public and Private Sectors Collective Response to Combat Covid-19 in Malaysia', *Journal of Pharmaceutical Policy and Practice*, 14.1 (2021), 1–4

Thakur, Vikram, and Anu Jain, 'Covid-19-Suicides: A Global Psychological Pandemic', *Brain*, *Behavior*, *and Immunity*, 88 (2020), 952

Thomas, Susan, LooSee Beh, and Rusli Bin Nordin, 'Health Care Delivery in Malaysia: Changes, Challenges and Champions', *Journal of Public Health in Africa*, 2.2 (2011)

Warren, Christopher, 'Transformation Roadmap: Pivoting and the Emerging Trends in a Post-Pandemic World', *Digital Transformation in a Post-Covid World*, 2021, 69–94

Williams, Julianne, Luke Allen, Kremlin Wickramasinghe, Bente Mikkelsen, Nia Roberts, and Nick Townsend, 'A Systematic Review of Associations between Non-Communicable Diseases and Socioeconomic Status within Lowand Lower-Middle-Income Countries',

Journal of Global Health, 8.2 (2018)

World Health Organization, 'The Impact of the Covid-19 Pandemic on Noncommunicable Disease Resources and Services: Results of a Rapid Assessment', 2020