

THE POTENTIAL OF CORONAVIRUS (COVID-19) TRANSMISSION IN MEDAN CITY, INDONESIA

by Henny Syapitri Universitas Sari Mutiara Indonesia, Medan

Submission date: 23-Oct-2021 12:07PM (UTC+1100)

Submission ID: 1681551769

File name: 11.docx (86.27K)

Word count: 5578

Character count: 25229

ISSN: 0258-2724

DOI : 10.35741/issn.0258-2724.56.4.61

Research article

Social Sciences

THE POTENTIAL OF CORONAVIRUS (COVID-19) TRANSMISSION IN MEDAN CITY, INDONESIA

11 印度尼西亚棉兰市冠状病毒(新冠肺炎) 传播的潜力

Henny Syapitri *, Janno Sinaga, Ivan Elisabeth Purba, Juneris Aritonang, Masri Saragih
Faculty of Pharmacy and Medical Science, Universitas Sari Mutiara Indonesia
Medan 20118, Indonesia, heny_syahfitri86@yahoo.com

2
Received: May 22, 2021 ▪ Review: June 11, 2021 ▪ Accepted: July 20, 2021 ▪ Published: August 30, 2021

This article is an open-access article distributed under the terms and conditions of the Creative Commons
Attribution License (<http://creativecommons.org/licenses/by/4.0>)

Abstract

1
The coronavirus (COVID-19) pandemic, mainly caused by severe acute respiratory syndrome, remains a global challenge. This study aimed to identify the potential of COVID-19 transmission in Medan City, Indonesia, by utilizing a quantitative descriptive design with a survey method based on questionnaire administration on Google Form. A total of 293 respondents were selected as a research sample through the accidental sampling technique. This study showed that the majority of the respondents (195, or 66.4%) traveled outside the city/country; 210 respondents (71.7%) used public transportation such as online and public transport; 54 respondents (18.4%) were in the area with an infected patient. This survey also includes the parameters of mask wearing, social distancing, avoiding hand contact, paying in cash, washing hands before or after touching an object, visiting outdoor activities, soaking the clothes after arriving home, and chronic disease history. This research concludes that positive confirmed cases in Medan city demonstrate a fluctuating trend in the infected COVID-19 cases from the respondents with frequent travel history.

Keywords: COVID-19, Medan, Survey, Social Distancing, Transmission Potential

8
摘要 主要由严重急性呼吸系统综合症引起的冠状病毒 (新冠肺炎) 大流行仍然是一项全球挑战。本研究旨在利用定量描述设计和基于谷歌 表格问卷管理的调查方法, 确定印度尼西亚棉兰市新冠肺炎传播的潜力。通过偶然抽样技术, 共有 293 名受访者被选为研究样本。这项研究表明, 大多数受访者 (195 人, 或 66.4%) 到过城市/国家以外的地方; 210 名受访者 (71.7%) 使用在线和公共交通工具等公共交通工具; 54 名受访者 (18.4%) 位于有感染患者的地区。这项调查还包括戴口罩

, 社交距离, 避免手接触, 现金支付, 接触物体前后洗手, 参加户外活动, 到家后浸泡衣服和慢性病史等参数。该研究得出的结论是, 棉兰市的阳性确诊病例表明, 经常旅行历史的受访者感染新冠肺炎病例呈波动趋势。

关键词: 新冠肺炎, 棉兰, 调查, 社交距离, 传播潜力

I. INTRODUCTION

At the end of 2019, the emergence of an infectious disease caused by the coronavirus (COVID-19) was similar to the Severe Acute respiratory syndrome (SARS) outbreak 17 years ago. However, the case fatality rate (CFR) of COVID-19 was still lower than that of SARS, i.e., 2% and 10%, respectively [1]. Despite lower CFR, the number of COVID-19 cases increased more rapidly, and they spread to other 27 countries in a short period [2].

Responding to this situation, the World Health Organization (WHO), as the biggest global health organization, has classified the risk caused by the coronavirus in the high category at a global level and declared that the outbreak constitutes a Public Health Emergency of International Concern (PHEIC) since January 30, 2020 [3]. As of February, 44,885 cases were COVID-19 positive confirmed, with details of 44,409 cases in China and 496 cases in other 27 countries, including Hongkong, Singapore, Thailand, South Korea, Japan, Malaysia, Taiwan, Australia, Germany, Vietnam, United States, France, Macau, United Arab Emirates, United Kingdom, Canada, Italy, Philippines, India, Russia, Spain, and also Nepal, Cambodia, Belgium, Finland, Sweden, and Sri Lanka (1 case each). Particularly, the number of death cases due to the COVID-19 in Indonesia was 1,114 [4].

The President of Indonesia, Joko Widodo, announced that the first COVID-19 case in Indonesia was detected on Monday, March 20, 2020. One month after the first case reported, the number of COVID-19 cases in Indonesia was kept increasing. It was reported that there were 2,273 positive-confirmed patients per April 5, 2020, with a death rate of 8.7%.

Currently, COVID-19 has also spread in North Sumatera. North Sumatera Provincial Task Force for COVID-19 reported that the number of people infected by the coronavirus increased. As of June 2020, the total number of COVID-19 positive patients increased from 1,447 to 1,467. Furthermore, 92 people were dead, and 383 patients recovered from the disease. The North Sumatera Provincial Task Force spokesperson for

COVID-19 announced that Medan city in North Sumatera had the highest number of COVID-19 cases (960), where 58 people were reported dead 242 recovered from the diseases [30].

The SARS-COV-2 virus was considered to be transmitted among people primarily through respiratory droplets when an infected person coughs, sneezes, talks, or exhales [5]. In addition, the transmission can be resulting from touching the face right after touching contaminated surfaces. However, the COVID-19 might infect people without any shown symptoms [6].

Responding to this situation, the Indonesian government has implemented numerous measures and efforts to prevent the pandemic by promoting social distancing. Social distancing suggested that the transmission of COVID-19 can be hindered if the people maintain their distance of at least 1 – 2 meters and do not make close contact with other people, and avoid large public gatherings [7].

The North Sumatera Provincial Task Force for COVID-19 has implemented various measures to stop the coronavirus spread, such as the appeal for social distancing, wearing a mask, and washing hands with soap. The government of North Sumatera Province has also issued policies and regulations for preventing and handling COVID-19 in schools, offices, and businesses. Closure of schools, shopping centers, tourism sites, and entertainment places is also applied to combat the transmission of COVID-19. However, even though the government needs support from its citizens to slow down the COVID-19 transmission, many people have not practiced the health protocols recommended by the government. Based on the online survey method using Google Form, we hypothesized that the COVID-19 transmission in Medan city could be analyzed in the behavioral study.

A preliminary survey conducted in Medan city found that many people violated health protocols, did not wear a mask during outdoor activities and did not maintain physical distance when shopping at the local store or in public transport. Based on the discussion earlier, it is necessary to conduct further research to study the

potential of coronavirus transmission in Medan city.

II. METHODOLOGY

This study aimed to identify the potential of COVID-19 transmission in Medan city. This study employed a quantitative descriptive design using the survey method by administering a web-based questionnaire on Google Form. A total of 293 respondents were selected as a research sample through the accidental sampling technique. Univariate analysis was performed in data analysis.

Due to the restriction of large public gatherings during the COVID-19 pandemic, the conventional data collection method was modified to a web-based questionnaire. However, the researchers still considered the respondents' rights and the ethical value during the data collection. This study has been reviewed and has received ethics approval from the Research Ethics Committee of Universitas Sari Mutiara Indonesia No. 183/FUSM/VIII/2020.

III. RESULTS AND DISCUSSION

Based on the results, it was obtained that the majority of the respondents (195 (66.6%)) traveled outside their country. The number of respondents who used public transport, such as online motorcycle taxi, public transport, bus, taxi, or train, was 210 (71.7%), as summarized in Table 1. It was also found that 54 respondents (18.4%) reported that they were where the people were infected with COVID-19. In this case, the virus transmission could occur due to direct contact with an infected person in a vehicle.

Table 1.
Respondent frequency distribution based on potential COVID-19 transmission in Medan City

Criteria	Yes		No	
	f	%	f	%
Travel intercity/ around the country	195*	66.4*	98	33.6
Public & online transport	210*	71.7*	83	28.3
Wearing mask	167	57.0	126*	43.0*
Social distancing	109	37.2	184*	62.8*
Shaking hands	130*	44.6*	163	55.6
Hand sanitizer	156	53.2	137*	46.8*
Cash payment	283*	96.6*	10	3.4
Eating in a restaurant	180*	61.4*	113	38.6
COVID-19 infected area	54*	18.4*	239	81.6
Sanitizing sink	114	38.9	179*	61.1*
Washing hands with soap	122	41.6	172*	58.4*
Hand sanitizers, masks, antiseptic soap at home.	177	60.4	116*	39.6*
Washing clothes	86	29.4	207*	70.6*
Washing hair	125	57.3	168*	42.7*
Chronic diseases	31*	10.6*	262	89.4

* Potential for COVID-19 transmission

The results of this study are in line with Yuliani's theory, which states that the transmission of the virus may occur due to several factors, such as coming into contact with infected animals, working or visiting healthcare facilities with confirmed cases, being infected by COVID-19 in other infected areas or countries, and having a history of traveling to areas with high infection rates [8]. Furthermore, to prevent the transmission of COVID-19, it is suggested to use disposable tissue paper when sneezing or coughing and avoid touching the face, particularly around the areas of eyes, nose, or mouth, because it can be a portal for the virus into the body [9]. Contact can be defined as an individual who has spent time in close-range physical proximity with an infectious patient and can communicate the virus to other individuals. The network of contacts may include the connection of an individual with family members, neighbors, friends, teachers, coworkers, healthcare workers, or social community members [10].

Supported by the findings of positive confirmed cases in Medan city, the trend seems to fluctuate. These tracing results no longer dominated the case findings but mostly originated from patients who had a travel history from other provinces. The Director-General of Disease Prevention and Control at the Ministry of Health of the Republic of Indonesia, who was also acting as the spokesperson for Indonesia's COVID-19 Task Force, Achmad Yurianto, stated that individuals who travel have a higher potential to come into contact with both asymptomatic patients and patients with mild COVID-19 symptoms [11]. Thus, under the COVID-19 Task Force Circular No. 4 the Year 2020, people who travel need to show a health certificate stating a negative status based on polymerase chain reaction (PCR) or rapid antigen test results from the local health offices, hospitals, clinics, and other health facilities.

The Indonesian government has implemented numerous measures to prevent and eradicate the spread of COVID-19 based on 3M applications, namely wearing a mask, washing hands, and social distancing. The present study, which included 293 respondents in Medan City, demonstrates that 126 respondents (43%) reported not wearing a mask when gathering or being outdoor, 184 respondents (62.8%) did not maintain their distance with other people of at least 1 meter when shopping, working or worshipping. The other 130 respondents (44.6%)

still shake hands with others, 283 respondents (96.6%) still pay in cash that had been touched by the COVID-19 infected persons; 172 respondents (58.4%) did not wash their hands before and after touching an object.

The data shows that the calls for wearing masks and practicing health protocols when doing outdoor activities are still ignored. Other papers also reported several reasons for not wearing masks, such as feeling uncomfortable and forgetting to wear masks [12]. Some other people even reported the feeling that their area was safe so that they did not need to practice social distancing or wear a mask [13]. Moreover, despite the awareness of COVID-19 transmission potential, some people still ignore the health protocols because of the distress caused by the pandemic [14]. People are uncertain about the end of the pandemic, but they have to work to live and recover their domestic financial issues [15]. The government suggests the people be disciplined in observing 3M movement in their daily routines to stop coronavirus transmission. According to a previous report, the results of international research found that wearing a cloth mask can help reduce the transmission risk by 45 percent [16].

The Indonesian task force for COVID-19 explained that cloth masks could be used as a substitute for medical masks to reduce the risk of transmission in public places. The number of asymptomatic cases has completed the socialization of wearing cloth masks. Asymptomatic individuals may not be aware that they have the virus in their body and can transmit the COVID-19 [17] if they do not wear a mask when interacting and in close-range proximity with other people. The infection may occur after exposure to only one droplet of contaminated saliva or respiratory secretion [18]. Therefore, to anticipate this, people are suggested to keep wearing their masks in public places. However, the benefits of these cloth masks can be obtained as long as they meet the requirements to support their effectiveness [19]. As part of the 3M movement, handwashing can also help reduce the risk of COVID-19 transmission [20]. The WHO pleads the people to thoroughly wash their hands for 20-30 seconds according to the suggested instructions. The use of a hand sanitizer that contains at least 60% alcohol is suggested if there is no water and soap [21].

Adhering to the health protocols is a key to break the chains of transmission and suppress the virus. Awareness and discipline in complying with the health protocols by the individual and all community members can protect people and

prevent virus transmission [22]. Based on this study, many people were not still fully aware of the potential of the COVID-19 transmission, where 180 respondents (61.4%) still ate at stalls/restaurants, 172 respondents (58.4%) did not wash hands when arriving home, and 207 respondents (70.6%) did not bathe and soak their clothes in hot water or detergent right after arriving home [23]. This data shows that many people did not care about personal hygiene. During the COVID-19 pandemic, people should maintain personal and environmental hygiene because objects that carry the COVID-19 can pass on the infections when people touch them [24]. These suggestions are consistent with the experts who advocate that the spread of COVID-19 occurred due to contact with infected people. It is necessary always to practice the health protocols and maintain personal hygiene during outdoor activities [25].

In most cases, many people are not aware that they are contaminated by the virus when doing regular activities. People may have the COVID-19 on the surface of their clothes or things that they mostly use, resulting in increased transmission potential to their family members. Therefore, people must limit the time spending outside the home, avoid large crowds, practice social distancing, avoid using crowded public transportations, use takeaway or delivery foodservice and eat at home [26].

A study by Lancet Global Health shows that people worldwide are at an increased risk if exposed to the COVID-19. The crisis of chronic disease and the failure of global public health to stem the emergence of risk factors that are actually preventable make the world vulnerable to any acute health emergencies such as COVID-19 [27]. The interaction between chronic diseases that continue to increase globally and risk factors, such as obesity, hypertension, diabetes, and cholesterol, can increase the vulnerability of individuals to the exposure [28].

Based on the present research on 293 people in Medan city, it was obtained that 31 respondents (10.6%) had a history of chronic diseases such as diabetes and other diseases related to kidney, heart, and respiratory. Despite the small percentage of chronic disease history (10.6%), it is still considered a high-risk factor in the virus infection. Besides, the risk of complication in people with chronic disease history is most likely higher, particularly in the elderly and those with multiple chronic conditions. The risk of death also increases among older people and those who suffer from diabetes, heart disease, blood clotting problems,

or those who have shown signs of sepsis. On average, the death rate due to the COVID-19 is 1%. Moreover, it increases to 6% in people with cancer, hypertension, or chronic respiratory disease, 7% in diabetic patients, and 10% in patients with heart disease. Meanwhile, the mortality rate due to COVID-19 in people aged 80 years or older was 15% higher [29].

IV. CONCLUSION

In summary, positive confirmed cases in Medan city demonstrate a fluctuating trend as the COVID-19 infected cases referred to the respondents with frequent travel history. Therefore, it is suggested to stay at home and not to travel during the period of the COVID-19 pandemic unless for urgent purposes. Additionally, any outdoor activities were essential to wear a mask, practice social distancing, wash hands with soap or clean them using hand sanitizer. Practicing entering and leaving the house protocols during the pandemic might effectively hinder the COVID-19 transmission. The novelty of this work is in the fact that it seeks to investigate the current pandemic situation and understand the behavior of preventing COVID-19 transmission.

ACKNOWLEDGMENT

The author would like to thank Universitas Sari Mutiara Indonesia for funding this research.

REFERENCES

- [1] LUI, G. C.-Y., YIP, T. C.-F., WONG, V. W.-S., CHOW, V. C.-Y., et al. (2021) Significantly lower case-fatality ratio of coronavirus disease 2019 (COVID-19) than severe acute respiratory syndrome (SARS) in Hong Kong—a territory-wide cohort study. *Clinical Infectious Diseases*, 72 (10), article ID e466-e475. <https://doi.org/10.1093/cid/ciaa1187>
- [2] KANDEL, N., CHUNGONG, S., OMAAR, A., & XING, J. (2020) Health security capacities in the context of COVID-19 outbreak: an analysis of International Health Regulations annual report data from 182 countries. *The Lancet*, 395 (10229), pp. 1047-1053. [https://doi.org/10.1016/S0140-6736\(20\)30553-5](https://doi.org/10.1016/S0140-6736(20)30553-5)
- [3] WHO (2020) COVID 19 Public Health Emergency of International Concern (PHEIC). Global research and innovation forum: towards a research roadmap. pp. 1-7.
- [4] SIRAIT, R. H., SURYOWATI, T., SIAGIAN, F. E., AHMAD, L. N., et al. (2020) The New Normal among Indonesian Elderly: Their Perception on COVID 19 and Their Positive Perspective to Accept the Consequences. *Asian Journal of Medical Principles and Clinical Practice*, 3 (4), pp. 53-60. <https://www.journalajmpcp.com/index.php/AJMPCP/article/view/30128>
- [5] JAYAWEERA, M., PERERA, H., GUNAWARDANA, B., & MANATUNGE, J. (2020) Transmission of COVID-19 virus by droplets and aerosols: A critical review on the unresolved dichotomy. *Environmental Research*, 188, article ID 109819. <https://doi.org/10.1016/j.envres.2020.109819>
- [6] ROTHAN, H. A., & BYRAREDDY, S. N. (2020) The epidemiology and pathogenesis of coronavirus disease (COVID-19) outbreak. *Journal of Autoimmunity*, 109, article ID 102433. <https://doi.org/10.1016/j.jaut.2020.102433>
- [7] QIAN, M., & JIANG, J. (2020) COVID-19 and social distancing. *Journal of Public Health*, 2020, pp. 1-3. <https://doi.org/10.1007/s10389-020-01321-z.pdf>
- [8] WU, Y.-C., CHEN, C.-S., & CHAN, Y.-J. (2020) The outbreak of COVID-19: An overview. *Journal of the Chinese Medical Association*, 83 (3), pp. 217-220. <https://doi.org/10.1097/JCMA.0000000000000270>
- [9] PARVIN, F., ISLAM, S., URMY, Z., & AHMED, S. (2020) The symptoms, contagious process, prevention and post treatment of COVID-19. *European Journal of Physiotherapy and Rehabilitation Studies*, 1 (1), pp. 81-105. <https://doi.org/10.5281/zenodo.3779252>
- [10] WU, Y., SONG, S., KAO, Q., KONG, Q., et al. (2020) Risk of SARS-CoV-2 infection among contacts of individuals with COVID-19 in Hangzhou, China. *Public Health*, 185, pp. 57-59. <https://doi.org/10.1016/j.puhe.2020.05.016>
- [11] LUO, S.-H., LIU, W., LIU, Z.-J., ZHENG, X.-Y., et al. (2020) A confirmed asymptomatic carrier of 2019 novel

- coronavirus. *Chinese Medical Journal*, 133 (9), pp. 1123-1125. <https://doi.org/10.1097/CM9.0000000000000798>
- [12] HOWARD, M. C. (2021) Gender, face mask perceptions, and face mask wearing: Are men being dangerous during the COVID-19 pandemic? *Personality and Individual Differences*, 170, article ID 110417. <https://doi.org/10.1016/j.paid.2020.110417>
- [13] BURTON, A., MCKINLAY, A., AUGHTERSON, H., & FANCOURT, D. (2021) Impact of the Covid-19 pandemic on the mental health and wellbeing of adults with mental health conditions in the UK: A qualitative interview study. *MedRxiv*, 2021, pp. 2020-2012. <https://doi.org/10.1101/2020.12.01.20241067v2>
- [14] GALEHDAR, N., KAMRAN, A., TOULABI, T., & HEYDARI, H. (2020) Exploring nurses' experiences of psychological distress during care of patients with COVID-19: A qualitative study. *BMC Psychiatry*, 20 (1), pp. 1-9. <https://doi.org/10.1186/s12888-020-02898-1>
- [15] TAN, W., HAO, F., MCINTYRE, R. S., JIANG, L., et al. (2020) Is returning to work during the COVID-19 pandemic stressful? A study on immediate mental health status and psychoneuroimmunity prevention measures of Chinese workforce. *Brain, Behavior, and Immunity*, 87, pp. 84-92. <https://doi.org/10.1016/j.bbi.2020.04.055>
- [16] SUGRUE, M., O'KEEFFE, D., SUGRUE, R., MACLEAN, L., & VARZGALIS, M. (2020) A cloth mask for under-resourced healthcare settings in the COVID19 pandemic. *Irish Journal of Medical Science*, 2020, pp. 1155-1157. <https://doi.org/10.1007/s11845-020-02241-3>
- [17] HARTANTO, B. W., & MAYASARI, D. S. (2021) Environmentally friendly non-medical mask: An attempt to reduce the environmental impact from used masks during COVID 19 pandemic. *Science of the Total Environment*, 760, article ID 144143. <https://doi.org/10.1016/j.scitotenv.2020.144143>
- [18] XU, R., CUI, B., DUAN, X., ZHANG, et al. (2020) Saliva: potential diagnostic value and transmission of 2019-nCoV. *International Journal of Oral Science*, 12 (1), pp. 1-6. <https://doi.org/10.1038/s41368-020-0080-z>
- [19] WANG, D., YOU, Y., ZHOU, X., ZONG, Z., et al. (2020) Selection of homemade mask materials for preventing transmission of COVID-19: A laboratory study. *PLoS One*, 15 (10), article ID e0240285. <https://doi.org/10.1371/journal.pone.0240285>
- [20] LIN, Y.-H., LIU, C.-H., & CHIU, Y.-C. (2020) Google searches for the keywords of "wash hands" predict the speed of national spread of COVID-19 outbreak among 21 countries. *Brain, Behavior, and Immunity*, 87, pp. 30-32. <https://doi.org/10.1155/2021/5531830>
- [21] THOMSON, E., & BULLIED, A. (2020) Production of ethanol-based hand sanitizer in breweries during the COVID-19 crisis. *MBAA TQ*, 57 (1), pp. 47-52. <https://doi.org/10.1094/TQ-57-1-0417-01>
- [22] ERREN, T. C., & LEWIS, P. (2020) SARS-CoV-2/COVID-19 and physical distancing: risk for circadian rhythm dysregulation, advice to alleviate it, and natural experiment research opportunities. *Chronobiology International*, 37 (7), pp. 1106-1109. <https://doi.org/10.1080/07420528.2020.1772811>
- [23] MAHMOOD, S. U., CRIMBLY, F., KHAN, S., CHOUDRY, E., & MEHWISH, S. (2020) Strategies for rational use of personal protective equipment (PPE) among healthcare providers during the COVID-19 crisis. *Cureus*, 12 (5), article ID e8248. <https://doi.org/10.7759/cureus.8248>
- [24] JIANG, Y., WANG, H., CHEN, Y., HE, J., et al. (2020) Clinical data on hospital environmental hygiene monitoring and medical staff protection during the coronavirus disease 2019 outbreak. *MedRxiv*, 2020, pp. 1-15. <https://doi.org/10.1101/2020.02.25.20028043v2>
- [25] DJEKIC, I., NIKOLIĆ, A., UZUNOVIĆ, M., MARIJKE, A., et al. (2021) Covid-19 pandemic effects on food safety-Multi-country survey study. *Food Control*, 122, article ID 107800.

<https://doi.org/10.1016/j.foodcont.2020.107800>

[26] JAMALUDIN, S., AZMIR, N. A., AYOB, A. F. M., & ZAINAL, N. (2020) COVID-19 exit strategy: Transitioning towards a new normal—Review article. *Annals of Medicine and Surgery*, 59, pp. 165-170.

<https://doi.org/10.1016/j.amsu.2020.09.046>

[27] NOURI, S., KHOONG, E. C., LYLES, C. R., & KARLINER, L. (2020) Addressing equity in telemedicine for chronic disease management during the Covid-19 pandemic. *NEJM Catalyst Innovations in Care Delivery*, 1 (3), <https://doi.org/10.1056/CAT.20.0123>

[28] HOLLY, J. M., BIERNACKA, K., MASKELL, N., & PERKS, C. M. (2020) Obesity, diabetes and COVID-19: an infectious disease spreading from the east collides with the consequences of an unhealthy western lifestyle. *Frontiers in Endocrinology*, 11, pp. 665. <https://doi.org/10.3389/fendo.2020.582870>

[29] BONANAD, C., GARCÍA-BLAS, S., TARAZONA-SANTABALBINA, F., SANCHIS, J. et al. (2020) The effect of age on mortality in patients with COVID-19: a meta-analysis with 611,583 subjects. *Journal of the American Medical Directors Association*, 21 (7), pp. 915-918. <https://doi.org/10.1016/j.jamda.2020.05.045>

[30] ANTARA NEWS (2020) *Active COVID-19 cases in North Sumatra drop to 1,935*. [Online] Available from: <https://en.antaraneews.com/news/159061/active-covid-19-cases-in-north-sumatra-drop-to-1935> [Accessed 24/08/21].

参考文献:

[1] LUI, G. C.-Y., YIP, T. C.-F., WONG, V. W.-S., CHOW, V. C.-Y., 等。(2021) 2019年冠状病毒病 (新冠肺炎) 的病死率显著低于香港的严重急性呼吸系统综合症 (非典)——一项全港性队列研究。 *临床传染病*, 72 (10), 文章 ID e466-e475。 <https://doi.org/10.1093/cid/ciaa1187>

[2] KANDEL, N., CHUNGONG, S., OMAAR, A., 和 XING, J. (2020) 新冠肺炎爆发背景下的卫生安全能力: 对来自 182 个国家的国际卫生条例年度报告数据的分析。 *柳叶刀*, 395 (10229), 第 1047-1053 页。 [https://doi.org/10.1016/S0140-6736\(20\)30553-5](https://doi.org/10.1016/S0140-6736(20)30553-5)

[3] 世界卫生组织 (2020) 新冠肺炎国际关注的突发公共卫生事件 (突发公共卫生事件)。 *全球研究与创新论坛: 迈向研究路线图*。第 1-7 页。

[4] SIRAIT, R. H., SURYOWATI, T., SIAGIAN, F. E., AHMAD, L. N., 等。

(2020) 印度尼西亚老年人的新常态: 他们对新冠肺炎的看法以及他们接受后果的积极观点。 *亚洲医学原理与临床实践杂志*, 3 (4), 第 53-60 页。 <https://www.journalajmpcp.com/index.php/AJMPCP/article/view/30128>

[5] JAYAWEERA, M., PERERA, H., GUNAWARDANA, B. 和 MANATUNGE, J. (2020) 通过飞沫和气溶胶传播新冠肺炎病毒: 对未解决的二分法的批判性审查。 *环境研究*, 188, 文章 ID 109819。 <https://doi.org/10.1016/j.envres.2020.109819>

[6] ROTHAN, H. A., 和 BYRAREDDY, S. N. (2020) 冠状病毒病 (新冠肺炎) 爆发的流行病学和发病机制。 *自身免疫杂志*, 109, 文章 ID 102433。 <https://doi.org/10.1016/j.jaut.2020.102433>

[7] QIAN, M., 和 JIANG, J. (2020) 新冠肺炎和社会疏远。 *公共卫生杂志*, 2020, 第 1-3 页。 <https://doi.org/10.1007/s10389-020-01321-z.pdf>

[8] WU, Y.-C., CHEN, C.-S., 和 CHAN, Y.-J. (2020) 新冠肺炎的爆发: 概述。 *中华医学杂志*, 83 (3), 217-220 页。

<https://doi.org/10.1097/JCMA.00000000000000270>

[9] PARVIN, F., ISLAM, S., URMU, Z., 和 AHMED, S. (2020) 新冠肺炎的症状、传染过程、预防和后治疗。欧洲物理治疗和康复研究杂志, 1 (1), 第 81-105 页。

<https://doi.org/10.5281/zenodo.3779252>

[10] WU, Y., SONG, S., KAO, Q., KONG, Q. 等. (2020) 中国杭州 新冠肺炎 患者接触者感染 SARS-CoV-2 的风险。公共卫生, 185, 第 57-59 页。

<https://doi.org/10.1016/j.puhe.2020.05.016>

[11] LUO, S.-H., LIU, W., LIU, Z.-J., ZHENG, X.-Y. 等. (2020) 2019 新型冠状病毒确诊无症状携带者。中国医学杂志, 133 (9), 第 1123-1125 页。

<https://doi.org/10.1097/CM9.0000000000000798>

[12] HOWARD, M. C. (2021) 性别、口罩认知和口罩佩戴：在 新冠肺炎大流行期间男性是否危险？个性和个体差异, 170, 文章 ID 110417。

<https://doi.org/10.1016/j.paid.2020.110417>

[13] BURTON, A., MCKINLAY, A., AUGHTERSON, H., 和 FANCOURT, D. (2021) 新冠肺炎大流行对英国有心理健康状况的成年人的心理健康和福祉的影响：A 定性访谈研究。MedRxiv, 2021, 第 2020-2012 页。

<https://doi.org/10.1101/2020.12.01.20241067v2>

[14] GALEHDAR, N., KAMRAN, A., TOULABI, T., 和 HEYDARI, H. (2020) 探索护士在护理 新冠肺炎患者期间的心理困扰经历：一项定性研究。BMC 精神病学, 20 (1), 第 1-9 页。

<https://doi.org/10.1186/s12888-020-02898-1>

[15] TAN, W., HAO, F., MCINTYRE, R. S., JIANG, L., 等. (2020) 在 新冠肺炎大流行期间重返工作是否有压力？中国劳动力即

时心理健康状况及心理神经免疫预防措施研究[J]. 大脑, 行为和免疫, 87, 第 84-92 页。

<https://doi.org/10.1016/j.bbi.2020.04.055>

[16] SUGRUE, M., O'KEEFFE, D., SUGRUE, R., MACLEAN, L. 和 VARZGALIS, M. (2020) 在 新冠肺炎大流行中为资源不足的医疗保健环境提供的布口罩。爱尔兰医学科学杂志, 2020, 第 1155-1157 页。

<https://doi.org/10.1007/s11845-020-02241-3>

[17] HARTANTO, B. W. 和 MAYASARI, D. S. (2021) 环保非医用口罩：尝试减少 新冠肺炎大流行期间使用过的口罩对环境的影响。总体环境科学, 760, 文章 ID 144143

<https://doi.org/10.1016/j.scitotenv.2020.144143>

[18] XU, R., CUI, B., DUAN, X., ZHANG 等. (2020) 唾液：2019 新型冠状病毒的潜在诊断价值和传播。国际口腔科学杂志, 12 (1), 第 1-6 页。

<https://doi.org/10.1038/s41368-020-0080-z>

[19] WANG, D., YOU, Y., ZHOU, X., ZONG, Z. 等. (2020) 选择自制口罩材料以防止 新冠肺炎传播：一项实验室研究。公共图书馆一号, 15 (10), 文章 ID e0240285

<https://doi.org/10.1371/journal.pone.0240285>

[20] LIN, Y.-H., LIU, C.-H., 和 CHIU, Y.-C. (2020) 谷歌搜索关键词“洗手”预测 新冠肺炎疫情在 21 个国家的全国传播速度。大脑, 行为和免疫, 87, 第 30-32 页。

<https://doi.org/10.1155/2021/5531830>

[21] THOMSON, E., 和 BULLIED, A. (2020) 新冠肺炎危机期间啤酒厂生产乙醇洗手液。工商管理硕士, 57 (1), 第 47-52 页。 <https://doi.org/10.1094/TQ-57-1-0417-01>

- [22] ERREN, T. C., 和 LEWIS, P. (2020) 非典-冠状病毒 2/新冠肺炎和身体距离：昼夜节律失调的风险 缓解它的建议以及自然实验研究机会。国际时间生物学, 37 (7), 第 1106-1109 页。
<https://doi.org/10.1080/07420528.2020.1772811>
- [23] MAHMOOD, S.U., CRIMBLY, F., KHAN, S., CHOUDRY, E. 和 MEHWISH, S. (2020) 新冠肺炎危机期间医疗保健提供者合理使用个人防护设备 (个人防护装备) 的策略. 丘脑, 12 (5), 文章 ID e8248。
<https://doi.org/10.7759/cureus.8248>
- [24] JIANG, Y., WANG, H., CHEN, Y., HE, J. 等. (2020) 2019 年新型冠状病毒肺炎疫情期间医院环境卫生监测和医务人员防护临床数据。MedRxiv, 第 1-15 页。
<https://doi.org/10.1101/2020.02.25.20028043v2>
- [25] DJEKIC, I., NIKOLIĆ, A., UZUNOVIĆ, M., MARIJKE, A. 等. (2021) 新冠肺炎大流行对食品安全的影响——多国调查研究。食品控制, 122, 文章 ID 107800。
<https://doi.org/10.1016/j.foodcont.2020.107800>
- [26] JAMALUDIN, S., AZMIR, N. A., AYOB, A. F. M., 和 ZAINAL, N. (2020) 新冠肺炎退出策略：过渡到新常态——评论文章。医学和外科年鉴, 59, 第 165-170 页。
<https://doi.org/10.1016/j.amsu.2020.09.046>
- [27] NOURI, S., KHOONG, E. C., LYLES, C. R., 和 KARLINER, L. (2020) 在新冠肺炎大流行期间解决慢性病管理远程医疗的公平问题。NEJM 护理交付中的催化剂创新, 1 (3),
<https://doi.org/10.1056/CAT.20.0123>
- [28] HOLLY, J. M., BIERNACKA, K., MASKELL, N., 和 PERKS, C. M. (2020) 肥胖、糖尿病和 新冠肺炎：一种从东方传播的传染病与不健康的西方生活方式的后果相冲突。内分泌学前沿, 11, 第 665 页
<https://doi.org/10.3389/fendo.2020.582870>
- [29] BONANAD, C., GARCÍA-BLAS, S., TARAZONA-SANTABALBINA, F., SANCHIS, J. 等. (2020) 年龄对 新冠肺炎患者死亡率的影响：对 611,583 名受试者的荟萃分析。美国医学指导协会杂志, 21 (7), 第 915-918 页。
<https://doi.org/10.1016/j.jamda.2020.05.045>
- [30] 安塔拉新闻 (2020) 北苏门答腊的活跃新冠肺炎病例下降至 1,935。[在线] 可从：
<https://en.antaranews.com/news/159061/active-covid-19-cases-in-north-sumatra-drop-to-1935> [访问 24/08/21]。

THE POTENTIAL OF CORONAVIRUS (COVID-19) TRANSMISSION IN MEDAN CITY, INDONESIA

ORIGINALITY REPORT

11 %
SIMILARITY INDEX

10 %
INTERNET SOURCES

6 %
PUBLICATIONS

4 %
STUDENT PAPERS

PRIMARY SOURCES

1	covid19dataportal.es Internet Source	2 %
2	Submitted to Forum Komunikasi Perpustakaan Perguruan Tinggi Kristen Indonesia (FKPPTKI) Student Paper	2 %
3	Submitted to Kang Chiao International School Student Paper	1 %
4	arxiv.org Internet Source	1 %
5	repository.uin-malang.ac.id Internet Source	1 %
6	en.antaranews.com Internet Source	1 %
7	www.skyscanner.com.hk Internet Source	1 %
8	www.x-mol.com Internet Source	1 %

9

plus.mcmaster.ca

Internet Source

1 %

10

369485e5-78d9-4695-8ee7-77e624124993.filesusr.com

Internet Source

1 %

11

asrtbd.uyp97.com

Internet Source

1 %

12

www.ibi.or.id

Internet Source

1 %

Exclude quotes Off

Exclude bibliography Off

Exclude matches Off

THE POTENTIAL OF CORONAVIRUS (COVID-19) TRANSMISSION IN MEDAN CITY, INDONESIA

GRADEMARK REPORT

FINAL GRADE

/0

GENERAL COMMENTS

Instructor

PAGE 1

PAGE 2

PAGE 3

PAGE 4

PAGE 5

PAGE 6

PAGE 7

PAGE 8

PAGE 9
