

Sustainable strategies to prevent COVID-19 in Indonesia

Ramadhan Tosepu* 

Department of Environmental Health, Faculty of Public Health, University of Halu Oleo, Indonesia

Doi: <https://dx.doi.org/10.36685/phi.v8i1.576>

Received: 8 January 2022 | Revised: 20 February 2022 | Accepted: 29 March 2022

Corresponding author:

Ramadhan Tosepu, Ph.D

Faculty of Public Health, University of Halu Oleo Southeast Sulawesi province, Indonesia

Jl.H.E.Mokodompit, Anduonohu

Email: ramadhan.tosepu@uho.ac.id

Copyright: © 2022 the Author(s). This is an open-access article distributed under the terms of the Creative Commons Attribution Non-Commercial License, which permits unrestricted non-commercial use, distribution, and reproduction in any medium provided the original work is properly cited.

Keywords: COVID-19; Indonesia; Sustainable Development Goals; Posyandu; Integrated Service Post

The World Health Organization (WHO) explains that coronavirus or called COVID-19 is a virus that infects the respiratory system, which causes illnesses from the common cold to more severe diseases, such as Middle East Respiratory Syndrome (MERS-CoV) and Severe Acute Respiratory Syndrome (SARS-CoV) (Shi et al., 2020).

On 31 December 2019, WHO has notified a case of pneumonia of unknown etiology detected in Wuhan City, Hubei Province of China (Tosepu, Effendy, & Ahmad, 2020; World Health Organization, 2020a). Wuhan itself is a megapolitan city with a total population of tens of millions, just like Beijing, Shanghai, and others. At the beginning of its appearance, the virus was known as the 2019 novel coronavirus, abbreviated as 2019-nCoV, which had never been identified in humans before (Tosepu et al., 2021).

COVID-19 has significantly changed human life in just a matter of months, and human social behavior has changed drastically due to adjustments to the COVID-19 pandemic (Li, Ghosh, & Nachmias, 2020). Change occurs not only at the individual level but also in groups, organizations, and companies. Moreover, almost all aspects are affected, including

education, economy, politics, and religion, which cause social discomfort and turmoil (Grasso et al., 2021).

The COVID-19 virus has been in the community, and alternately this virus will change variants so that a sustainable COVID-19 response is needed by involving the community and the government. In Indonesia, the opportunity to create a model for dealing with COVID-19 is possible. Indonesia has *Posyandu* (Integrated Service Post) and family welfare empowerment, called PKK (Sari, Pradiptha, & Triana, 2022). Both institutions have essential roles and performances in community empowerment.

New Health Center Problems in the COVID-19 Era

The more active the public health centers are in dealing with COVID-19, the more problems they will face in carrying out their duties and responsibilities in the community. For example, **Figure 1** presents new issues in the health center in the era of COVID-19.

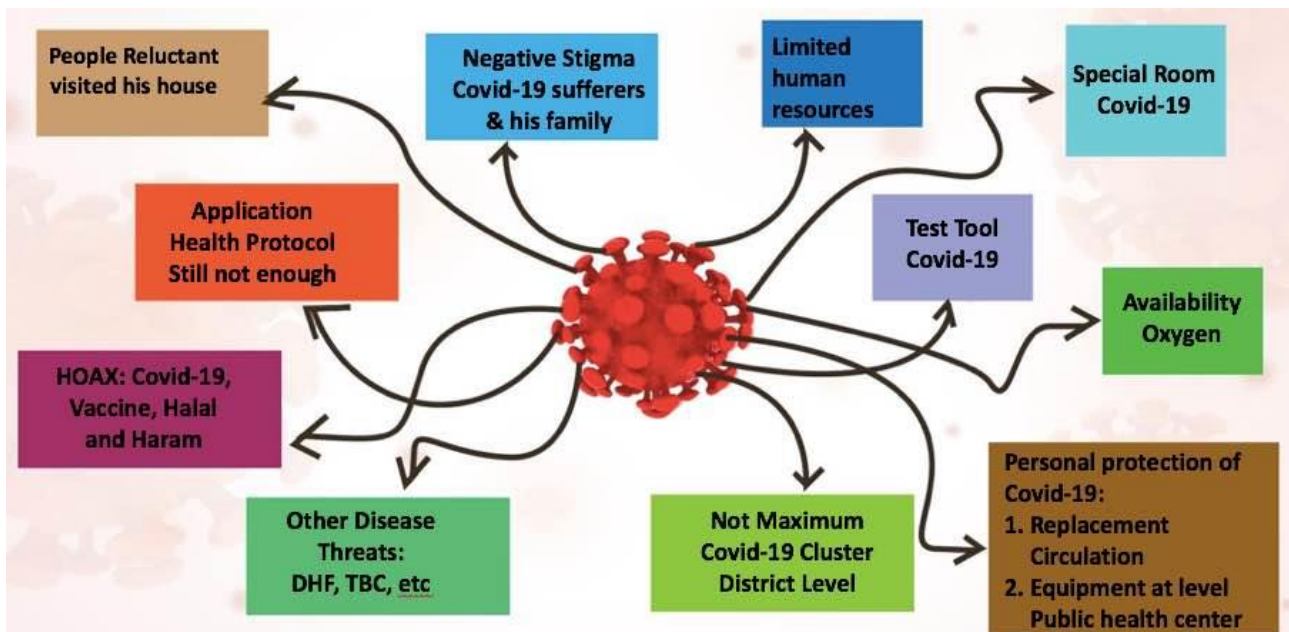


Figure 1 New problems of public health centers in the era of COVID-19 (Developed by the author)

A Sustainable Model of Coping with COVID-19

The COVID-19 prevention Health Protocol, namely 3T: Testing, Tracing, and Treatment, is an effort that must be carried out by the government and the community (Park et al., 2020). This program is not as easy as wearing masks, washing hands, and keeping a distance because it involves other parties, but it must be implemented properly. This approach is designed by identifying COVID-19 cases with health checks through several types of tests to confirm COVID-19 cases, followed by tracing people who spend time and are in close contact with them. If an individual is infected, self-isolation is needed to prevent transmission to others.

COVID-19 is still spreading among the surrounding community. Therefore, even though the current condition of the spread of the virus has begun to decline, the public must remain vigilant in carrying out daily activities, namely following the health protocols, such as wearing masks, washing hands, and maintaining distance (Sharif et al., 2021). Mask is one of the Personal Protective Equipment (PPE) used to protect the mouth, nose, and face from airborne pathogens, droplets, and splashes of infected body fluids (World Health Organization, 2020b).

Medical masks are preventive measures that can limit the spread of certain respiratory diseases

caused by viruses, including COVID-19. The use of masks has proven to be effective in suppressing the spread of COVID-19 when balanced with other health protocols such as diligently washing hands with soap and running water and keeping a distance from other people (Cirincione et al., 2020).

The coronavirus is transmitted through droplets, which are liquids or splashes of saliva that a person releases from the nose or mouth when sneezing, coughing, or even talking (Pendar & Páscoa, 2020). Droplets are small and light in size and can spread an estimated distance of 1 to 2 meters, then fall according to the law of gravity. Droplets containing this virus fall on the surface of an inanimate object, then the object will be contaminated and have the potential to spread infection (Delikhoon, Guzman, Nabizadeh, & Norouziyan Baghani, 2021). Therefore, maintain at least 1 meter from other people. A distance that is too close allows you to inhale water droplets and the nose or mouth of a person who may be infected with COVID-19 when that person sneezes or coughs (Issakhov et al., 2021).

The position of *Posyandu* with respect to village administration/government is a government agency responsible for organizing development in villages as a forum for community empowerment in the health and other basic social fields which are institutionally fostered by the village government (Suparto, Azizah, Andriyani, Puspita, & Hermayanti, 2021). The COVID-19 prevention program can

involve *Posyandu* as a forum to carry out all COVID-19 prevention activities, such as providing education about health protocols. The community empowerment model starts from the lowest level, controlling the sub-district level, or called RT/RW level, by utilizing the COVID-19 cadres in the *Posyandu* formed by the local health center and PKK that have been trained and given knowledge education about overcoming COVID-19.

In addition to educating the community, it is hoped that cadres can also carry out simple risk-based surveillance, which will later be monitored by the local public health center and PKK. In addition, cadres are also expected to be able to find cases in the community that will later be reported to the public health center for follow-up (see **Figure 2**)

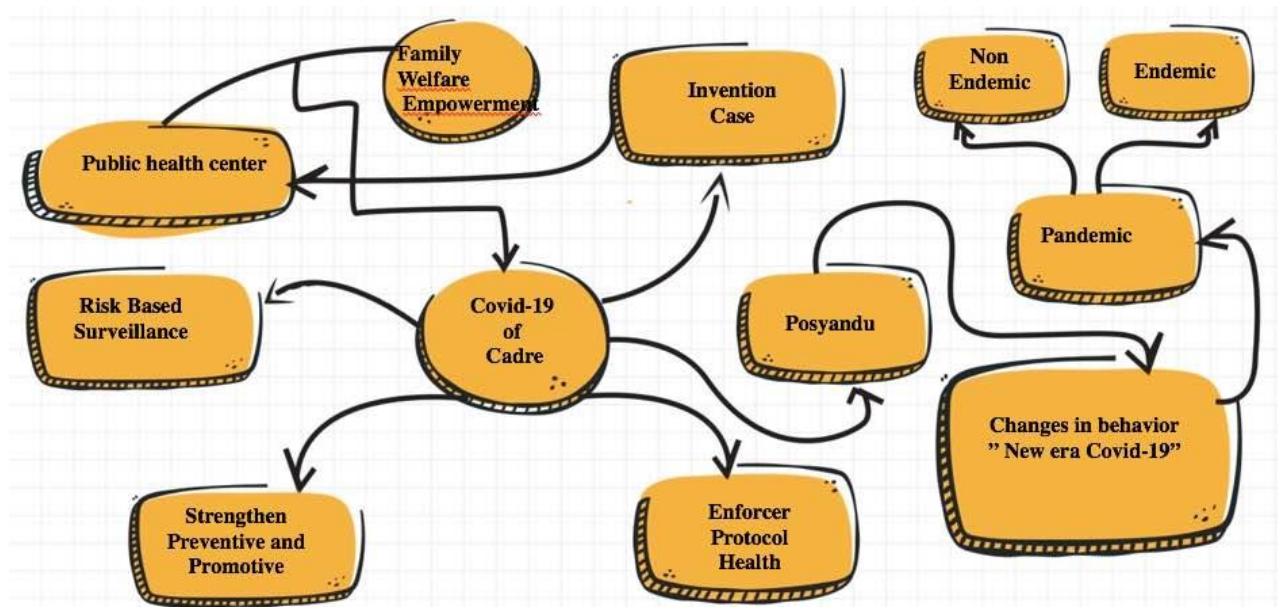


Figure 2 A model for dealing with COVID-19 in a sustainable manner (Developed by the author)

Conclusion

The management aspect in dealing with COVID-19 has not been fulfilled from financing, facilities, and infrastructure at the public health centers. There are still shortages to support the activities of the public health centers. Thus, there is an increase in the spread of COVID-19. Public health efforts in overcoming COVID-19 have been carried out with cross-sectoral collaboration from the public health centers, but the roles of cadres in the community to help overcome COVID-19 have not yet been optimized. The model developed in this article may become an input for reducing the spread of the virus.

Declaration of Conflicting Interest

The author declares no conflict of interest in this study.

Funding

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Acknowledgment

None.

Author Contribution

This is the original work of the author.

Author Biography

Ramadhan Tosepu, SKM., M.Kes., Ph.D is a Lecturer of the Public Health Faculty, Halu Oleo University, Indonesia. He is also the Head of the Department of Public Health, Postgraduate Study Program at the same university.

References

- Cirincione, L., Plescia, F., Ledda, C., Rapisarda, V., Martorana, D., Moldovan, R. E., . . . Cannizzaro, E. (2020). COVID-19 pandemic: Prevention and protection measures to be adopted at the workplace. *Sustainability*, 12(9), 3603. <http://doi:10.3390/su12093603>
- Delikhon, M., Guzman, M. I., Nabizadeh, R., & Norouziyan Baghani, A. (2021). Modes of transmission of severe acute respiratory syndrome-coronavirus-2 (SARS-CoV-2) and factors influencing on the airborne transmission: A review. *International Journal of*

- Environmental Research and Public Health*, 18(2), 395. <https://doi.org/10.3390/ijerph18020395>
- Grasso, M., Klicperová-Baker, M., Koos, S., Kosyakova, Y., Petrillo, A., & Vlase, I. (2021). The impact of the coronavirus crisis on European societies. What have we learnt and where do we go from here?—Introduction to the COVID volume. *European Societies*, 23(sup 1), S2-S32. <https://doi.org/10.1080/14616696.2020.1869283>
- Issakhov, A., Zhandaulet, Y., Omarova, P., Alimbek, A., Borsikbayeva, A., & Mustafayeva, A. (2021). A numerical assessment of social distancing of preventing airborne transmission of COVID-19 during different breathing and coughing processes. *Scientific Reports*, 11(1), 1-39. <https://doi.org/10.1038/s41598-021-88645-2>
- Li, J., Ghosh, R., & Nachmias, S. (2020). In a time of COVID-19 pandemic, stay healthy, connected, productive, and learning: Words from the editorial team of HRDI. *Human Resource Development International*, 23(3), 199-207. <https://doi.org/10.1080/13678868.2020.1752493>
- Park, Y., Huh, I. S., Lee, J., Kang, C. R., Cho, S.-i., Ham, H. J., . . . Lee, J. Y. (2020). Application of testing-tracing-treatment strategy in response to the COVID-19 outbreak in Seoul, Korea. *Journal of Korean Medical Science*, 35(45). <https://doi.org/10.3346/jkms.2020.35.e396>
- Pendar, M.-R., & Páscoa, J. C. (2020). Numerical modeling of the distribution of virus carrying saliva droplets during sneeze and cough. *Physics of Fluids*, 32(8), 083305. <https://doi.org/10.1063/5.0018432>
- Sari, N. L. P. D. Y., Pradipta, I. D. A. G. F., & Triana, K. Y. (2022). Perceptions of Health workers, cadres, and mothers regarding the Posyandu program during COVID-19 pandemic: A qualitative study. *International Journal of Nursing and Health Services (IJNHS)*, 5(1), 107-116. <http://doi.org/10.35654/ijnhs.v5i1.551>
- Sharif, N., Alzahrani, K. J., Ahmed, S. N., Opu, R. R., Ahmed, N., Talukder, A., . . . Saha, T. (2021). Protective measures are associated with the reduction of transmission of COVID-19 in Bangladesh: A nationwide cross-sectional study. *Plos One*, 16(11), e0260287. <https://doi.org/10.1371/journal.pone.0260287>
- Shi, Y., Wang, G., Cai, X.-p., Deng, J.-w., Zheng, L., Zhu, H.-h., . . . Chen, Z. (2020). An overview of COVID-19. *Journal of Zhejiang University-SCIENCE B*, 21(5), 343-360. <https://doi.org/10.1631/jzus.B2000083>
- Suparto, T. A., Azizah, N. N., Andriyani, S., Puspita, A. P. W., & Hermayanti, Y. (2021). The problems affecting the implementation of Posyandu program: A literature review. *JIKO (Jurnal Ilmiah Keperawatan Orthopedi)*, 5(2), 55-61. <http://DOI:10.46749/jiko.v5i2.75>
- Tosepu, R., Effendy, D. S., & Ahmad, L. (2020). The first confirmed cases of COVID-19 in Indonesian citizens. *Public Health of Indonesia*, 6(2), 70-71. <https://dx.doi.org/10.36685/phi.v6i2.337>
- Tosepu, R., Gunawan, J., Effendy, D. S., HN, M. R., Muchtar, F., Sakka, A., & Indriastuti, D. (2021). Experience of healthcare workers in combatting COVID-19 in Indonesia: A descriptive qualitative study. *Belitung Nursing Journal*, 7(1), 37-42. <https://doi.org/10.33546/bnj.1251>
- World Health Organization. (2020a). *Getting your workplace ready for COVID-19: how COVID-19 spreads, 19 March 2020*. Retrieved from <https://www.who.int/docs/default-source/coronaviruse/getting-workplace-ready-for-covid-19.pdf>
- World Health Organization. (2020b). *Rational use of personal protective equipment (PPE) for coronavirus disease (COVID-19): interim guidance, 19 March 2020*. Retrieved from <https://apps.who.int/iris/handle/10665/331498>

Cite this article as: Tosepu, R. (2022). Sustainable strategies to prevent COVID-19 in Indonesia. *Public Health of Indonesia*, 8(1), 27-30. <https://dx.doi.org/10.36685/phi.v8i1.576>