

MANAGING MASK WASTE IN THE NEW NORMAL ERA

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PAPER INFO	ABSTRACT
Received: February 2023 Revised: February 2023 Approved: February 2023	Background: The COVID-19 pandemic has changed the dynamics of global landfills so it needs special attention. Personal protective equipment, used masks, gloves are the main contribution to the volume of waste. The handling of infectious waste is a major global concern for public health and environmental sustainability if not handled properly. This can cause the spread of deadly diseases because waste acts as a vector for corona virus disease that lasts up to 7 days in COVID-19 waste such as masks. Aim: To identify mask waste management in the new normal era. Method: The research method used in this study is a literature review by analyzing journals about mask waste management in the new normal era from Google Scholar between 2019-2021. Findings: Mask waste management in the new normal era can be implemented well by the community. Further socialization and monitoring from local governments is needed so that people understand household medical waste management properly.
KEYWORDS	<i>management, waste, masks, new normal</i>
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INTRODUCTION

Corona Virus Disease 19 (COVID-19) is a new virus and the disease it causes was unknown before the start of the outbreak in Wuhan, China in December 2019. Covid 19 has now become a pandemic that occurs in many countries around the world (WHO, 2020). This COVID-19 virus was found in Indonesia in early March 2020 (Irawati, 2020).

The COVID-19 pandemic has changed the dynamics of global landfills so it needs special attention (Sharma et al., 2020). Personal protective equipment, used masks, gloves are the main contribution to the volume of waste (Benson et al., 2021; Rizan et al., 2021). The handling of infectious waste is a major global concern for public health and environmental sustainability if not handled properly. This can cause the spread of deadly diseases because waste acts as a vector for corona virus disease that lasts up to 7 days in COVID-19 waste such as masks (Ilyas et al., 2020).

During the pandemic, Indonesian people are required to live with a new way of life, which can 'come to terms' with COVID-19. New normal is an action of the community and all institutions to do daily or work patterns or new lifestyles different from before (Hall et al., 2021). If this is not done, there will be a risk of transmission (Kemenkes RI & GERMAS, 2020).

The COVID-19 response strategy aims to slow and stop the rate of transmission, provide optimal health services for patients and minimize the impact of the COVID-19 pandemic on the health system, social services, economic activities, and other sector activities. The community has an important role in breaking the chain of transmission of COVID-19 so as not to cause new sources of transmission considering the way transmission can be through droplets

from individual to individual. Prevention of transmission and spread of COVID-19 in the community can be done by active education and communication related to the importance of physical distancing, clean and healthy living behavior (PHBS, *Perilaku Hidup Bersih dan Sehat*) by always ensuring hand hygiene, wearing masks, and limiting activities outside the home (Irawati, 2020).

The use of masks is part of a comprehensive series of prevention and control measures that can limit the spread of COVID-19. Masks can be used either to protect healthy people (worn to protect themselves when in contact with an infected person) or to control the source (worn by infected people to prevent further transmission), but an understanding of the use of appropriate masks is needed to ensure maximum effectiveness in avoiding transmission of COVID-19 (WHO, 2020). Along with the increase in the number of COVID-19 cases, the use of masks by the public is also getting higher as a form of increasing public awareness to protect the risk of COVID-19 transmission. However, the increased use of masks is also used by irresponsible people and it is feared that used masks will be recycled and resold to the market. Therefore, education is needed to increase understanding related to COVID-19 prevention, correct use of masks and waste disposal management of used masks.

Based on the explanation, the researcher would like to conduct research on managing mask waste in the new normal era. The research is expected to contribute to the waste management knowledge, especially how to manage disposed masks as one of the side effects of COVID-19.

METHOD

This is a literature review study research in which it is explained that it is a description of theories, findings, and other research materials obtained from reference materials that will be used as the basis for research activities to compile a clear framework of problem formulation that researchers want to research (Nurislaminingsih, 2020). Google Scholar assisted the researcher during the process of data collection by providing a platform to search scientific articles on waste management, mask disposal, and recent COVID-19 situations. The researcher used inclusion criteria such as research should be conducted in Indonesia, not more than 3 years-old, and scope both mask disposal and COVID-19. Once all the articles were collected, they were then sorted out to find the most suitable ones, analyzed their results, then drew a final conclusion.

RESULTS AND DISCUSSION

The results of research using literature review obtained that from 6 journals analyzed, it was found that mask waste management in the new normal era has been running well, the community can carry out the management of mask waste handling properly.

The results of research from Budiastuti et al. (2021) stated that there were significant differences before and after education was carried out to the public about the use of masks and mask waste management as an effort to prevent COVID-19.

The results of research from Chasanah et al. (2021) stated that the use of masks during the Covid-19 pandemic has become an adaptation to people's lifestyles. This is done as an effort to protect themselves while reducing the spread of the coronavirus. The activity of using masks, of course, has an impact on increasing the amount of infectious waste in the form of medical masks, be it cloth masks or medical masks. Infectious waste requires special handling than

other waste generated in the household environment. The management goes through the stages of collection, sorting, container and disinfection, as well as labeling. One important factor in the management of infectious waste in the household environment is to increase public knowledge through education and counseling to the public about the environment and health. And the last is support from the government to provide an independent infectious waste management infrastructure in villages.

The results of research from Fentia and Ningsih (2020) stated that there is a relationship between knowledge of mask waste management in the Working Area of the Sidomulyo Inpatient Health Center in Pekanbaru City, with the results of the chi square statistical test obtained $p \text{ value} = 0.01 < \alpha = 0.1$. There is a relationship between attitudes towards mask waste management in the Working Area of the Sidomulyo Inpatient Health Center in Pekanbaru City, with the results of the chi square statistical test obtained $p \text{ value} = 0.01 < \alpha = 0.1$.

The results of research from Pratama et al. (2021) stated that the behavior of people throwing mask waste carelessly is still high and public understanding regarding medical waste disposal regulations is still lacking. This was supported by respondents using masks when outside the home with 81% answering always. The intensity of respondents disposing of mask waste during the pandemic with 28% answering always and 41% answering almost always. Respondents understood how to dispose of masks during the pandemic with 28% answering not understanding and 27% answering very incomprehensible. Respondents disinfected mask waste with presentations as many as 36% who answered rarely and 39% who answered never.

The results of research from Amalia et al. (2020) show that handling household infectious waste is an important effort to prevent the spread of the SARS-CoV-2 (COVID-19) virus. Handling waste from sources can be done with several steps that are easy for the general public to do, namely sorting, container and disinfection, and labeling. Further handling of household infectious waste can be done with 2 options, namely transportation by special facilities (if provided by the local government) then the waste is transported and processed according to B3 waste handling procedures. The second option is transportation without special means, following domestic waste handling procedures, however, provided that health risk reduction procedures have been carried out at the source and have been stored for 72 hours. The results of research from Axmalia and Sinanto (2021) stated that the amount of medical B3 waste during the COVID-19 pandemic has increased. This infectious waste is medical waste classified as hazardous and toxic waste or B3, medical waste sourced from households and waste from health care facilities. The community does not fully know and has not carried out household waste treatment, then there is a lack of information about the effectiveness of handling COVID-19 infectious waste.

The results of research from Sumiarsih and Sarumi (2021) stated that the community and students have begun to understand after participating in counseling on the management of used mask waste, both procedures for using and disposing of mask waste properly and correctly so as not to pollute the environment. Then the knowledge, attitudes and actions of sanitarian officers in the waste management of used masks in the work environment of the Batalaiworu Health Center, Muna Regency correctly.

CONCLUSION

The results of the study analyzed by researchers, from 6 journals show that the community has been able to implement mask waste management in the new normal era well. The results of the study analyzed by researchers from six journals show that the community has been able to implement mask waste management in the new normal era well. However, it is important to note that surgical masks are mainly composed of polypropylene (PP), thus turning them into a source of fossil plastic and microplastic pollution. Protective personal equipment (PPE) such as gloves and masks should not be recycled for health and safety reasons, and should go into the general rubbish container.

The researcher realized that some gaps still remain. Therefore, future research are expected to fulfill them by investigating the effectiveness of different mask waste management strategies in reducing the environmental impact of mask waste, studying the feasibility of recycling surgical masks and other ppe to reduce waste and pollution, analyzing the impact of mask waste on human health and the environment, and examining the public's perception of mask waste management and identifying factors that influence their behavior towards mask waste.

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