

Training on Making Hand Sanitizers for Cadres During the Covid-19 Pandemic, Cibadak Village, Bogor City

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ABSTRACT

Covid-19, which has become a global pandemic, has made many people take preventive measures. One way to prevent the transmission of Covid-19 is to maintain cleanliness such as diligently washing hands with soap using Hand Sanitizer. The purpose of this training is to provide knowledge to cadre mothers about how to make Hand Sanitizers during the Covid-19 pandemic. The partner in this service activity is RW.12 in Cibadak sub-district, Bogor City. Due to the limitations of Hand Sanitizer and to take advantage of time at home we can make our own Hand Sanitizer . This training activity was carried out for 1 time with three stages: 1) preparation, implementation, evaluation activities. This activity was carried out by Ibn Khaldun University Bogor Students who were accompanied by Field Supervisors, the results of this activity showed that the partners of this activity were able to make their own Hand Sanitizer.

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INTRODUCTION

Covid-19, which has become a global pandemic, has made many people take preventive measures This virus was found in Wuhan, China for the first time and has infected 90,308 people as of March 2, 2020 (Yuliana, 2020). One way to prevent the transmission of Covid-19 is to maintain cleanliness such as diligently washing hands with water and soap. According to the Centers for Disease Control and Prevention (CDC), using alcohol-based hand sanitizer is the second best option after washing hands with soap. The use of Hand Sanitizer is considered capable of disabling microorganisms attached to the hands. The use of Hand Sanitizer is more effective and efficient when compared to using soap and water so that many people are interested in using it (Asngad, A., Bagas, A., & Nopitasari. 2018)

Since the confirmed Covid-19 reached Indonesia in early March 2020, vigilance against the Covid-19 outbreak in Indonesia has increased. The appeal to always keep the body clean by washing hands is always heard loudly. The best hand washing is actually to use running water and soap. But in some conditions that do not allow many people to rely on hand sanitizers. The problem is, just like masks, Hand Sanitizer products also experience scarcity and price increases in the market. Seeing this phenomenon, World Health Organization (WHO, 2020) also shared a special alcohol-based formulation that can be used to mix its own Hand Sanitizer through its official website.

Based on the description above, community detention is needed in order to be able to make Hand Sanitizer independently according to standards so that people have no difficulty obtaining Hand Sanitizer . several studies on making Hand Sanitizers made from various materials such as Trikolosan (Wijaya, 2016),

extra ethanol 96%, (Widyawati, Mustariani, & Purmafitriah, 2017), hydrogen peroxide 3%, and Aquadest Hand Sanitizer to inhibit bacterial housing (Rini & Nugraheni, 2018; Darmayanti & Aryani 2020). That Covid-19 can die if you use Hand Sanitizers made from Alcohol above 80% and Ethanol 96% (WHO, 2020). However, of all the Hand Sanitizers, no one has stated that they can eliminate Covid-19.

In connection with the scarcity and high cost of Hand Sanitizers in an effort to prevent the Corona Virus according to the Food and Drug Supervisory Agency or abbreviated as Badan (POM) makes its own Hand Sanitizer in accordance with World Health Organization (WHO) guidelines with a formula attached to local POM to coordinate in manufacturing.

Based on the analysis of the situation that has been carried out through observations in the RW 12 area of Cibadak Village, Kayumanis Village, Cibadak Village, Tanah Sareal District, Bogor City, We conducted Training on making Hand Sanitizer Therefore, in this Semi Offline KKN activity, we provided training on making Hand Sanitizer through the cadre mother in RW 12. Through the media Poster targeting RW 12 Cadres, Cibadak Village, Tanah Sareal District, Bogor, with the aim of increasing knowledge of cadres about Hand Sanitizer making activities in RW 12, Cibadak Village, Tanah Sareal District, Bogor City about training on making Hand Sanitizers for cadres during the COVID-19 pandemic.

IMPLEMENTATION METHOD

The method of implementing descriptive service of this intervention is carried out by:

The initial stage is carried out through a survey or assessment of service locations to find out the problems being faced by partners, namely that there are still many surrounding residents who do not wash their hands or at least use Hand Sanitizer when leaving the house during the Covid-19 pandemic.

The implementation stage is carried out through: 1). Knowledge methods to cadres and related material will be explained Hand Sanitizer through Posters that contain how to make Hand Sanitizer, How to Use Hand Sanitizer and How Side Effects in Use Hand Sanitizer As well as what are the materials, tools and examples of products that can be made into Hand Sanitizer. 2.) Practice Method which is to provide examples and how to make Hand Sanitizer. Cadres who have difficulties can ask questions and be guided in their creation.

Material Through Posters

- How to Make Hand Sanitizer According to WHO Formulation (2020) is as follows:
 1. Ethanol 96% 833ml
 2. Glycerol 98% 14.5ml
 3. Hydrogen Peroxide 3% 41.7ml
 4. Sterile Water or Aquadest
- The necessary tools are as follows:
 1. 1000-mL Glass Size
 2. Becker Glass
 3. 50-mL glass
 4. 25-mL glass
 5. Stirring rod
 6. Glass bottle
- How to make Hand Sanitizer according to POM Formula as follows:
 1. A total of 833mL, 96% ethanol is put into a 1000mL glass,
 2. Add 14.5ml, 3% Hydrogen peroxide to the ethanol-filled size glass.
 3. Next add 14.5% ml of 98% glycerol using a measuring cup, and make sure the remaining glycerol is not left behind by rinsing it with water up to 1000ml, stirring until homogeneous.
 4. Transfer the mixture into a clean glass bottle.
 5. Store for 72 hours to ensure there is no contamination of organisms from the bottle container.
 6. Hand Sanitizer is ready to use.

Table 1. Benefits and Ingredients in Hand Sanitizer According to WHO (2020)

No	Ingredients	Womb
1.	<i>Ethanol 96%</i>	Ethanol or often called alcohol is an alcoholic liquid that is usually the main ingredient in alcoholic beverages such as beer, wine or brandy. Because it is easily soluble in water and other organic compounds, ethanol is also an ingredient in a variety of products, from personal care and beauty products to paints and varnishes. With the right concentration, ethanol can penetrate the cell membranes of bacteria or viruses and destroy them. (Muryani.S 2016).
2.	<i>Glycerin 98%</i>	Glycerin or Glycerol is the simplest compound of glycerides. Glycerin in the manufacture of hand sanitizers is useful for making alcohol easier to apply to the skin. Glycerin is also useful to moisturize the skin and prevent skin irritation due to alcohol. Glycerin serves as a moisture barrier that can increase the dispersion of liquids and protect liquids from the possibility of becoming dry
3.	<i>Hydrogen peroxide 3%</i>	Hydrogen peroxide (H ₂ O ₂) is a clear liquid, somewhat more viscous than water, which is a strong oxidizing agent. Hydrogen peroxide acts as an antiseptic agent such as alcohol in hand sanitizers. This substance is used to stop the growth of microbes that can develop in hand sanitizer liquid
4.	<i>Sterile Water or Aquadest</i>	Aquades water is water from distillation or commonly called the distillation process or commonly also called pure water. This distillation process is a process by separating the presence of chemicals according to differences in vaporizing speed or volatility, namely by a separation technique based on differences in boiling points in their usefulness to obtain pure compounds.

RESULTS AND DISCUSSION

The implementation of dedication to cadres for the manufacture of hand sanitizers in Cibadak sub-district, Bogor City. Cadres understand how to make Hand Sanitizer themselves according to World Health Organization (WHO) standards, so they are not worried about the scarcity of Hand Sanitizer. The process of service activities to cadres about training in making Hand Sanitizers starts from the opening of activities presented by cadres and visits by Field Supervisors (DPL) who are present in the local area. Furthermore, this core activity is the manufacture of hand sanitizers according to World Health Organization (WHO) standards. The ingredients prepared are Akohol 96%, Glycerol 98%, Hydrogen Proxide, and Aquadest. The steps for making activities are as in the method above.

The advantage of this activity is that cadres can know how to make Hand Sanitizers according to World Health Organization (WHO) standards, so that when Hand Sanitizers on the market are scarce in stock, local cadres will make them independent and pressed to their citizens. But there are shortcomings in making this Hand Snitizer, namely the process is very easy to press according to the World Health Organization (WHO) standard dose. In addition, the ingredients needed are very easy to find on the market and also require the appropriate dose. Even so, this activity still went smoothly and was enthusiastically welcomed by local cadres. The following is a documentation of the ongoing use of Han Sanitizer as Figure 1-7.

In making this is very good enough and there are no obstacles whatsoever this silvertik runs smoothly and there are no problems whatsoever from some cadres who are quite able to understand and understand during the training of making this Hand Sanitizer. And each cadre gets a Hand Sanitizer that we have let stand for 72 hours and each cadre gets 2 bottles of Hand Sanitizer consisting of Oroginal Hand Sanitizer and Hand Sanitizer that has a fragrance.

The results of the Hand Sanitizer that we made get 18 bottles measuring 100ml with different results, some are Original and Fragrance here we share with cadres who have attended training in making Hand Sanitizer and explain how to distinguish Hand Sanitizer that has fragrance and original:

1. Original Hand Sanitizer, which has alcohol content and does not use any mixture, it's just that it uses ingredients that we have prepared and not mixed fragrances and ingredients that have been described above.
2. Hand Sanitizer Fragrance, which is here we add a few drops of essential fragrance oil can be directly mixed during the process of making Hand Sanitizer so that this artificial Hand Sanitizer will not only smell of alcohol but also has a distinctive aroma and this method is also more friendly to use.

Table 2 . List of Raw Material Costs, Quantity and Price of Hand Sanitizer

No	Material Type	Unit	Cost (Rp)	Total
1	Alcohol 99%	3L	30.000	90.000
2	Glycerine	1L	60.000	60.000
3	Hydrogen 3%	1L	30.000	30.000
4	Aquades	2L	7.000	21.000
5	100 ML bottle	19 Btl	30.000	30.000
6	Sensi Gloves	50	78.000	78.000
			Total	309.000

CONCLUSION

From this activity it can be concluded that:

1. Training on making Hand Sanitizer was carried out directly on the cadres of Rw.12 Cibadak Bogor City.
2. Cadres become understanding and have skills in making Hand Sanitizer independently according to WHO standards.
3. The advantage of this Hand Sanitaizer making training activity is that it provides education to cadres who will be practiced to the community and can be made together in their respective homes.

These suggestions and activities are:

1. This activity must often be carried out in RW.12 communities so that they know and know how to make Hand Sanitizers according to WHO standards.
2. Expected to RW cadres. 12 Cibadak Village Bogor City can practice making Hand Sanitizer for their own use.

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