



Pros And Cons Of The Implementation Of Measles Rubella (Mr) Immunization In *Balita* At Tembung Village, Percut Sei Tuan Subdistrict

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ABSTRACT: *Measles and Rubella (henceforth, MR) are contagious infection caused by virus through respiratory tract. They have been targeted to be eliminated in 5 (five) WHO Regions in 2020. One of the strategies is by giving two dosages of vaccine which contain MR through routine immunization and supplement with equally high coverage (>95%). The objective of the research was to find out the pros and cons of the implementation of MR immunization in under five year-old children (henceforth) at Tembung Village, Percut Sei Tuan Sub-district. The research used descriptive explorative study approach. The population was women who had balita as the target of MR mass immunization, and 90 of them were used as the samples, taken by using accidental sampling technique. The data were gathered by using questionnaires to find out the pros and cons of the implementation of MR immunization and analyzed by using univariate analysis. The result of the research showed that 56 respondents (62.2%) agreed on the implementation of MR immunization; 68.9% of them wanted to protect their children against the danger of MR, and 72.2% of them wanted to keep their children immunized from the dangerous infection. Meanwhile, 33 respondents disagreed or even rejected MR immunization; 28 of them (31.1%) worried about the vaccine since they suspected of fake vaccine because it did not have Halal Certificate from MUI, and 27.8% of them were afraid if their children would be paralyzed after they were immunized.*

KEYWORDS: *Pros and Cons, Implementation of MR Immunization*

I. INTRODUCTION

Immunization is giving immunity to babies and children against various diseases so that they can grow healthily. Immunization is prevention so that the body will not be infected by certain infections such as tetanus, whooping cough (pertussis), polio, and tuberculosis, or if they are infected, the infection does not cause fatal effect on the body. Infection or contagious disease can be safeguarded by immunization (Kemenkes RI, 2007).

The government has made immunization program which requires anyone as the member of society to participate in it in order to protect him and his surrounding against infection which can actually be prevented with immunization. This routine immunization program should be carried out continuously and sustainably; it consists of advanced immunization, supplementary immunization which is the repetition of basic immunization to maintain the level of immunity and to prolong the duration of protection for a child who has gotten basic immunization, while special immunization is to protect anyone or the people against a certain disease in certain situation (Kemenkes RI, 2017).

Immunization can prevent various types of disease such as pneumonia and meningitis caused by pneumococcal infection, diarrhea caused by rotavirus infection, influenza, chickenpox (varicella), mumps, German measles (rubella), typhoid fever, hepatitis A, cervical cancer caused by human papilloma virus, japanese encephalitis, herpes zoster, hepatitis B in adults, and hemorrhagic fever (Kemenkes RI, 20017).



Measles is one of the infections which needs immunization: basic immunization is given to 9 moth-old babies and advanced immunization is given to 18 month-old babies (Kemenkes RI, 2017). It is a very infectious disease caused by virus. Generally, it attacks children and an endemic disease throughout the world. It is actually very dangerous because it can bring about defect and even death caused by complication such as pneumonia, otitis media, and encephalitis Rubella which is another type of measles known as German measles (Rubella) and caused virus (Giaswara, 2014).

The World Health Organization (WHO) revealed that there were 535,000 children died because of measles while more than 110,000 babies that were born with Congenital Rubella Syndrome (CRS); the highest rate was found in Southeast Asia (85%) and Africa (38%) (WHO, 2012). The incidence of CRS were varied, between 0.1 and 0.2/1,000 life-born babies in the endemic period and between 0.8 and 4/1,000 life-born babies in the period of rubella. The incidence rate of CSR in the countries which have not introduced rubella vaccine is estimated high. It is estimated that there were about 22,000 birth rates with CRS in Africa, about 46,000 birth rates with CRS in Southeast Asia, and 12,634 birth rates with CRS in West Pacific (Kemenkes RI, 2017).

Accordiing to Kemenkes in 2015, there were 8,158 cases of measles with 1 (one) patient died in Jambi Province. Through surveillance activity, it is reported that there were more than 11,000 cases of suspect measles each year, and from the result of laboratory confirmation, 12-39% of them were positive measles (lab confirmed) (Kemenkes RI, 2017).

Rubella in Indonesia is one of the health problems which needs effective prevention. There were 23,104 cases of measles and 30,463 cases of rubella from 2010 until 2015. Surveillance data within the last five years indicated that 70% of rubella cases occurred in the age-group of < 15 years. Besides that, based on the study on the estimation of the burden of CRS in Indonesia in 2013, it was estimated that there were 2,767 cases of CRS; 82/1,000,000 occurred in female teenagers of 15-19 years old which decreased to 47/100,000 in women of 40-44 years old (Kemenkes RI, 2017)

In the Global Vaccine Action Plan (GVAP), MR is targeted to be eliminated in 5 (five) regional WHO's in 2020. In accordance with GVAP, The Global Measles & Rubella Strategic Plan of 2012-2020 mapped the needed strategy to reach the world's target without measles, rubella, and CRS. One of the five strategies is reaching and maintaining people's high level of immunity by giving two dosages of vaccine containing measles and rubella through routine and supplementary immunization with high intake (95%) and equal (Ditjen P, 2017).

The Indonesian government has committed to eliminate measles and to handle CRS in 2020. The strategy to achieve the target is by strengthening routine immunization in order to achieve the coverage of measles immunization of $\geq 95\%$, equal to all levels, implementing Measles Cash Program in 9-59 month-old children in 185 districts/towns from August until October, 2016, implementing campaign in MR vaccine in 9 month-old babies to < 15 year-old children step by step, introducing MR vaccine to the routine immunization program in October, 2017, implementing Case Based Measles Surveillance (CBMS), CRS Sentinel Surveillances in 13 hospitals in 2018, and implementing fully investigated KLB measles (Kemenkes RI, 2017).

One of the programs of the Health Department of the Republic of Indonesia is giving MR which is a mass immunization activity as an attempt to break off the transmission of MR viruses in 9 month-old babies to < 15 year-old children without considering their previous immunization status. This immunization is a must since it does not need individual informed consent. The ITAGI (Committee of National Immunization Professional Advisor) has also given their recommendation on January 11, 2016 to integrate rubella vaccine into the national immunization program in order to decrease the incidence rate of measles, rubella, and CRS (Kemenkes RI, 2017).



The implementation of MR is an immunization activity as an attempt to break off the transmission of MR viruses in 9 month-old babies to < 15 year-old children without considering their previous immunization status. The objective of implementing MR immunization is to increase people's immunity against MR as quickly as possible, to break off the transmission of MR viruses, to decrease the morbidity rate in MR, and to decrease the incidence rate of CRS (Kemenkes RI, 2017). Giving MR immunization is very important to protect the Indonesian children against congenital diseases such as hearing disorder, seeing disorder, heart disease, and mental retardation caused by rubella infection during pregnancy.

In order to achieve the target of eliminating MR in 2020, the Indonesian government is campaigning MR immunization as supplementary immunization before routine immunization is implemented. The campaign is done simultaneously in all provinces (34 provinces) of Indonesia. Immunization services were done in the service posts of immunization services such as at schools (PAUD or Pre-Kindergartens), kindergartens, Elementary Schools, Islamic Elementary Schools, High Schools, Islamic High Schools, Posyandu, Polindes, Poskesdes, Puskesmas, Auxiliary Puskesmas, Hospitals, and other health service facilities; the target is 9 month-old babies to < 15 year-old children. The implementation of MR Immunization campaign was divided into two phases. The first phase was implemented from August until September, 2017 in the entire Java, and the second phase was implemented from August until September, 2018 in the entire Sumatera, Kalimantan, Sulawesi, Bali, Nusa Tenggara, Maluku, and Papua (Kemenkes RI, 2017).

In the attempt to accelerate the campaign of MR immunization, many stakeholders are invited to participate in the activity. They, among others, are parents or women. In this case, women play an important role in the need for immunization for their children. There are some influencing factors such as knowledge of vaccination and women's education.

MR immunization arouses pros and cons among the people. A number of parents admit that they do not want their children to be given MR immunization because they are afraid if the vaccine is fake or does not have any *halal* certificate; therefore, they are worried about the danger if their children are immunized by MR vaccine.

Based on the result of the preliminary study done on April 18, 2019, it was found that of the 10 respondents, 7 of them were accepted and 3 of them were rejected and did not bring their children to be immunized in the MR mass immunization because they were worried about the availability of fake MR vaccine, and they were really afraid if their children would be sick because of the immunization.

II. LITERATURE REVIEW

2.1. Implementation of MR Immunization

2.1.1 Definition

The implementation of MR immunization is an immunization activity as an attempt to break off the transmission of MR viruses in 9 month-old babies to < 15 year-old children without considering the previous immunization status (Kemenkes RI, 2017)

2.1.2. The Objective of MR Immunization

The objective of MR immunization is to achieve the elimination of measles and the handling of rubella, to increase people's immunity against MR quickly, to break off the transmission of MR viruses, to decrease morbidity rate of MR, and to decrease the incidence rate of CRS (Kemenkes RI, 2017).

2.1.3 The Target of MR Immunization

The target of implementing MR campaign is that all 9 month-old babies to < 15 year-old children are given MR immunization regardless of the previous immunization status and history of previous MR (Kemenkes RI, 2017).



2.1.4 Contra-Indication of MR Immunization

Contra-indication of giving MR immunization is an individual who is under corticosteroid therapy, immunosuppressant and radiotherapy, pregnant women, leukemia, serious anemia and the other disorders, serious kidney dysfunction, decompensation cordis (heart failure), after the giving of gamma globulin or blood transfusion, and history of allergy to vaccine components (neomycin). Giving immunization is postponed when the subject has fever, flu-like symptoms, and diarrhea (Kemenkes RI, 2017).

2.1.5 Pros and Cons of MR Immunization

1. The Problem of *Halal* and *Haram* of Vaccine

IDAI (Indonesian Pediatrician Association) states that vaccine which exists in Indonesia does not contain pork. However, in the process of making it such as polio and enzyme trypsin contain pork even though “it has been cleaned off and removed” so that there will be no disturbance in the process of production (Lestari & Budhi, 2017).

Even though there is no *halal* (legitimate to Islamic law) certification, it does not mean that the vaccine is *haram* (forbidden by Islam). In order to settle the problem of whether vaccine is *halal* or *haram*, MUI has issued its *Fatwa* (advice) No. 4/2016 which states that immunization is allowed to be used as an attempt to provide immunity for the body and to prevent certain diseases. The *Fatwa* is issued because many people reject vaccination. In an emergency situation such as death and epidemic of a disease, immunization can be done even though there is no *halal* vaccine (Lestari & Budhi, 1917)

2. The Problem of Safety in Using Vaccine

The World Health Organization (WHO) states that vaccination is proven to be able to prevent the spread of disease and to save millions of children throughout the world. Many parents who are worried about the safety of vaccine often relate vaccine to KIPi (Following Incidence of Post-Immunization). The problem of safety in vaccine is often related to the spreading assumption before investigation is done by the authorities.

Lestari & Budhi (2017) point out that vaccine used in Indonesia is safe. MR vaccine itself has been used in 114 countries, and there is no single report about its side-effect or danger. Two prerequisites have to be fulfilled for processing a vaccine: safe and effective which means that it can cause body immunity so that a child does not get sick.

2. Effectiveness and Coverage of Vaccination

Parents who are opposed to vaccination believe that their children will always be healthy without immunization. According to Lestari & Budhi (2017), the effectiveness of vaccine is not 100%; chickenpox vaccine, for example, is about 70%-90% so that of the 10 children immunized by chickenpox vaccine, about 1 to 3 of them still get sick which means that more than a half of them do not get sick. Lack of immunization coverage can cause KLB (Extraordinary Incidence)

III. METHODOLOGY

The research used descriptive explorative method which was aimed to describe a condition or phenomena in the field. Arikunto (2010) points out that descriptive research is a research which is aimed to describe or to explain something such as situation, condition, event, activity, and so on. Arikunto (2010) also points out that explorative research is a research which attempts to dig up the causes or anything which influences an incidence. The population was women who had balita as the target in the implementation of mass MR immunization, and 90 of them were used as the samples, taken by using accidental sampling technique. The data were gathered by using questionnaires to find out the pros and cons of the implementation of MR immunization and analyzed by using univariate analysis.

IV. RESULTS & DISCUSSION

1. Respondents' Characteristics

Table 4.1
Distribution Frequency of Respondents' Demographic Data at Tembung Village, Percut Sei Tuan Sub-district, in 2019

No	Respondents' Demographic Data	Frequency	Percentage (%)
1	Age		
	20-35 years	56	62.2
	> 35 years	34	37.8
2	Education		
	Elementary School	18	20.0
	High School	64	71.1
	College/University	8	8.9
3	Religion		
	Islam	72	80.0
	Protestantism	10	11.1
	Catholicism	8	8.9
4	Occupation		
	Employed	28	31.1
	Unemployed	62	68.9
5	Number of Children		
	Primipara (first child)	22	24.4
	Multipara (second child)	53	58.9
	Grandemultipara (many children)	15	16.7

Table 4.1 indicates that 56 respondents (62.2%) were 20-30 years old, 64 respondents (71.1%) are high school graduates, 72 respondents (80%) are Moslems, 62 respondents (68.9%) are unemployed, and 53 respondents (58.9) are multipara (giving birth twice).

Table 4.2
Distribution Frequency of Pros and Cons of the Implementation of MR Immunization in Balita at Tembung Village, Percut Sei Tuan Sub-district, in 2019

No	Pros and Cons of the Implementation of MR Immunization	Frequency	Percentage (%)
1	People who agree	56	62.2%
	Reasons:		
	a) Think that MR Vaccine is important for protecting children against the danger of measles and rubella	62	68.9%
	b) MR vaccine is important for safeguarding the immunity of balita against dangerous diseases	65	72.2%
2	People who disagree	33	36.7%
	Reasons:		
	a) Worried about fake vaccine and it does not have any <i>halal</i> certificate from MUI	28	31.1%
	b) Afraid if their children will be paralyzed after having been immunized by MR	25	27.8

Table 4.2 above indicates that 56 respondents (62.2%) agree and accept MR immunization; 68.9% of them want to protect their children against the danger of MR, and 72.2% of them want to safeguard the immunity in balita from dangerous diseases. Meanwhile, 33 respondents (36.7%) reject MR immunization, 28 respondents (31.1%) feel worried about fake vaccine, and 27.8% of them are afraid if their children will be paralyzed after having been immunized.



V. DISCUSSION

MR immunization is a new program which is aimed to decrease the incidence of measles and rubella. Giving MR immunization is done for the first time so that it arouses argument in society. Many parents agree on the implementation of MR immunization, but there also many parents who disagree and even reject it since they are not aware of the importance of immunization for their children due to their bad knowledge of it. There is also a rumor which says that MR immunization contains dangerous vaccine and the vaccine itself is not *halal*.

1. People who Agree on the Implementation of MR Immunization at Tembung Village, Percut Sei Tuan sub-district, in 2019

The result of the research shows that 62.2% of the people at the research location agree on the implementation of MR immunization carried out by the Health Agency as the executor of government program. The government considers that MR immunization is important to protect children against the danger of measles and rubella and to safeguard the immunity of balita from dangerous diseases. Kemenkes RI recommends that socialization and understanding be given to people about the importance of MR immunization in order to increase their knowledge and awareness of the importance of MR immunization.

The result of the research is in accordance with the viewpoint of Husna, et.al (2018) which states that parents who support MR vaccination have some reasons as follows: prevention is better than cure, vaccination is important to prevent infection from being epidemic, individual and environmental health standard is still low in Indonesia so that children need to be vaccinated. The *Fatwa* of MUI No. 4/2016 on Immunization states that immunization is basically *mubah* (something allowed by religion but not considered meritorious) in emergency and whether the vaccine materials are *halal* or impure.

MUI (Indonesian Islamic Scholar Assembly), represented by the Founder of Halal Corner, claims that Rubella vaccine is *halal* (Maharan, 2017). Besides that, the Secretary of Komisi Fatwa MUI, Asrorun, says that MUI has issued *Fatwa* No. 4 /2016 on Immunization. This *Fatwa* responds to the hesitation of some Moslems who argue that immunization as the concept of prevention is contrary to religious doctrine, especially about *ikhthiar* (effort), on condition that the vaccine is *halal*. Concerning Rubella vaccine, it is used for MR immunization which has *halal* certificate.

MR immunization is given to children to protect them against congenital diseases such as hearing disorder, seeing disorder, heart failure, and mental retardation caused by rubella infection during pregnancy. MR is infectious disease through respiratory tract caused by viruses. Measles can cause serious complication such as diarrhea, pneumonia, encephalitis, blindness, and even death. Rubella is usually not a serious disease in children but it can infect pregnant women in the first trimester or at the beginning of pregnancy; it can cause miscarriage or defect in new-born babies. The defect is known as CRS which includes disorders in heart and eyes, deafness, and stunting. There is no medication for MR infection although it can be prevented by MR immunization (Kemenkes RI, 2017).

People who agree on the implementation of MR immunization are influenced by women's level of knowledge of MR immunization which can be analyzed according to the respondents' characteristics, viewed from their level of education. In this research, it was found that the majority of the respondents were Senior High School graduates. This finding is supported by the theory of Notoatmodjo (2010) which states that education is a learning process, a change toward more maturity, better, and more mature in individual personality, family, and community. Education becomes very important in influencing broad knowledge. Therefore, it is expected that by high level of education, knowledge and insight will be increased and can change in a person's attitude and action, especially in carrying out immunization punctually.



This research is related to the research done by Pramitasari and Putri (2017) in which there is the correlation between knowledge and adherence to participating in MR immunization which means that the higher a person's knowledge is, the more adhered he is to take his children to be immunized. Parents' knowledge will influence the completeness of his children's immunization status, and vice versa. The respondents' moderate level of knowledge is influenced by the lack of information obtained from women about the implementation of MR immunization which is said as not *halal*, the problem of whether the vaccine is safe or not, and whether it is effective or not.

Rejection against MR immunization is because women's lack of knowledge of MR immunization and rubella since this is a new program, and most women are not familiar with rubella. The appearance of negative news about MR immunization also influences women's perception on MR immunization.

2. People who Disagree on the Implementation MR Immunization at Tembung Village, Percut Sei Tuan Sub-district, in 2019

The result of the research shows that 36.7% of the people at the research location disagree on the implementation of MR immunization carried out by the Health Agency. They believe that MR vaccination has not had any *halal* certificate from MUI so that its *halal* is still doubtful. They are worried about its fakeness and afraid if their children will be paralyzed after having been immunized with MR immunization. Many people also consider that MR vaccination is not important for the growth of their children. Based on the article written by Sri Lestari & Oki Budhi (2017), it is found that there are some problems in pros and cons of MR immunization: the problem of *halal* and *haram*, IDAI (Indonesian Pediatrician Association) states that vaccine which exists in Indonesia does not contain pork even though there is no *halal* or *haram* certification. MUI has issued Fatwa No. 4/2016 which allows immunization as a kind of an effort to provide body immunity to prevent from certain diseases. The Fatwa is issued since many people disagree on vaccination. In an emergency situation such as epidemic or death, immunization can be done even though there has been no *halal* vaccine.

According to Directorate General of P2P (Prevention from Disease Transmission) Kemenkes (in Lestari & Budhi, 2017), vaccine which is used in Indonesia is safe. MR vaccine itself has been used in 141 countries, and there is no single report of its side effect. There are two prerequisites for making vaccine: safe and effective which means that it can cause body immunity so that children will not sick. Parents who disagree on vaccination believe that their children will be healthy without being immunized. The effectiveness of vaccine is not 100%. Chickenpox vaccine, for example, is 70-90% so that of the 10 children immunized with chickenpox, 1-3 of them are still sick while more than a half of them are not sick. Lack of immunization coverage can cause KLB (Extraordinary Incidence).

Parents who disagree on vaccination believe that their children are still healthy without being immunized. However, some experts in health say that children who are not immunized will get protection from those who have been given vaccine. People are opposed to using vaccine because they doubt its safety; they still think of the side effect of vaccination incidence, KIPI (Following Incidence in the Post-Immunization) in which the rate is very small (Husna, et. al., 2018).

Some reasons why people are opposed to MR vaccine are 1) because the vaccine does not have *halal* certificate, 2) there is an assumption that immunization is a business of medicine companies, 3) Immunization precedes God's determination that sickness has been determined by God the Almighty, 4) Some information from competent medical personnel says that "no vaccine is *halal*," 5) There is a great amount of fake vaccine, 6) children usually feel bad after having been immunized, and 7) lack of support from family/husbands/parents toward vaccine (Husna, et. al., 2018).



Another factor which influences knowledge is the lack of information from health personnel about the objective of the implementation of MR immunization. This is related to one of the roles of health care providers and posyandu cadres in giving information to the parents of balita through the meeting of students' parents or through circular letters containing notification about the benefit of MR immunization and the day of its implementation, providing counseling for the parents of balita, and encouraging parents and the target to visit immunization service post/posyandu.

VI. CONCLUSION & SUGGESTION

Conclusion

1. People who agree on the implementation of MR immunization were 62.2%; they have some reasons: MR vaccine is important to protect their children against the danger of MR; it is also important to safeguard the immunity of balita from dangerous diseases;
2. People who disagree on or are opposed to the implementation of MR immunization were 36.7%; they have some reasons: they are worried about fake vaccine; they also doubt if it does not have any *halal* certification from MUI, and they are afraid if their children will be paralyzed after having been given MR immunization.

Suggestions

1. For the Health Agency
It is recommended that the Health Agency coordinate with cadres, religious leaders, and elementary school management about the socialization and counseling about MR immunization, especially in the regions which have the high level of opposition to MR immunization;
2. For Health Cadres
The health cadres should participate in providing socialization and counseling about MR immunization so that the socialization can be conveyed equally among all women at Tembung Village;
3. For MUI
It is recommended that MUI give information such as direction and counseling about giving immunization compulsorily to balita and giving guidance about the importance of MR immunization since it can decrease morbidity rate.

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