



## Analysis Of Incidence Of Rubella Measles In The Working Area Of The Belimbing Health Center, Padang City In 2022

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<p><b>Track Record Article</b></p> <p>Accepted: 08 April 2023 Revised: 20 June 2023 Published: 30 July 2023</p> <p><b>How to cite :</b> Henafi, F. R., Serudji, J., &amp; Hardisman, H. (2023). Analysis Of Incidence Of Rubella Measles In The Working Area Of The Belimbing Health Center, Padang City In 2022. <i>Contagion : Scientific Periodical of Public Health and Coastal Health</i>, 5(3), 834-848.</p>	<p style="text-align: center;"><b>Abstract</b></p> <p><i>Measles and rubella have long-term health consequences for an estimated 103,000 babies born with congenital rubella syndrome (CRS). A total of 541 cases of measles were found in districts and cities in West Sumatra with the highest number in the city of Padang in 2022. The aim of the study was to analyze the incidence of measles rubella in the working area of the Belimbing Health Center, Padang City in 2022. The research was conducted using a qualitative approach, the method used in this research are in-depth interviews, observation, and document review. The research was conducted in the Work Area of the Belimbing Health Center, Padang City. Informants consisted of 24 people consisting of 8 health workers, 5 cadres, and 11 mothers with children. The results of this study indicate mothers' knowledge about measles rubella is still not optimal. MR immunization has not reached the target as expected, there are still many parents who do not want to bring their children MR immunization, such as being consumed by HOAX news or gossip circulating about MR immunization, Surveillance in reporting MR cases is always reported every day if there are cases, surveillance officers trace cases and evaluate them, and the results of the report are submitted monthly to the P2P section of the Padang City Health Office. Most children suffer from measles because they get it from their playmates at school. The implication of this research is as an illustration of Incidence Of Rubella Measles In The Working Area Of The Belimbing Health Center, Padang City In 2022.</i></p> <p><b>Keywords:</b> <i>Health Center, Infection Disease, Measles, Padang City, Rubella</i></p>
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### INTRODUCTION

Measles and rubella be threatening that serious and real. Measles is the cause morbidity and mortality at entire world. Case measles Rubella at entire world increase as big as 79 percent deep two moon first year 2022. Almost 17.338 case at entire world on January and February 2022, Then with 9.665 for two moon first year 2021 (Vynnycky et al., 2019).

In 2020, the spread of suspected cases of measles and rubella was almost throughout Indonesia. In 2021, there were 2,931 suspected cases of measles rubella, a decrease compared to 2020, which was 3,434 cases. The distribution of measles cases tended to be low at the beginning of 2021 and increased in October, November and December (695 cases). The increase in the number of cases is partly due to the Covid-19 Pandemic which causes surveillance personnel at all levels to focus on overcoming the Covid-19 pandemic so that other surveillance programs including PD3I cannot run according to established standards (Kemenkes RI, 2018) . Based on the results of research conducted by Erwani (2020) also stated that Measles and Rubella (MR) immunization was 19.53%, and the national target had not been

reached, namely 95%. Health education based on local wisdom is a method of providing information that is tailored to the characteristics of the community by utilizing local wisdom.

Measles and rubella cases in West Sumatra have increased. A total of 541 measles cases were found in regencies and cities in West Sumatra from January to July in 2022. The highest cases are in Padang City, second in Agam Regency, and third in Bukittinggi City (WHO, 2018). The percentage of toddlers who have received MR immunization in West Sumatra in 2019 was 58.84%, in 2020 it was 56.40%, while in 2021 it was 26.03%.

Based on the 2019 Annual Report of the Padang City Health Office, the achievement of advanced measles/MR immunization is 64.2%, which has not yet reached the target of 80%. In 2020 and 2021, the achievement of advanced measles/MR immunization was 30.4% and 36.9% was far from the target of 95%. The incidence of measles and rubella in 2022 increased compared to the previous year, in 2021 there were only 2 cases of measles in Padang City. In 2022 from January to the end of May, the number of measles and rubella cases in the working area of the Padang City Health Office amounted to 53 cases with positive measles-rubella cases in 12 health centers. Where the most cases are found in the Belimbing Health Center totaling 5 cases (Masresha et al, 2015).

Based on preliminary observations made by researchers, the factor causing low immunization against measles/Mr is low knowledge, this is evidenced by the fact that many mothers do not know what Measles Rubella is. Other factors that also support are parents' education, occupation, income and health support which have not been well-facilitated in the area (Cooper et al., 2021).

Research Sari (2020) concerning the Relationship between Measles Immunization and Measles Incidence found that there was a relationship between measles immunization in infants and the number of measles cases in East Java Province. Aswan (2022) in Padang Sidempuan, the results showed that there was a significant relationship between knowledge and adherence in carrying out Measles Rubella (MR) Immunization in the Gunungtua Inpatient Government Clinic Unit Area, North Padang Lawas Region. Based on research conducted by Astuti (2022) regarding Evaluation of the Measles Surveillance System in Kab. In Bangkalan, it was found that the lack of implementation of the surveillance system was found in the input components and processes of surveillance activities, especially at the puskesmas level. Based on the results of the initial survey that the researchers conducted, there were several problems that the researchers found, namely the lack of knowledge of mothers about MR immunization, then there were still many mothers who did not want to bring their children immunizations to the posyandu (Anggraini & Bambang, 2017).

Measles and rubella have long-term health consequences for about 103,000 babies born with *congenital rubella syndrome* (CRS). Measles (measles) Rubella (MR) immunization is given to the child to protect him from congenital disorders, which are caused by Rubella infection during pregnancy. If a person who is not immunized will cause death, severe illness or permanent life-threatening disability, based on the consideration of competent and trusted experts, then immunization is mandatory. MR vaccine is safe to give to children (Aji, 2021; Ilawati, 2022).

The course of the rubella virus begins with the spread of airborne droplets that come from humans exposed to the rubella virus. The virus will replicate and spread through lymphoid tissue and into the systemic. Then, maternal viremia occurs. After spreading through the systemic system in pregnant women, the virus will infect the placental then the embryo will be infected continuously causing apoptosis which inhibits embryonic mitosis so that it can cause ocular lens damage, growth delay, lesions in bones, organogenesis chaos and give damage to the vascular endothelium causing ensepalitis, mental retardation, central deafness and cochlea. Setiati (2016) from the description above, this research is important to do with the aim of informing action, proving theories, and contributing to the field of health studies which is more specifically explaining the incidence of Rubella measles.

## **METHODS**

This type of research is qualitative research with case study research designs that aim to reveal certain phenomena completely and deeply (Sugiyono, 2016). The case study formulated by Robert K. Yin, is a method that refers to research that has elements of how and why, in the main question of his research examining contemporary (present) problems in real life. sources of informants related to the incidence of measles rubella in the Work Area of the Belimbing Health Center, Padang City, were the head of the puskesmas, parents and surveillance officers. from related informant sources the incidence of rubella measles in the Working Area of the Belimbing Health Center in Padang City.

This research was carried out in Padang City from July 2022 to March 2023. Informants consisted of 24 people consisting of 8 health workers, 5 cadres, and 11 mothers with children. Data collection through in-depth interviews, document review and field observation. In this study the validity of the data was carried out by triangulation. There are two kinds of triangulation techniques used by researchers in this study, namely: source triangulation and method triangulation.

## RESULTS

The data analysis approach used in this study was divided into three stages, namely data reduction, data presentation, and drawing conclusions. So, the subject comes from the interview findings. The investigation's findings revealed four barriers to immunization, according to MR.

Measles Rubella Incidence Analysis is research objectives answered in 4 category 1) knowledge of mothers about measles rubella is still not optimal 2) angry MR has not reached the expected target, there are still many parents who do not want to bring their children to carry MR, such as being consumed by HOAX news or gossip circulating about MR pregnancy 3) Surveillance in reporting cases MR always reports every day if there are cases, surveillance officers trace cases and evaluate them, and the results of these reports are submitted monthly to the P2P section of the Padang City Health Office 4) Most children get measles because they get it from their playmates at school.

The results of interviews with participants showed that the participants lacked knowledge related to general information related to rubella immunization. This lack of understanding from mothers is what causes parents not to immunize their children. This was proven by the interviews conducted by the participants.

*" I don't know what rubella immunization is, all I know is immunization in general"* Another participant also said that *"I even heard today, and don't know how the process of the disease occurs and how to overcome it"*. This was also explained by other participants who said *that "I have heard, and I know that the disease is contagious, but for the knowledge of how to overcome it and prevention efforts I do not understand.*

Participants expressed similar concerns about MR vaccination, including the fact that the vaccine contains pork and is therefore illegal to administer when injected into the body. These problems make it difficult for participants to vaccinate their children against MR. Participant information was also obtained from the results of monitoring socialization activities carried out at their children's schools. After participating in the exercise, several participants decided to vaccinate their children because they were aware and worried about the effects of rubella. Meanwhile, participants who also took part in the activity stated that they were still delaying their child's immunizations because they heard the speaker explain that the rubella vaccine did contain pork. This was in accordance with the statement of one of the participants, namely: *" Yes, I heard and read that the vaccination came from a haram substance. After that, there was also news, kalua nati would affect his child, so I did not give the vaccine to my child "*.

As the party responsible for the vaccination process for children, the P2P service optimizes its roles and responsibilities. This is in accordance with the interviews conducted.

*An interview with the responsible party at the puskesmas, stated that "we as the person in charge, always coordinate with the local health office, namely the P2P office of the Padang city office. This is one of the steps we always take to anticipate problems related to vaccination in the community" Another participant also said that "coordination is carried out well, when there are cases when we report them, the P2P office also moves quickly. It is hoped that with this all problems can be resolved immediately.*

Some cases exist, mostly because parents do not understand that measles can be transmitted through coughing and sneezing, plague or seasonal diseases, drinking from the same place or container, and passing through the wind as in the following quote.

*"Well, if the incident happened to my child, because they turned out to be infected from his friend, that I also know from me observing him, because after school and a few days after experiencing symptoms such as fever and heat such as smallpox. Another participant also said that "because of my limited knowledge of this disease, so I know that children have experienced the incident".*

Based on in-depth interviews and observations made from several informants and document review, it can be concluded that the mother's knowledge of measles rubella in general already knows in terms of understanding, but there are still many who do not know, especially in terms of how to prevent and the consequences caused by the measles rubella disease. Likewise with the counseling received by the mother. On average, no one attends the counseling provided by the puskesmas, so there is a lack of knowledge of mothers to understand about measles rubella and many still say HOAX even though they have been given an explanation.

There are still many people in the working area of the Belimbing Health Center who do not want to immunize their children, especially the MR immunization, due to the lack of support from parents, including the role of fathers who still prohibit their children from being immunized, other reasons because of busy parents, fear of side effects and HOAX circulating in the community about this immunization, so BIAN (National Childhood Immunization Month) is held within the MR immunization program, because the achievement of the MR immunization target is still far from the expected target.

Based on in-depth interviews conducted with several informants and review of documents, it can be concluded that the surveillance officers have carried out their duties as they should, namely tracking down MR case visits and their prevention, but the overall data has not been recorded because there are still many who get measles but parents do not take

their children for treatment. the puskesmas and did not notify the puskesmas also when the puskesmas staff went to visit the house of an MR sufferer, his parents were always not at home because they worked at the market or the rice fields.

History of contact with sufferers of MR is one of the main causes of transmission of this disease. Based on an interview conducted by one of the parents whose child had MR, stated that their child shared a room with a MR sufferer so they also contracted the disease and at school and the home environment many were infected. affected by MR disease so that there are several parents who suspect that they have contracted MR disease after their children play outside the home or recite the Koran and come into contact with sufferers of MR.

## **DISCUSSION**

### **Mother's Knowledge**

Knowledge is a person's ability to express what he knows again in the form of evidence of answers either oral, or written which is a simulation of a question. Knowledge or cognitive is a very important domain in shaping a person's actions. Knowledge measurement can be done by interviews that ask about the material to be asked so that it can be measured from research subjects or respondents (Notoatmodjo, 2012).

Health knowledge has an influence on behavior as an intermediate *impact* of health education. Basically, health counseling is synonymous with health education, because both are oriented towards the expected behavior change, namely healthy behavior, so that they have the ability recognize the health problems of himself, his family and his group in improving his health (Aji et al., 2021).

A person's knowledge of an object contains two aspects: positive and negative. It is these two aspects that will ultimately determine a person's attitude towards a particular object. The more positive aspects of the object are known, the more positive attitudes towards the object will grow (Sari et al., 2020).

Based on the results of in-depth interviews and observations conducted in the working area of the Belimbing Health Center, it is known that there are still many mothers who do not have good knowledge regarding the causes, symptoms, and treatment of measles-rubella. Based on interviews conducted with the Head of the Belimbing Health Center, regional midwives, measles surveillance officers said that MR counseling had been carried out and given to mothers through posyandu, at home and at school. However, the results of the counseling have not been achieved as expected, because there are still many who say HOAX

even though health workers have tried their best and boasted of providing explanations regarding measles and rubella and how to prevent it through MR immunization

Of all the mothers interviewed all said they had never received counseling about measles-rubella, some said they received counseling but did not listen and did not really care with what was conveyed by the health workers, there are also those who reason that they never go immunization to the posyandu.

Observed maternal knowledge based on in-depth interviews, it can be concluded that mothers only know measles in general, namely the presence of bumps or red spots, red eyes, and hot bodies. While absolutely no one knows what rubella is or the difference between measles and rubella. Of the 12 mothers interviewed, only 4 mothers knew about how to prevent immunization. And the danger of measles is broadly known, which can be deadly, paralyzed or can cause blindness in children or the impact on pregnant women to children who are in the womb. There was even 1 informant on the IF12 informant turned out to be a posyandu cadre and also as a mother who had a child with a history of measles, but the informant said no Want for her child to be immunized because she is still hesitant and afraid of side effects.

Based on research conducted by Prihanti et al (2020) on the Effect of Measles Immunization Counseling on Increasing Knowledge and Attitudes of Mothers at Tuminting Health Center Manado City based on the results that health counseling affects mothers' knowledge and attitudes about measles immunization. According to researchers, knowledge causes changes in a person's attitude and actions in overcoming problems that arise in life. The importance of this knowledge requires health workers to provide correct information about the prevention of transmission and the dangers of measles rubella (MR) disease to mothers. The delivery of information or the provision of good knowledge through health counseling can have an impact on increasing knowledge from not knowing to knowing. Health counseling will be more easily accepted by mothers if it is done face-to-face directly using media. Health counseling is an effort to improve the welfare of children in the family. Parents who have been given health counseling will find it easier to care for children and prevent children from the dangers of infectious diseases that will befall the child.

Maternal knowledge or community knowledge is not obtained through formal education but is also obtained from the results of non-formal stimuli, namely through conversations between friends or neighbors around the house, Social media interaction is very broad, therefore the role of health workers in providing targeted counseling will be able to increase public knowledge so that it will be conveyed to the target, namely parents (father or mother) who have children aged toddlers to teenagers, not only in posyandu but every mother

who will marry or who is pregnant, so it will form a better mother's mindset regarding this measles rubella disease.

This is also related to research conducted by Sari (2020) regarding the analysis of maternal demographic factors on the interest in participating in MR (*Measles Rubella*) vaccination in several Makassar City Health Center based on the results of the *chi-square* statistical test obtained a p significance value of 0.000 with a p value of  $< 0.05$ , which means that there is a relationship between the mother's level of knowledge and interest in MR vaccination participation in Kassi-Kassi and Mangasa Health Centers in 2021.

The efforts that can be made to increase maternal understanding of measles rubella disease are to improve a good image by health workers through approaches and provide good knowledge that Good for the cadres in the posyandu, so that it is not only monotonous to counseling at the posyandu but looking for other ways so that mothers want to find out and are curious about Measles rubella disease is how to prevent and handle it yourself.

The hope of the community when meeting with health workers is that they can provide solutions to solve their health problems, both basic complaints and things related to complications are asked of them. The role of health workers is also all roles and actions of health workers who are directly related to the community in matters related to health, both direct roles with one's health condition and roles in terms of support in the form of policy programs in the health sector (Kusumawardani, 2020).

### **MR Immunization History**

MR immunization is a type of immunization that serves to protect the body from two diseases at once, namely measles (*Measles*) and German measles (*Rubella*) (World Health Organization, 2015). This immunization is an effective effort that needs to be given to children to prevent two diseases, namely measles and rubella, as well as to prevent their spread to the wider community (European Observatory on Health Systems, 2018).

The *rubella* vaccine is a live attenuated strain, with a single dose providing more than 95% long-term immunity, which is similar to that induced by natural infection. The *rubella* vaccine is available both in those induced by natural infection. Available either in monovalent formulations (vaccines proposed on only one pathogen) or more commonly in combination with other vaccines such as measles (MR) vaccine (WHO, 2022).

Measles Rubella (MR) immunization campaign is a mass immunization activity as an effort to cut off the transmission of *Measles* and *Rubella* virus transmission in children aged 9 months to 15 years, regardless of previous immunization status. This immunization is mandatory and does not require *individual informed consent* (Rachmawati & Barlianto, 2019).



Young children who are not vaccinated are at increased risk of measles and its complications, including death. Unvaccinated pregnant women are also at risk. Any person who is not immune (who has not been vaccinated or vaccinated but does not develop immunity) can become infected (WHO, 2022).

At the age of 9 months, toddlers are expected to form their own antibodies actively after receiving measles vaccination. Within 12 days after measles inflammation peaks near 21 days, IgM will be created and will quickly disappear after which it is replaced by IgG. Measles immunization coverage of more than 90% will cause *herd immunity* which will cause measles problems to shrink in residents (Aprina, 2023).

Based on in-depth interviews, document studies and observations that have been carried out in the working area of the Belimbing Health Center, it is concluded that MR immunization has been carried out in every posyandu or school but There are still obstacles that occur in the field, the obstacles are mostly from the parents of the child who do not want to be immunized because the husband's permission does not exist, This is very common in the working area of the Belimbing Health Center, which for Posyandu sometimes the MCH book lives or is lost. So that parents themselves forget that children have MR immunization or not.

According to the researcher, support from health workers in providing MR immunization until the achievement of the target target is social support in the form of informative support, where the subject's feeling (mother who has a baby / community) that the environment (health workers) provides clear enough information about things known related to immunization Nusantara (2020) Health workers have a very important role in providing guidelines related to the benefits of immunization in accordance with the immunization schedule and the disadvantages of not getting MR immunization for the community, especially the Belimbing Health Center.

By further improving providing information to the entire community (not only mothers) also fathers should be given information/counseling related to the importance of MR immunization for children with hope that in the future it can change the wrong attitude/understanding in the community about HOAX and fear of side effects of MR immunization so that there is no more It was found that the reason for the child who was not immunized was because it was not allowed by the father / husband, afraid of being paralyzed if immunized, immunization was not halal, his parents were busy working So that it is ignorant of children's health, so it is said that the role of both parents is very important in achieving the target number of measles rubella immunization in accordance with expectations.

## MR Surveillance

Surveillance is a series of observation processes carried out continuously and systematically and continuously in data collection, analysis and interpretation of health data as an effort to describe and monitor a health event so that effective and efficient countermeasures to health problems in the community can be carried out (Astuti, 2022).

Health surveillance is the systematic and continuous observation of data and information about the incidence of diseases or health problems and conditions that affect the increase and transmission of diseases or health problems to obtain and provide information to direct control and control measures effectively and efficiently (Astuti, 2022).

Measles-Rubella surveillance is continuous and systematic monitoring of measles and rubella starting from collecting, processing, analyzing and interpreting data and disseminating information so as to produce recommendations (Kemenkes RI, 2018).

The thorough investigation, namely house-to-home visits by MR surveillance officers, aims to look for additional cases and review measles-rubella immunization status, and explain to parents patients about the purpose of arrival, symptoms, dangers, and how to prevent measles-rubella (immunization) (Kemenkes RI, 2018).

Based on the results of in-depth interviews, document reviews and observations that have been carried out in the working area of the Belimbing Health Center with health worker informants, it is known that surveillance knows the measles case. Actually, there are many cases in the working area of the Belimbing Health Center, but the obstacle is that those affected by measles do not go to the puskesmas so that the recognition of measles program holders is not affordable by officers surveillance, and when visited, the obstacle is that the parents of the child affected by measles are always not at home because their livelihood is on average to the rice fields and sell in the market. For routine surveillance schedules go down when there are measles cases and direct laboratory tests to prevent transmission of measles to others, and test results are sent to the laboratory, to the health office, directly send it to Jakarta. For MR case reporting, it is always reported every day if there is a case and surveillance officers have a WA group to track cases and their evaluation, and results the report is submitted monthly to the P2P section of the Padang City Health Office.

For informants from mothers who had children with a history of measles, there were 8 mothers whose children had been exposed to measles a few months ago before being interviewed by researchers. Of the 8 people, there were only 2 houses visited by the puskesmas so that it was recorded by the puskesmas, while the other 6 mothers claimed that they had never been visited by the party Puskesmas, because they choose to use village medicine,

there are also some who seek treatment to the nearest midwife or doctor when getting a child starting to have a fever before measles symptoms. Others came out, so they were not recorded by the Puskesmas surveillance, this caused disruption of the surveillance system running well to stop transmission and prevent more to the rest of society.

According to researchers, it takes cooperation between community leaders, cadres, and health workers who open practices in areas around residential areas to work together to provide information related to patients. Those suspected of having a measles-rubella outbreak so that data collection can be carried out by the puskesmas and help surveillance work more optimally to conduct further investigations related to Measles-rubella disease in the Belimbing Health Center area.

Also continue to carry out house-to-house immunization sweeps to pursue and increase MR immunization achievements according to the target, in addition to knowing people affected by measles due to. There are still many people who are not recorded so that this is expected to support efforts to eliminate measles and rubella as well as early detection of measles and rubella outbreaks and the implementation of responses KLB quickly.

In a study conducted by Keswara (2019) entitled Development of a Case Based Measles Surveillance (CBMS) Database in Sidoarjo Regency it was stated that d ATA was not immediately collected completely because some data had to look at other records such as the date of measles immunization and the number of times, I had received immunization before illness. The obstacle in taking serum specimens is that not all parents want their children to have blood drawn.

Research conducted by Anggraini (2017) entitled Evaluation of the Measles Surveillance System at the Health Office Kabupaten Bangkalan, it was stated that data collection by district surveillance officers was carried out actively and shifts. The methods used in collecting this data are in accordance with the measles surveillance technical manual. To find a significant case of measles, district surveillance officers must visit hospitals in their work area every 4 times a week. Every case of measles reported from the hospital is immediately informed to the puskesmas where the case is located for the search for additional cases.

### **Contact History of Patients**

Contact history is a condition in which a person has been directly exposed to measles sufferers or with a playful environment, residence or place of study such as school. About 90% of children who have been in contact with measles sufferers will get an infection (Ardiansyah, M., & Brorsen, 2020)

The measles virus is easily transmitted by disease. The virulence is very large, especially in children who are vulnerable to family or friend contact, so that almost 90% of children are vulnerable to infection. Measles is transmitted through droplets in the air by people from 1 day before the appearance of clinical indications to 4 days after the onset of rash (Aprina, 2023).

From the in-depth interviews that have been conducted, indeed all of the informant statements of his son who was affected by measles had a history of contact with other measles sufferers, such as with playmates at home, school or with his own relatives.

According to researchers, most children or toddlers affected by measles-rubella are caused by contracting their playmates at school. This is because most parents of toddlers do not know the early symptoms of measles so that there are still many children attending school at the beginning of measles symptoms such as increased body temperature, cough, runny nose mistaken for ordinary fever. Some are also infected by neighbors, even measles sufferers who live in the same house, but only a few compared to school. This suggests that while at school or at home their child accidentally comes into contact with a measles sufferer.

Most school-age children or toddlers get measles because they are infected by their playmates at school (Pan American Organisation, WHO, 2005). This is because most parents of toddlers do not know the early symptoms of measles so that there are still many children attending school at the beginning of measles symptoms such as increased body temperature, cough, runny nose mistaken for ordinary fever. Some are also infected by neighbors, even measles sufferers who live in the same house, but only a few compared to school. This suggests that while at school or at home their child accidentally comes into contact with a measles sufferer. After the child is known for measles, parents realize it too late.

A way to prevent being infected by other measles sufferers by using personal protective equipment such as masks. This is due to the transmission of measles through airborne disease. Measles patients should be isolated or should not leave the house or play / hang out with others until cured so as not to transmit to others (Presentation & Measles, 2019).

Research conducted by Ardiansyah (2020) entitled Factors affecting measles outbreaks of elementary school-age children with hasil The odds ratio of 4.141 to 95%CI = 1.208– 14.201 means that primary school students who have a history of contact with measles sufferers have a 4.141 times risk of measles outbreaks compared to students who have no contact history.

Research conducted by Rachmawati, S. D., & Barlianto (2019) with the title relationship of immunization status and contact history with the incidence of measles in toddlers in Sukuharjo Regency with h The results of the Chi Square test obtained a value of  $p = 0.038 < \alpha = 0.05$  then  $H_0$  was rejected, with a relationship between contact history

and measles incidence in toddlers in Sukoharjo Regency. There was also an odds ratio of 2.991 with (CI 95% = 1.157 to 7.731) which means toddlers with a contact history have a 2.991 times higher risk of measles compared to toddlers with no contact history.

## CONCLUSIONS

Based on the results of the analysis that has been carried out, this study shows: 1) the mother's knowledge about measles-rubella is still not optimal so that the targets for MR immunization and prevention of contact history in terms of disease prevention have not been achieved. 2) MR immunization has still not reached the target as expected, there are still many parents who do not want to bring their children MR immunization, for various reasons such as being forbidden by their father/father, being consumed by HOAX news or rumors circulating regarding MR immunization. 3) Surveillance in reporting MR cases is always reported every day if there are cases, surveillance officers track cases and evaluate them, and the results of these reports are submitted monthly to the P2P section of the Padang City Health Office. However, it is still far from good because of the lack of cooperation between the community and health workers in reporting if their child has measles, so that the surveillance task is not accomplished. 4) Most children suffer from measles because they are infected by their playmates at school. This is because most of the parents of toddlers do not know the early symptoms of measles so there are still many children who go to school at the beginning of the symptoms of measles such as increased body temperature, cough, runny nose are mistaken for a common fever. There were also those who contracted it from neighbours, even people with measles who lived at the same house, but only a few compared to schools. This suggests that while at school or at home, their child accidentally came into contact with someone with measles.

Suggestions from researchers are to continue to direct and foster posyandu cadres in informing parents of children about measles-rubella immunization, as well as conducting counseling more actively so that the intention grows and the community becomes motivated to bring their children to MR immunization or complete their child's immunizations, and the role of fathers must be maximized in immunization. This MR also makes an animated video such as an interesting audiovisual related to complete information about measles rubella and the importance of MR immunization and distributes it to cadres and all health workers, making it easier for cadres' performance in helping health workers to be conveyed to the community.

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