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Assessment Of The Polio 4 Immunization Program: Study At The Puskesmas Rowosari, Pemalang Rural Area

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***Abstrak*:** *Immunization is still the mainstay of the strategy to reduce the number of infectious diseases in toddlers. In 2023 Rowosari Puskesmas, Pemalang only reached 82.61% of polio 4 immunization achievements which had not reached the 100% target. To assess the evaluation of polio 4 immunization program at Rowosari Puskesmas, Pemalang. This study used a qualitative research type with a descriptive approach. To gather information, in-depth interviews were conducted with five informants, namely the immunization program manager (main informant), two village midwives (supporting informants), and two mothers of children under five (triangulation informants) through direct observation to the research location. Wiyorowetan Village has the lowest immunization achievement, the level of knowledge of mothers of toddlers is still lacking on the importance of immunization, lack of family support in immunization activities, small number of children in immunization implementation, low effectiveness of polio vaccine usage index (IPV) utilization, and lack of support from health workers to remind follow-up immunization schedule. Meanwhile, Bumirejo Village has the highest immunization achievement. This research study found barriers in the knowledge level of mothers of children under five, family support, number of children, utilization of index vaccine use (IPV), and health worker support.*

Keywords : Assessment, Immunization, Polio, Program

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INTRODUCTION

The infectious disease polio attacks the nervous system and can cause permanent paralysis of the legs or arms within hours or even death. The polio virus enters the body through the mouth, water, or food contaminated with the feces of an infected individual. Polio most commonly affects children under the age of five. However, any unvaccinated person of any age can contract the disease. Early symptoms may include fever, fatigue, headache, vomiting, neck stiffness, and limb pain. However, most infections cause no symptoms, but 5-10% of infected people experience flu-like symptoms. One in 200 infections causes irreversible paralysis. Between five and ten percent of paralyzed people die from the inability to move their

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respiratory muscles. (WHO, 2023) Data released by the Indonesian Ministry of Health (MoH) shows that many regions in Indonesia are still experiencing outbreaks due to the polio virus. A total of 32 Provinces and 399 districts/municipalities in Indonesia fall into the high risk category of polio, with 12 cases of paralysis reported from 2022 to 2024, with 11 cases caused by type 2 polio virus and one case caused by type 1 polio virus. These cases are spread across eight Indonesian provinces, one of which is Central Java. (MoH, 2024) Polio cannot be treated, but it can be prevented by receiving the complete polio vaccination from polio vaccinations one to four, which consists of two types of vaccines: injected polio vaccine and drip polio vaccine. Drip polio immunization (OPV) and injectable polio immunization (IPV) should be given in full or a combination of both. Drip polio immunization is given three times by mouth at one month, two months and three months of age, known as OPV 1, OPV 2 and OPV 3 respectively. At four months of age, IPV vaccine is given simultaneously, either drops or injection. At nine months of age, IPV 2 vaccine is given again. (MoH, 2024)

The polio immunization rate in Central Java Province only reached 95.03% (Utami, 2024). This situation is a health issue as Indonesia achieved polio-free status in 2014. Based on secondary data from Rowosari Puskesmas, Pemalang in 2023, the target number of polio immunization was 1,914 children from the target number of 100% and 533 (98.70%) children were immunized with polio 1, 501 children (94.71%) were immunized with polio 2, 443 children (83.74%) were immunized with polio 3 and 437 children (82.61%) were immunized with polio 4. It can be concluded that polio immunization 4 achievement is still below the target or the lowest compared to other polio immunization percentage achievements. Based on these data, the researcher is interested in evaluating the evaluation of the polio immunization program 4 at Rowosari Puskesmas, Pemalang including resource support, budget utilization, infrastructure management, implementation, achievements, and obstacles of the polio program 4 at Rowosari Puskesmas, Pemalang.

METHOD

This research was conducted using a qualitative study method through a descriptive approach. This research used in-depth interviews, observation, field notes, recording devices, and documentation to collect data. Primary data was collected through in-depth interviews using a system concept (input-process-output) interview guide with the variables studied to be asked to the informants consisting of: Input variables include: resource support, utilization, infrastructure management; Process includes implementation of polio immunization 4; and Output includes achievements and obstacles of polio immunization 4 program. The system concept was used for the question and answer process by researchers with informants involved in the study (Rika Ariyani, 2022). Secondary data on polio immunization coverage 4, 2023 was obtained from the immunization program manager of Rowosari Puskesmas, Pemalang through documentation method.

This research uses interactive data analysis techniques with three components of processing data, namely data reduction by simplifying data from field notes through making summaries and determining problem boundaries; data presentation through a series of information in the form of descriptive narratives that describe conditions in detail; and drawing conclusions based on all things obtained in the data reduction process and data presentation and can be explored more deeply through field notes. This research study uses non-probability sampling techniques, specifically purposive sampling with the aim of selecting certain samples based on characteristics that can help provide in-depth insights related to the topic under study, namely the assessment of the polio immunization program 4 at puskesmas rowosari, pemalang rural area with the number of research informants as many as 5 people, including: immunization program manager (1 main informant), 2 village midwives (2 supporting informants), and 2 mothers of toddlers (2 triangulation informants). The following informant characteristics based on the research results are seen in the table below.

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Table 1. Overview of Informants by Gender, Age, and Educational Status

No.	Informant	Gender	Age	Education Status	Description
1.	WH	Male	52	D-III	Immunization Program Manager
2.	KH	Female	44	D-III	Bumirejo Village Midwife
3.	DW	Female	41	D-III	Wiyorowetan Village Midwife
4.	JK	Female	37	SLTP	Mother of Toddlers Bumirejo Village
5.	RM	Female	48	SD	Mother of Toddlers Wiyorowetan Village

RESULTS AND DISCUSSION

Resource Support

Resource support is one of the important factors influencing the achievement of polio immunization 4. The following are the results of in-depth interviews related to health worker support for the polio immunization 4 program:

"There is no problem in human resources, because in the implementation of activities there are other officers who help." (WH, 52 years old)

"In the implementation of immunization, there are a maximum of 14 officers who are divided into several teams assisted by cadre mothers." (KH, 44 years old, DW, 41 years old)

"I don't know, because I only participated in immunization once." (RM, 48 years old)

In-depth interviews with five informants showed that the necessary resources have been provided to implement the polio immunization program. However, one informant (the fifth informant), said that he only participated in polio immunization activities once. This shows how important the role of immunization officers is, both in its implementation and in socialization education about the importance of polio immunization to increase community participation which affects polio immunization coverage. Health workers (midwives, nurses) play a role in helping to improve the health status of infants and transform communities into healthier ones. Health workers should be able to inform the community, especially mothers of infants, about the importance of complete basic immunization. Therefore, health workers are expected to take preventive measures such as teaching the importance of basic immunization, informing mothers of infants about the immunization schedule, and encouraging the role of cadres to mobilize participation in the village posyandu, and recording vaccine administration. (Dianti, 2017) This study is in accordance with research (Rindy Apriyani et al., 2024) that, Health workers have a role in making people aware of the importance of immunization to improve the health status of toddlers. However, some mothers

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of toddlers have minimal knowledge of the importance of polio immunization and only think that polio 1 immunization is enough. This is in line with research (Chininta Amadea Wibowo et al., 2020) which states that in addition to lack of maternal insight, lack of family support is the reason for non-compliance with polio immunization participation.

Budget Utilization

Budget is one of the vital elements that determine the effectiveness of immunization program implementation. The results of interviews with informants are as follows:

"Regarding the budget, we cannot provide detailed information, we only get budget dropping in the form of providing vaccines." (WH, 52 years old)

"There is no budget allocation for immunization from the puskesmas, but it uses voluntary community self-help for the purchase of stationery." (KH, 44 years old, DW, 41 years old)

"There is no obligation to pay dues, it is voluntary. We get snacks or green bean porridge from the puskesmas and women cadres as additional food for toddlers." (JK, 37 years old)

Based on these in-depth interviews, it is said that the budget used for the immunization program is obtained entirely from the government in the form of providing vaccines, not in the form of nominal money and its implementation utilizes community self-help or opens voluntary contributions for the purchase of stationery. Non-Governmental Organizations are non-governmental organizations (NGOs) formed by members of the public of the Republic of Indonesia, either individuals or groups of people who voluntarily of their own free will and great interest and engaged in certain activities as a form of community participation in an effort to improve the standard of living and welfare of the community, which focuses on self-help without the aim of profit. (LSM PRSK, 2024) According to Law No. 40 of 2004 on the National Social Security System (SJSN) and Law No. 24 of 2011 on the Social Security Organizing Agency (BPJS), only complete basic immunizations, including polio, are fully covered by BPJS Health.

Infrastructure Management

The main supporting aspect in the implementation of the immunization program is the availability of infrastructure in the form of complete facilities and infrastructure. The results of the interview are as follows:

"The implementation of immunization in Bumirejo Village is very convenient because it is held at the Regional Personnel and Training Agency, which is my official residence." (KH, 44 years old)

"Suggestions and infrastructure are complete provided by the puskesmas such as scales, other measuring instruments, and assistance from the village hall such as providing chairs." (DW, 41 years old)

"The provision of infrastructure is complete, but it is constrained by the lack of enthusiasm of the community because many have moved." (JK, 37 years old)

"I don't know because I rarely participate in immunization activities." (RM, 48 years old)

Based on the results of the interviews, informants said that the availability of immunization infrastructure was adequate in supporting the implementation of immunization activities. In line with research (Rizki et al., 2020) states that in the implementation of the immunization program, the unavailability of facilities and infrastructure affects the non-implementation of immunization activities. The facilities and infrastructure needed include vaccines, vaccine storage equipment, vaccine use equipment, and medicines and the space needed to support the implementation of immunization activities.

Immunization Implementation

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The implementation of immunization is a major factor in achieving program success. The results of the informant interviews are as follows:

"Immunization is carried out in two places, namely inside the building and in the yard of the puskesmas. An obstacle in its implementation is that there are people who move areas or move residence because many residents are migrating outside the city. For example, babies who are immunized for the first 3 months, then the next 3 months have moved. So, there are obstacles in follow-up immunization." (WH, 52 years old)

"In the implementation of polio immunization 1, 2, 3, 4 there have never been any problems or obstacles, but the problems that arise are caused by the fact that polio immunization is not given separately. However, it is given together with other immunizations." (KH, 44 years old)

"The provision of polio immunization has been maximized and is running smoothly. Although there are obstacles but all can be overcome." (DW, 41 years old)

*"The immunization place is very comfortable and the nurses are friendly if we want to ask questions." (*JK, 37 years old)

"I am not aware of any information regarding the follow-up immunization schedule." (RM, 48 years old)

Based on the results of interviews conducted with 5 informants, the number of children is an obstacle to the implementation of the program because according to the immunization program manager who said that there was a regional mutation or moving, many children in the family so that it was inconvenient and underestimated this activity. The lack of role of village midwives in personally approaching mothers of toddlers related to reminding immunization schedules. Polio immunization schedule: polio immunization drops (OPV 1) given at 1 month of age, polio immunization drops (OPV 2) given at 2 months of age, polio immunization drops (OPV 3) given at 3 months of age, and injectable polio immunization (IPV1) at 4 months of age. (MoH, 2024b) In line with previous research, (Rizky Indah Syahfitri et al., 2024) that the chance of a child not getting complete basic immunization if the order of the 3rd child etc. is 27%. The more children the mother gives birth to, the less chance the child will get complete basic immunization. In this case, the study is not in line with research (Raudatul Jannah et al., 2024) that the active role of midwives and cadres is needed, including reminding parents to bring their children to be immunized.

Polio Immunization Outcome 4

Immunization outcomes illustrate the success rate of the program. The results of interviews with informants are as follows:

"The achievement is only 82% of the 100% target. However, it has exceeded the UCI (Universal Child Immunization) target. This is influenced by various factors such as cross-sectoral synergy and community participation in the high and low achievement targets." (WH, 52 years old)

"The immunization achievement in Bumirejo Village is the highest compared to other villages." (KH, 44 years old)

"Actually there are several obstacles, the most felt is the enthusiasm of mothers of toddlers and the number of children in the implementation of immunization so that it affects the immunization achievements in Wiyorowetan Village." (DW, 41 years old)

Based on the results of interviews conducted with 5 informants, it shows that only 82% of polio immunization 4 achievements at Rowosari Puskesmas, Pemalang have not reached the 100% target, because it is influenced by various factors and the support of all communities. However, it has passed UCI

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(Universal Health Immunization) with an achievement of 82% with a normal threshold of 80%. According to the researcher, the attitude of health workers towards child immunization contributes to the completeness of polio immunization in children. Families will be motivated to fully immunize their babies because of the friendly and professional attitude of health workers. If health workers are friendly and professional in providing information to families about the purpose, benefits, and schedule of immunization clearly and continuously, families will be more motivated to fully immunize their children, which in turn will increase the overall number of children immunized against polio. Therefore, it is highly expected that health workers can be friendly and professional when providing immunization. Based on research (Raudatul Jannah et al., 2024) that the success of the vaccination program is not only the responsibility of health workers, but also requires cross-sectoral and community support such as community leaders, religious leaders, teachers, youth organizations, NGOs, mothers and special groups in their respective fields of work. Therefore, cooperation between policy makers is needed.

Barriers

Barriers are factors that disrupt and cause the success of program achievements. The results of in-depth interviews obtained from informants are as follows:

"The most felt obstacle is the ineffectiveness and efficiency of the utilization of polio IPV (Index of Vaccine Usage) doses, so that many vaccines have been opened and wasted. This is a result of the low number of children participating in immunization activities. The hope is that the manufacturer will reduce the IPV dose of polio." (WH, 52 years old)

"...there are no obstacles because the achievements in Bumirejo Village have been maximized." (KH, 44 years old, JK 37 years old)

"The obstacle I feel is that sometimes the child is fussy, so the situation is not conducive." (DW, 41 years old)

"Her grandmother forbade her to participate in the follow-up immunization because her granddaughter became feverish." (RM, 48 years old)

Based on in-depth interviews, it is said that the family support factor is not very supportive of the immunization program so that family support is one of the obstacles to bringing children to be immunized and the low effectiveness of using polio vaccines so that they are wasted. Continuing research (Sri Janatri et al., 2022) found a correlation between family participation in maternal motivation and maternal compliance with child immunization. Several forms of support, including social support, can be an invitation to be open to different points of view. According to a study (Jati et al., 2021), vaccines that have been opened and remain after the end of the maintenance period (in the service area outside the building) should not be reused.

CONCLUSIONS

This study can be concluded that the use of polio vaccine 4 has not been maximized, and the knowledge of mothers of toddlers who are still lacking in the importance of immunization, so from this immunization achievement at Rowosari Puskesmas, Pemalang has not reached 100%. For the implementation of immunization from the health workers do not have obstacles that are so disturbing. While the insight of mothers of toddlers regarding immunization is still very lacking, because according to them if they have been immunized once then they do not follow the next immunization. The budget provided by the government is only focused on providing immunization vaccines, if there is a need to purchase stationery during immunization, it usually uses community self-help funds. Polio 4 immunization activities take place inside and outside the building, the availability of vaccines has been fulfilled, and immunization

support tools have been fulfilled. During the implementation of polio immunization 4 there were no significant obstacles, but regional mutations or moving residence caused the immunization program to not run according to target. Barriers to immunization activities are the work of mothers of toddlers who cannot attend and bring their children to be immunized and the lack of family support.

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