


Rotavirus, PCV And HPV Immunization Coverage In Bima City In 2024

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Article Info	ABSTRACT
Keywords: Immunizations Rotavirus, PCV and HPV, coverage	Immunization is an effective way to prevent disease transmission and reduce morbidity and mortality rates in infants and toddlers. Additional immunizations recommended by IDAI are pneumococcal vaccine (PCV), rotavirus, influenza, HPV, varicella, Japanese Encephalitis (JE), Hepatitis A and Typhoid (IDAI, 2020). The aim of this study is to determine the coverage of additional immunizations for Rotavirus, PCV and HPV in Bima City in 2024. This research method is quantitative descriptive with a secondary data analysis approach to describe the coverage of Rotavirus, PCV and HPV immunization in Bima City. The population in this study was all children who received Rotavirus, PCV and HPV immunization during 2024, with the entire population being sampled. Based on the research results, it was found that Rotavirus immunization coverage in 2024 was 82.1%, HPV immunization coverage was 81.5%, and for HPV immunization coverage in 2024 was 72.6%
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INTRODUCTION

Immunization is an effective way to prevent disease transmission and reduce morbidity and mortality rates in infants and toddlers (Mardianti & Farida, 2020). Differences in perception in society cause obstacles to the implementation of immunization. Other problems in implementing complete basic immunization include fear that the child will have a fever, often get sick, the family won't allow it, the immunization place is far away, they don't know where the immunization is, and it's busy/busy (Ministry of Health of the Republic of Indonesia, 2015).

Based on Minister of Health Decree Number 12 of 2017 concerning the Implementation of Immunization, there are two categories of immunization and additional immunization. In this study, the immunization coverage that will be described is Rotavirus, PCV and HPV immunization, with data collected from recording and reporting through the Bima City Health Service, Immunization Section. Based on data and information obtained by the Bima City Health Service, in 2024 vaccines for Rotavirus, PCV and HPV immunization will be provided at Community Health Centers, so children should be able to get these three vaccines.

This research uses a quantitative descriptive method by looking at the number of immunization coverage in Bima City, with the instrument used being a checklist. This research is the beginning of the researcher's research roadmap, which is relevant to the research roadmap for study programs that focus on maternal and child health.

METHODS

This research method is quantitative descriptive with a secondary data analysis approach to describe the coverage of Rotavirus, PCV and HPV immunization in Bima City. The population in this study was all 2,301 babies aged 0 - 8 months in Bima City who received the Rotavirus vaccine, all 2,500 babies aged 2 - 6 months who received the PCV vaccine and children aged 0-12 years who received the HPV vaccine as many as 1,264 people from January – December 2024. The research instruments used in this study used master tables and immunization frequency distribution tables

RESULTS AND DISCUSSION

Frequency distribution of Rotavirus dose 1 coverage (January-December 2024) in Bima City

Table 1. Frequency distribution of Rotavirus dose 1 coverage (January-December 2024) in Bima City

Name of the Community Health Center	Number who received immunization	Percentage (%)
Jati Baru	392	65,9
Kolo	104	96,4
Paruga	354	65
Mpunda	610	100
Rasanae Timur	179	94,5
Kumbe	118	99,9
Penanae	530	71,9
Jumlah	2.287	84,8

Frequency distribution of Rotavirus dose 2 coverage (January-December 2024) in Bima City

Table 2. Frequency distribution of Rotavirus dose 2 coverage (January-December 2024) in Bima City

Name of the Community Health Center	Number who received immunization	Percentage (%)
Jati Baru	311	73
Kolo	105	100
Paruga	347	100
Mpunda	634	96,7
Rasanae Timur	190	95
Kumbe	128	94,6
Penanae	586	75
Jumlah	2.301	90,6

Frequency distribution of Rotavirus dose 3 coverage (January-December 2024) in Bima City

Table 3. Frequency distribution of Rotavirus dose 3 coverage (January-December 2024) in Bima City

Name of the Community Health Center	Number who received immunization	Percentage (%)
Jati Baru	224	41,2
Kolo	111	92,6
Paruga	349	76,9
Mpunda	581	96,5
Rasanae Timur	191	100
Kumbe	124	94,8
Penanae	523	71
Jumlah	2.103	71,0

Based on the table above, it shows that rotavirus immunization coverage at dose 1 was 84.8%, at dose 2 was 90.6% and at dose 3 the coverage was 71.0%. This shows that there is a change in the amount of coverage for each dose of rotavirus immunization, where at the second dose there is an increase of 5.8% from the coverage for dose 1, while at dose 3 there is a decrease of 19.6% from the coverage for dose 2 immunization.

The first dose of rotavirus immunization is given to babies aged 6–12 weeks, the second dose is given at the age of 16 weeks – 22 weeks (4 months – 7 months), while the third dose is given at a distance of at least 4–10 weeks after the previous vaccine. The third dose should be given no later than the child is 32 weeks (8 months) old.

Rotavirus immunization is an immunization given to prevent severe diarrhea in babies caused by Rotavirus. Rotavirus immunization is one of the new antigens given to babies born starting in August 2023 so the target number of babies is still relatively low. Therefore, the lack of information about new antigens causes parents to worry about the side effects of immunization. Apart from that, due to limited time in data collection, the data obtained resulted in a decrease in the number of samples for rotavirus 2 and 3.

Frequency distribution of PCV dose 1 coverage (January-December 2024) in Bima City

Table 4. Frequency distribution of PCV dose 1 coverage (January-December 2024) in Bima City

Name of Health Center	Number of Immunized	Percentage (%)
Jati Baru	486	53,4
Kolo	145	100
Paruga	385	70,6
Mpunda	610	100
Rasanae Timur	191	100
Kumbe	121	89
Penanae	539	73,2
Jumlah	2.477	83,7

Frequency distribution of PCV dose 2 coverage (January-December 2024) in Bima City

Table 5. Frequency distribution of PCV dose 2 coverage (January-December 2024) in Bima City

Name of Health Center	Number of Immunized	Percentage (%)
Jati Baru	478	77,7
Kolo	146	100
Paruga	348	60,1
Mpunda	611	99,8
Rasanae Timur	194	100
Kumbe	132	98,4
Penanae	591	79,7
Jumlah	2.500	87,9

Frequency distribution of PCV dose 3 coverage (January-December 2024) in Bima City

Table 6. Frequency distribution of PCV dose 3 coverage (January-December 2024) in Bima City

Name of Health Center	Number of Immunized	Percentage (%)
Jati Baru	323	60,8
Kolo	139	100
Paruga	197	25,1
Mpunda	592	71,2
Rasanae Timur	141	100
Kumbe	137	81,1
Penanae	640	71,9
Jumlah	2.169	72,8

Based on the table above, it can be seen that the 1st dose of PCV immunization was given with coverage of 83.7% (seen in table 4), the 2nd dose of PCV immunization coverage was 87.9% (seen in table 5) and the 3rd dose of PCV immunization coverage was 72.8% (seen in table 6). This shows a decrease in coverage in the third dose with a decrease of 15.1%.

The decrease in the number of samples that occurred at the next dose was because 2 month old babies who received PCV immunization did not follow the proper schedule, so they were immunized in the month they were supposed to be. Apart from that, because parents are concerned that if their child has a fever or is fussy, they will be given a double injection and there is limited time for data collection so that when their child is immunized in the following month it will not be recorded.

Providing PCV immunization to babies aged 2 months, 3 months and also 12 months. PCV immunization is an immunization carried out to build the body's immunity against pneumonia or pneumococcal infection. According to the Ministry of Health, the benefits of PCV immunization are to prevent severe pneumonia or pneumonia and reduce the risk of death

from pneumonia, prevent stunting in children, because this infection disrupts the sufferer's nutrition, and reduces infant and toddler mortality.

Frequency distribution of HPV dose 1 coverage (January-December 2024) in Bima City

Table 7. Frequency distribution of HPV dose 1 coverage (January-December 2024) in Bima City

City		
Name of Health Center	Number of Immunized	Percentage (%)
Jati Baru	158	66,4
Kolo	185	50,4
Paruga	99	67,3
Mpunda	88	94,6
Rasanae Timur	58	100
Kumbe	257	87,1
Penanae	21	31,8
Jumlah	866	68,5

Frequency distribution of HPV dose 2 coverage (January-December 2024) in Bima City

Table 8. Frequency distribution of HPV dose 2 coverage (January-December 2024) in Bima City

City		
Name of Health Center	Number of Immunized	Percentage (%)
Jati Baru	102	82,3
Kolo	281	74,5
Paruga	215	84,6
Mpunda	89	98,9
Rasanae Timur	41	100
Kumbe	215	68,3
Penanae	8	20
Jumlah	951	76,6

Based on the table above, it was found that there was an increase in coverage of the first dose and second dose of HPV immunization, where coverage for the first dose was 68.5% and for the second dose was 76.6%. Even though there has been an increase in the number of coverage, this coverage is still below the coverage of other immunizations.

The HPV vaccine is given to girls aged 11–12 years. This vaccine is given twice with a gap of 6–12 months. Based on several studies conducted previously, the low coverage of HPV immunization is caused by several factors, including parents' concerns about the side effects and parents' thoughts that their children will not get cervical cancer.

CONCLUSION

Based on the research results, it was found that Rotavirus immunization coverage in 2024 was 82.1%, HPV immunization coverage was 81.5%, and for HPV immunization coverage in 20524 was 72.6%. This coverage is still below the national coverage standard, namely

93.7%. It is recommended for immunization program holders to further increase outreach activities regarding the importance of children getting immunizations.

REFERENCES

1. Bonkougou, I. J. O., Haukka, K., Österblad, M., Hakanen, A. J., Traoré, A. S., Barro, N., & Siitonen, A. 2013. Bacterial and viral etiology of childhood diarrhea in Ouagadougou Burkina Faso. *BMC Pediatrics*.13(1).
2. IDAI. 2020. Immunization schedule for children aged 0-18 years, recommended by the Indonesian Pediatrician Association (IDAI)
3. IG. N. Gde Ranuh. (2015). *Guidelines for Immunization in Indonesia*, Ed. 5. Jakarta: EGC.
4. Indonesian Ministry of Health (2017)). *Regarding Immunization Administration*. Jakarta: Ministry. Health of the Republic of Indonesia.
5. Mardianti & Yuli Farida. (2020). Factors Associated with Basic
6. Immunization Status for Babies in Rengasdengklok Selatan Village, Karawang Regency. *Indonesian Midwifery Journal*. 11(1), 17 –29
7. World Health Organization (WHO). 2014, *WHA Global Nutrition Targets 2025: Stunting Policy Brief*