

Precision Factors of Hb-0 Immunization in the Village of Bonda Kase Natal District, 2019



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ABSTRACT: Hepatitis B is a disease transmitted vertically from mother to baby, immunization with HB-0 immediately after birth is one of prevention of transmission. Indonesia the third largest after China and India. Survey results in the Village of Bonda Kase many there were to Indonesia many barriers and obstacles encountered in the implementation of Hepatitis B-0 immunization infants \leq 7 days.

The purpose of this study was to the precision factor of giving Hepatitis B-0 immunization in the Village of Bonda Kase Natal District. This type of research is explanatory research. The population is all mother who have babies 0-1 years and resides in the Village of Bonda Kase Natal District. In 2018 as many as 271 people. The samples were all mothers have babies 0-1 years, have recorded the statements KMS midwife and resides in the Village of Bonda Kase Natal District as many as 103 people. Data were collected through questionnaires. Analyzed through the stages of univariate, bivariate use test chi-square, and multivariate logistic regression using multiple statistical tests at 95% significance level.

The results of the bivariate analysis suggests that predisposing factors (work and knowledge), supporting factors (birth attendant and birth place) and the drivers (support of husband/ family) regarding the accuracy awarding the work of HB-0 ($p=0.001$; RP=6, 20; 95% CI=3.75-10.26), knowledge ($p=0.013$; RP=0.85; 95% CI=0.75-0.97), birth attendant ($p=0.001$; RP=3,63; 95% CI=2.06-6.40), where deliveries ($p=0.001$; RP=2.61; 95% CI=1.56-4.36), and the support of husband/family ($p=0.001$; RP=0.38; 95% CI=0.31-0.47). It is suggested that a working mother and gave birth at home as soon as possible in order to provide immunizations HB-0 to a baby with a baby to the nearest health facility when the baby is 0-7 day old.

KEYWORD: Precision in Giving, HB-0 Immunization

INTRIDUCTION

Hepatitis B virus (HBV) is the world's main infectious disease which is still a public health problem, although currently available vaccines are effective in the form of antiviral treatment (Nguyen & Dare 2018).

Based on WHO data (2018), Hepatitis B is the 10th killer in the world and is endemic in China and other parts of Asia, including Indonesia.

Based on the high prevalence of HBV infection, the *World Health Organization* (WHO) divides it into 3 types of endemic areas, namely: high (10-15%), moderate (8%) and low (5%). While the prevalence of HBV in developing countries is Indonesia (10%), Malaysia (5.3%), Brunei (6.1%), Thailand (8% -10%), Philippines (3.4% -7%) (WHO, 2018).

Based on the Indonesian Health Profile 2017, the coverage of immunization for Hepatitis B 0-7 days in Indonesia is 59.19% (Depkes RI, 2017). Based on the Health Profile of North Sumatra Province in 2008, the number of Hepatitis B cases was found in two districts with a total of 48 cases, with details of Simalungun Regency 46 cases and Samosir 2 cases, in 2016 7 cases were found, with details of Asahan Regency 6 cases and Binjai Municipality 1 case (North Sumatra Health Office, 2018).

The achievement of villages with UCI in North Sumatra Province in 2016 was only 65.78% of districts / cities whose villages had reached UCI 100%, namely the city of Medan, Binjai, Tebing Tinggi and Toba Samosir. UCI achievement is less than 80% as many as 9 districts / cities namely Labuhan Batu, Simalungun, Karo, Deli Serdang, Langkat, Humbang Hasundutan, Batubara, Labuhan Utara Selatan and Pematang Siantar city, UCI village coverage is still below 80%, there are 11 districts / cities, coverage UCI is below 50%, namely Nias, North West Nias, Mandailing Natal, Padang Sidempuan, Sibolga, Tanjungbalai, Central North Tapanuli, Gunung Sitoli (North Sumatra Provincial Health Office, 2017).

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Based on data obtained at the Provincial Health Office of North Sumatra until December 2017, the achievement of Hepatitis B immunization is still low. Of the 33 districts / cities, only four districts / cities achieved Hepatitis B immunization above 80%, namely the cities of Medan, Binjai, Tebing Tinggi and Toba Samosir. While the rest is still below 80%.

From the data on the coverage of Hepatitis B-0 immunization in 2017 at the Puskesmas Patiluban Mudik, Natal District, it was shown that the number of newborns was 290, early neonatal visits (KN-1) were 121 babies (41.7%), and those who were given immunizations. There are 121 babies of hepatitis B-0 aged 0-7 days, so there are 169 babies who did not receive Hepatitis B-0 immunization on time.

In 2017 the coverage of Hepatitis B-0 immunization at Puskesmas Patiluban Mudik was getting lower with 271 newborns, 98 babies (40%) of early neonatal visits (KN-1), and those given Hepatitis B-0 immunization. 0-7 days of 98 babies, so there are 173 babies who did not receive Hepatitis B-0 immunization on time

Research Purposes

District.

Benefits of Research

1. As input for the Head of the North Sumatra Provincial Health Office and the Head of the Mandailing Natal Regency Office, to increase the coverage of Hepatitis B immunization from 0 to 7 days in North Sumatra Province.
2. Can be used as input in planning health services for prevention and control of infectious diseases, especially efforts to reduce morbidity and mortality due to hepatitis B.
3. As input or comparison in conducting research that discusses Hepatitis B.

RESEARCH METHODS

This research is a survey research with *explanatory research* type. The research design used was *cross sectional*.

Research Location and Time

This research was conducted in Bonda Kase, Natal District. The time of this research was started from January 2018 finished on January 2019.

Population and Samples

The population in this study were all mothers who had babies 0-1 years old and had KMS. S Ampel in this research is the whole mothers who have babies 0-1 years old and have KMS, a large sample of as many as 103 people.

RESULTS AND DISCUSSION

Univariate Analysis

1. Predisposing Factors
 - a. Age category shows that more respondents are aged ≥ 20 years (healthy reproductive age according to the government), namely 78 people (75.7%).
 - b. The education category shows that the respondents have more low education (SD / SLTP / SLTA), namely 88 people (85.4%).
 - c. Job category, shows that more respondents do not work, namely 66 people (64.1%).
 - d. In the knowledge category, more knowledgeable respondents were categorized as bad, namely 64 people (62.1%) and a small proportion of them were good, namely 39 people (37.9%).
2. Supporting Factors
 - a. The birth attendant category showed that more respondents were assisted by health workers, namely 56 people (54.4%)
 - b. The category of place of delivery indicated that more respondents were at home, namely 68 people (66.0%).
3. Driving Factor
 - a. The category of information sources shows that most of the respondents are not good, namely 52 people (50.5%) and a small proportion is good, namely 51 people (49.5%)
 - b. The husband / family support category showed that most of the respondents were not supportive, namely 59 people (57.3%) and a small portion was supportive, namely 44 people (42.7%).

DISCUSSION

1. Relationship between Predisposing Factors and Accuracy of HB-0 Immunization in Bonda Kase, Natal District, 2019

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a. Relationship between Age and Accuracy of HB-0 Immunization

The results showed that mothers in the age group under 20 years (68.0%) and over or equal to 20 years (62.8%) tended to be inappropriate in giving HB-0 immunization to their babies. The results of the *chi-square* statistical test showed that the value of $p = 0.811 > 0.05$, meaning that there was no significant relationship between the age of the mother and the accuracy of giving HB-0 immunity to the baby.

There is no relationship between age and the accuracy of HB-0 immunization in infants because those under 20 years of age are mostly low-educated. With higher education, it is hoped that mothers will have good knowledge about HB-0 immunization so that mothers understand and understand the importance of giving HB-0 immunization to infants correctly, namely 0-7 days of age.

b. Relationship of Education with Accuracy of HB-0 Immunization

The results showed that mothers with low education (67%) were more accurate in giving HB-0 immunization to their babies and conversely, highly educated mothers (53.3%) were more accurate in giving HB-0 immunization. The results of the *chi-square* statistical test showed that the value of $p = 0.152 > 0.05$, thus the results of multiple logistic regression, the value of $p = 0.135 > 0.05$, meaning that the two tests showed no significant relationship between education and the accuracy of HB-0 immunization baby.

There is no relationship between education and the accuracy of giving HB-0 immunization to infants because low education with poor knowledge is one of the causes that results in mothers giving inappropriate HB-0 immunization to their babies.

c. Employment Relationship with Accuracy of HB-0 Immunization

The results showed that working mothers (67.6%) were more precise in giving HB-0 immunization to their babies and conversely, non-working mothers (81.8%) were more correct in giving HB-0 immunization. The results of the statistical test of *chi-square* values obtained $p = 0, 001 < 0.05$, according to the results of the multiple logistic regression value of $p = 0, 001 < 0.05$, meaning that both the test showed no significant relationship between work with the precision of the provision of HB imunsasi - 0 on the baby. The prevalence ratio was 6.20 with 95% CI 3.75 - 10.26, meaning that working mothers were likely 6.20 to be more appropriate in giving HB-0 immunization to their babies compared to non-working mothers.

There is a relationship between work and the accuracy of giving HB-0 immunization to infants because working mothers have a greater chance of getting information, especially health information about the importance of the accuracy of giving HB-0 immunization to infants.

d. Relationship between Knowledge and Accuracy of HB-0 Immunization

The results showed that mothers with good knowledge (59.0%) were more precise in giving HB-0 immunization to their babies and conversely, mothers with poor knowledge (78.1%) were more accurate in giving HB-0 immunization. The results of the statistical test of *chi-square* values obtained $p = 0, 001 < 0.05$, according to the results of the multiple logistic regression value of $p = 0.013 < 0.05$, meaning that both the test showed no significant relationship between knowledge with accuracy imunsasi granting HB-0 on the baby. Rasio prevalence was 0.85 with 95% CI 0,75 - 0,97, meaning that both the likelihood of 0.85 knowledgeable mother is more appropriate in HB-0 immunization of their babies than mothers with knowledgeable is not good.

There is a relationship between knowledge and the accuracy of giving HB-0 immunization to infants because well-informed mothers find it easier to analyze the health information they get from the environment, in this case the accuracy of giving HB-0 immunization is something that must be given in order to increase the baby's immune system and reduce the risk. The baby has hepatitis B.

2. Relationship of Supporting Factors with Accuracy of HB-0 Immunization in Bonda Kase, Natal District, 2019

a. Relationship between birth attendants and the accuracy of HB-0 immunization

The results showed that mothers who gave birth assisted by health workers (60.7%) were more precise in giving HB-0 immunization to their babies and on the contrary, mothers who gave birth assisted by non-health workers (93.6%) were more correct in giving HB immunization. The results of the statistical test of *chi-square* values obtained $p = 0, 001 < 0.05$, according to the results of the multiple logistic regression value of $p = 0.001 < 0.05$, meaning that both the test showed no significant relationship between knowledge with accuracy Award imunsasi HB-0 in the baby. The prevalence ratio was 3.63 with 95% CI 2.06 - 6.40, meaning that mothers who gave birth assisted by health workers were 3.63 likely to be more accurate in giving HB-0 immunization to their babies compared to mothers who were assisted by non-health workers.

A da relationship between birth attendants with the precision of HB-0 immunization in infants because maternal helped health workers supported by the skills or Standard Operating Procedure (SOP) that must be done midwives attending

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births. According to a normal delivery method, the steps for Hepatitis B immunization have been implemented as soon as the baby is born starting 2 hours after the baby is born. Babies whose births are assisted by health workers greatly influence the provision of Hepatitis B-0 immunization (Depkes, 2018).

b. Relationship between Place of Delivery and Accuracy of HB-0 Immunization

The results showed that mothers giving birth at health care centers (82.9 %) were more precise in giving HB-0 immunization to their babies and conversely mothers giving birth at home (88.2 %) were more correct in giving HB-0 immunization. The results of the statistical test of *chi-square* values obtained $p = 0,001 < 0.05$, according to the results of the multiple logistic regression value of $p = 0.001 < 0.05$, meaning that both the test showed no significant relationship between the place of delivery with accuracy Award HB-0 immunity to the infant. The prevalence ratio was 2.61 with a 95% CI 1.56 - 4.36, meaning that mothers giving birth at a health care facility were 2.61 more likely to be more precise in giving HB-0 immunization to their babies than mothers giving birth at home.

There is a relationship between the place of delivery and the accuracy of giving HB-0 immunization to infants because mothers giving birth at a health service place have the availability of health equipment / materials to improve the health of mothers and babies. HB-0 immunization aims to prevent transmission of Hepatitis B vertically from mother to baby which is only given by health workers, while mothers giving birth at home do not necessarily mean that health workers carry the Hepatitis B vaccine because it requires a special box (cold chain) and long distances passed by health workers.

3. The Relationship between Driving Factors and Accuracy of HB-0 Immunization in Bonda Kase, Natal District, 2019

a. Relationship of Information Sources with Accuracy of HB-0 Immunization

The results showed that mothers who received good information sources (62.7 %) were more accurate in giving HB-0 immunization to their babies and vice versa, mothers received bad information sources (90.4 %). The results of the statistical test of *chi-square* values obtained $p = 0,001 < 0.05$, meaning that there is a significant relationship between resources with precision giving imunsasi HB-0 on the baby. Based on the multiple logistic regression test, it was found that the value of $p = 0.466 > 0.05$, meaning that there was no significant relationship between information sources and the accuracy of giving HB-0 immunization to the baby.

According to Muazaroh's (2018) research, there is a relationship between communication, resources, disposition, bureaucratic structure and immunization coverage. There is an influence of bureaucratic structure with immunization coverage.

There is no relationship between the source of information and the accuracy of giving HB-0 immunization to infants because even though mothers get more health information sources from health workers, they do not receive support from husbands / families so it is inappropriate for babies to be given HB-0 immunization. On the other hand, mothers get information from print and electronic media, but mothers give HB-0 immunization according to the baby's age, namely 0-7 days because they receive support from their husbands / families.

b. Relationship of Husband / Family Support with Accuracy of HB-0 Immunization

The results showed that mothers who received support from husband / family (68.2 %) were more accurate in giving HB-0 immunization to their babies and conversely, mothers who did not receive support from husband / family (88.1 %) were more correct in giving HB immunization. -0. The results of the statistical test of *chi-square* values obtained $p = 0,001 < 0.05$, according to the results of the multiple logistic regression value of $p = 0.001 < 0.05$, meaning that both the test showed no significant relationship between husband support / family with the accuracy of giving HB-0 immunization to the baby. The prevalence ratio was 0.38 with 95% CI 0.31 - 0.47, meaning that the mother received support from husband / family, possibly 0.38 more precisely in giving HB-0 immunization to her baby compared to mothers who did not receive support from husband / family.

The result of a survey conducted by Siswandoyo and Putro (2015) states that the acceptance of mothers who have children aged 12-23 months for child immunization is influenced by family support.

There is a relationship between husband / family support and the accuracy of giving HB-0 immunization to infants because the husband is the head of the household who is more dominant in making decisions, especially regarding the health of the mother and the baby. If the mother is advised by the husband to bring the baby to do a health check or give HB-0 immunization to prevent transmission of hepatitis B disease.

CONCLUSION

1. Mothers who have jobs tend to interact with many people to obtain health information about the importance of giving HB-0 immunization according to the age of the baby, possibly 6.20 times more accurate in giving H B-0 immunization than non-working mothers.

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2. Mothers with good knowledge received more information from health workers, possibly 0.85 times more accurate in giving HB-0 immunization than mothers with poor knowledge.
3. Women who give birth assisted by health workers, of course, are handled by midwives who have the ability / competence in care and delivery assistance, possibly 3.63 times more precise in giving HB-0 immunization than mothers who are assisted by non-health workers.
4. Mothers giving birth in health care facilities certainly have facilities that are more supportive in improving maternal and child health, especially the Hepatitis B vaccine, possibly 2.61 times more appropriate in giving HB-0 immunization than mothers giving birth at home.
5. Mothers get support from husbands / families who recommend bringing their babies to give HB-0 immunization or visiting health services, it is likely that it is 0.38 times more appropriate to give HB-0 immunization than mothers who do not get support.

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