ATLANTIS PRESS

Advances in Health Science Research, volume 12

The 4th International Seminar on Public Health Education (ISPHE 2018)

Immunization Coverage on Infant in Three Districts of Central Java Province

1st Sutopo Patria Jati
Faculty of Public Health, Universitas Diponegoro
Lembaga Penelitian dan Pengabdian Masyarakat Universitas Diponegoro
Semarang, Indonesia
spjati@gmail.com

2nd Martini
Faculty of Public Health, Universitas Diponegoro
Lembaga Penelitian dan Pengabdian Masyarakat Universitas Diponegoro
Semarang, Indonesia
tinihen65@yahoo.co.id

3rd Budiyono
Faculty of Public Health, Universitas Diponegoro
Lembaga Penelitian dan Pengabdian Masyarakat Universitas Diponegoro
Semarang, Indonesia
kenang92@yahoo.com

4th Ayun Sriatmi
Faculty of Public Health, Universitas Diponegoro
Lembaga Penelitian dan Pengabdian Masyarakat Universitas Diponegoro
Semarang, Indonesia
ayunsriatmi@gmail.com

5th Nikie Astorina
Faculty of Public Health, Universitas Diponegoro
Lembaga Penelitian dan Pengabdian Masyarakat Universitas Diponegoro
Semarang, Indonesia
nikieastorinadewanti@gmail.com

***Abstract*-The coverage of complete basic immunization in Central Java decreased from 100.7%, 93.4%, and 97.2% during 2013-2015, as the number of measles cases increased from 32, 308 and 576. The aim of this research was to analyze the coverage of immunization in Semarang City, Brebes District, and Surakarta City of Central Java Province. The observational descriptive with quantitative and qualitative approach was conducted using of 877 infant samples from all districts and the respondents were the infants' parent. The instrument used to measure was Rapid Card Check (RCC) recommended by UNICEF. The results of the study indicated that several infants were still unimmunized. The reasons most often raised by mothers who do not immunize their baby were due to sick children, busy parents working, and religious factors (haram). Immunization is a measure to maintain the infant's health from the disease. It is very important to develop the maternal understanding to increase immunization coverage in three districts.**

Keywords: immunization coverage, Semarang, Brebes, Surakarta

I. INTRODUCTION

Infectious diseases have become one of the problems in Indonesia, as their spreading break over administrative boundaries causing difficulties in eradicating them. Therefore, immunization as one of the prevention of infectious diseases is very cost effective [13].

In Law Number 36, 2009 on Health, every child is entitled to basic immunization and the government is obliged to give complete immunization to every baby and child [13]. Immunization protects children against some Immunizable Diseases (PD3I) (MoH RI, 2016). PD3I is a contagious disease that potentially leads to outbreaks and death especially in Toddlers [14].

Indonesia's health profile reported that, in 2013, the coverage of complete basic immunization reached the target as stated in the Strategic Plan (Renstra) of the Ministry of Health; however, in 2014 and 2015, the immunization coverage did not meet the target stated in the strategic plan. During 2013-2015, the national immunization coverage decreased from 89.9%, 86.9%, and 86.5% [10].

Meanwhile, in Central Java during 2013-2015, the coverage of complete basic immunization was 100.7%, 93.4%, and 97.2%. This might cause by the factthat during 2013-2015 the measles cases increased from 32, 308, and 576 [2].

The cases of measles were identified taking place in several cities/regencies in Central Java, among which were in Semarang City, Brebes Regency, and Surakarta City. In Semarang city the measles cases increased by 137, 219, and 224 in 2013-2015 [4]. Meanwhile, in Brebes District, in 2013, the measles cases were 6, increased to 20 cases in 2014, and increased again to 54 cases in 2015 [3]. Furthermore, in the city of Surakarta, the measles cases were 5 in 2013, and fell to 3 cases in

2014, yet the outbreak of hepatitis B disease increased from 0 cases in 2013 to 126 cases in 2014 [5].

The district/municipal and provincial government shall carry out national planning for the implementation of immunization, which isundertaken by Community Health Center (puskesmas). The immunization planning includes targeting, logistic needs, and funding [12]. In the era of decentralization, strong commitment, operational cost support, and other resources determine the success of the immunization program conducted by local government, as the success of the immunization program might provide high immunization coverage [9].

In regard to the high problems faced by local government in relation to achieve health indicators of infants and toddlers, the coverage of immunization in high risk areas in three cities/regencies in Central Java Province needs to be further examined.

II. RESEARCH METHOD

The research applied descriptive observational design with quantitative and qualitative approach. The location chosen was high-risk areas in three cities/districts in Central Java Province namely Semarang City, Brebes Regency, and Surakarta City, from which 5, 8 and 2 sub districts respectively were chosen to be the locus of examination. The study was conducted in 2 months, starting from February to March 2017.

The population was all toddlers aged 12-24 months who were sampled to be 331 respondents using random sampling technique. Respondents in this study were mothers whose toddlers were selected as samples.

The research instrument used was Rapid Card Check (RCC) form recommended by UNICEF, and theresearch variables were immunization coverage and accuracy of immunization.

Table 1 shows that the percentage of not given the coverage of basic immunization in Semarang City takes place in penta 3 (51.6%) and measles (57.8%); while, in terms of immunization accuracy, the most delayed immunization is measles (71.9%), and the most accurate immunization is HB0, as 67.2% has immunized the baby at the age 0-7 days.

Furthermore, the percentage of not given the coverage of basic immunization in Brebes district takes place in penta 3 and polio (21.5%) and measles (29.1%); while, in terms of immunization accuracy, the highest delayed immunization is measles (59.2%), and the most accurate immunization is HB0, as 72.2% has immunized the baby at 0-7 days old baby.

TABLE 1. RESULT

Variable	Yes		No	
	f	%	f	%
Semarang				
1. Immunization Coverage				
- HB0	47	73.4	17	26.6
- BCG	49	76.6	15	23.4
- Penta 3	31	48.4	33	51.6
- Polio 4	33	51.6	31	48.4
- Measles	27	42.2	37	57.8
2. Immunization Accuracy				
- HB0	43	67.2	21	32.8
- BCG	42	65.6	22	34.4
- Penta 3	22	34.3	42	65.6
- Polio 4	21	32.8	43	67.2
- Measles	18	28.1	46	71.9
Brebes				
1. Immunization Coverage				
- HB0	179	80.3	44	19.7
- BCG	192	86.1	31	13.9
- Penta 3	175	78.5	48	21.5
- Polio 4	175	78.5	48	21.5
- Measles	158	70.9	65	29.1
2. Immunization Accuracy				
- HB0	161	72.2	62	27.8
- BCG	147	65.9	76	34.1
- Penta 3	127	57	96	43
- Polio 4	115	51.6	108	48.4
- Campak	91	40.8	132	59.2
Surakarta				
1. Immunization Coverage				
- HB0	32	72.7	12	27.3
- BCG	32	72.7	12	27.3
- Penta 3	23	52.3	21	47.7
- Polio 4	24	54.5	20	45.5
- Measles	18	40.9	26	59.1
2. Immunization Accuracy				
- HB0	32	72.7	12	27.3
- BCG	24	54.5	20	45.5
- Penta 3	15	34.1	29	65.9
- Polio 4	22	50	22	50
- Measles	9	20.5	35	79.5

Finally, according to research data of basic immunization coverage in Surakarta City, immunization which mostly not given is penta 3 (47.7%) and measles (59.1%); the most delayed immunization is measles (79.5%); and the best immunization accuracy is HB0, as 72.7% has already immunized the baby at the age of the baby 0-7 days.

III. DISCUSSION

In the three areas observed, a number of infants had not been given basic immunization coverage, based on which measles immunization had the lowest coverage; while, the highest coverage immunization was BCG immunization. This state might affect the reduction of complete basic immunization coverage in high-risk areas in 3 cities/districts in Central Java.

Factors affecting the incompleteness of complete basic immunization were obtained from interviews to infants' mothers, health cadres, and staff of community health center. The most common reasons mothers did not immunize their babies in the three areas were sick children, busy working parents, and religious factors; the vaccine used was haram.

According Albertina, the reason of incompleteness of immunization expressed by the mother is that the child is sick when about to immunize (28.4%) and parents are afraid of the side effect of immunization (23.5%) [1]. The sick child was contraindicateto immunization; however, this reasoncould not be underlined an excuse for having complete basic immunization because the child should have been given it as she/he recovered from the illness. In addition, the side effects like fever or cranky child should not also be an excuse because it is mild and insurmountable.

Child delayed getting-immunization affected mothers not taking their children out; as the mother was afraid that the community around her knew her child had not get immunization. In addition, some mothers believed that immunization would have a negative effect on the health of the children such as fever. In this case, mother's knowledge contributed to the lack of information obtained. This finding was similar to one of Maina, stated that maternal education is one of the factors significantly related to immunization coverage [11].

In addition to factors of under-five mothers, health cadres had problems in reaching them as well as less maximal in providing health services. Based on interviews with cadre, the result concluded that sometimes mothers were less cooperative when data collection of immunization coverage were conducted, such as not opening the door, need to make an appointment in advance, and for reasons of economic status. This was consistent with the finding of Harisman that there is a significant relationship between family support and cadre activity in every implementation of posyandu because the family has an important value in any decision making to act for a cadre [7].

In terms of lack of health services conducted by cadres, the cause was that the cadres had too many activities to be done, lack of knowledge about immunization, lack of activities in giving counseling, and limited facilities and infrastructure to do house visits. This was in accordance with the research conducted by Indrawan that posyandu cadres who have less knowledge about immunization mostly play less active during posyandu [8]. Posyandu cadres have not dared to give counseling because the level of knowledge is still not good so there is a fear to make mistake to convey information.

The discovery of children not being immunized was also influenced by factor of community health center officers. The results of interviews with puskesmas staff showed that the lack of health personnel caused officers not directly monitor posyandu activities besides concurrent positions and duties.

Based on the theory of L. Green, factors influencing health behavior related to immunization are predisposing factors include knowledge and attitudes toward health, traditions, and beliefs of the society; enabling factors that include the availability of facilities and infrastructure, as well as reinforcing factors including family support, health workers, and community leaders [6].

IV. CONCLUSION

There are still babies that have not been immunized by their mothers in high-risk areas in three cities/regencies in Central Java namely Semarang, Brebes, and Surakarta. Immunization is one of the ways to keep a baby healthy against disease. Therefore, there is

a need to improve maternal understanding in achieving complete basic immunization coverage for children. In addition, the role of health cadres and health workers need to be maximizedto conduct health services in order to increase immunization coverage. Support of religious/community leaders should also be stimulated to encourage and convince people to immunize their children.

REFERENCES

[1] Albertina, M., Febriana, S., Firmanda, W., Permata, Y., dan Gunardi, H. 2009. *Kelengkapan Imunisasi Dasar Anak Balita dan Faktor-faktor yang Berhubungan di Poliklinik Anak Beberapa Rumah Sakit di Jakarta dan Sekitarnya pada Bulan Maret 2008*. Jurnal *Sari Pediatri*, vol.11, no.1, hlm.1-7.

[2] Dinkes Jawa Tengah. 2016. Health profile of Jawa Tengah Province year 2015. IEEE. Transl. *Profil Kesehatan Provinsi Jawa Tengah Tahun 2015*. Semarang: Dinas Kesehatan Provinsi Jawa Tengah.

[3] Dinkes Kabupaten Brebes. 2016. Health profile of Brebes Regency year 2015. IEEE. Transl. *Profil Kesehatan Kabupaten Brebes Tahun 2015*. Brebes: Dinas Kesehatan Kabupaten Brebes.

[4] Dinkes Kota Semarang.2016. Health profile of Semarang City year 2015. IEEE. Transl. *Profil Kesehatan Kota Semarang Tahun 2015*. Semarang: Dinas Kesehatan Kota Semarang.

[5] Dinkes Kota Surakarta.2016. Health profile of Surakarta City year 2015. IEEE. Transl. *Profil Kesehatan Kota Surakarta Tahun 2015*. Surakarta: Dinas Kesehatan Kota Surakarta.

[6] Green, LW. 1991. *Health Promotion Planning An Educational and Environtmental Approach, 2nd edition*. London: Mayfield Publishing Company.

[7] Harisman dan Nuryani, DD. 2012. Factor predispose posyandu voulunteer activeness in Mulang Maya Village, Kota Bumi Selatan, Lampung Utara Regency. IEEE. Transl. *Faktor-Faktor yang Mempengaruhi Keaktifan Kader Posyandu di Desa Mulang Maya Kecamatan Kotabumi Selatan Kabupaten Lampung Utara*. Skripsi.

[8] Indrawan, IBMD., dan W, Chatarina Umbul. 2014. Relationship between knowledge and family support with volunteer role in order achieving village's UCI. IEEE. Transl. *Hubungan Pengetahuan serta Dukungan Keluarga dengan Peran Kader dalam Pencapaian UCI Kelurahan*. Jurnal Berkala Epidemiologi. Volume 2 Nomor 1, hlm.83-92.

[9] Kemenkes RI. 2011. Immunization program sucessfully pressing mortality and mordibity of seven disease in Indonesia. IEEE. Transl. *Program Imuisasi Berhasil Tekan Morbiditas dan Mortalitas Tujuh Penyakit di Indonesia*. Diakses dari http://www.depkes.go.id/development/site/jkn/index.php?cid=1691&id=prorgam-imunisasi-berhasil-tekan-morbiditas-dan-mortalitas-tujuh-penyakit-di-indonesia.html pada tanggal 18 April 2018.

[10] Kemenkes RI. 2016. Health profile of Indonesia year 2015. IEEE. Transl. *Profil Kesehatan Indonesia Tahun 2015*. Jakarta: Kementerian Kesehatan RI.

[11] Maina, LC., Karanja, S., and Kombich, J. *Immunization coverage and its determinants among children aged 12 - 23 months in a peri-urban area of Kenya*. The Pan African Medical Journal.2013; 14: 3.

[12] Peraturan Menteri Kesehatan Republik Indonesia Nomor 43 Tahun 2013 Tentang Penyelenggaraan Imunisasi

[13] Pusdatin. 2016. Immunization situation in Indonesia. *Situasi Imunisasi di Indonesia*. Diakses dari http://www.depkes.go.id/resources/download/pusdatin/infodatin/InfoDatin-Imunisasi-2016.pdf pada tanggal 18 April 2018.

[14] Undang-Undang Republik Indonesia Nomor 36 tahun 2009 Tentang *Kesehatan*.