

Qualitative Analysis of Immunization Services During Covid-19 at Puskesmas Krebangan Selatan Surabaya

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ABSTRACT

Complete basic immunization coverage in Surabaya and Puskesmas Krebangan Selatan is always above 85%, however, during COVID-19, implementation of immunization at Puskesmas Krebangan Selatan has decreased. This research aims to analyze the description of the implementation of immunization during COVID-19 at Puskesmas Krebangan Selatan. This research was conducted at Puskesmas Krebangan Selatan Surabaya, from January 18 to February 26, 2021. This research was conducted using an online system, with stages coordination and interview with institution supervisor and midwife and documentation study. This research uses primary data. The results of primary data showed that during COVID-19, immunization services continued. Although there are some services that cannot be carried out. Even though there were obstacles, services are still carried out with the implementation of strict health protocols. The conclusion, during COVID-19, immunization services at the Puskesmas Krebangan Selatan were running according to health protocols, but the coverage of most immunizations had not yet reached the predetermined target because people were worried about visiting health services.

Keywords: Immunization service, puskesmas, COVID-19

INTRODUCTION

According to the Regulation of the Minister of Health, Republic of Indonesia Number 12/2017 about Immunization, Immunization is defined as an effort to increase immunity against an illness so that the individuals may experience mild symptoms or less severe of illness, which is it can be given by injections and mouth. The global vaccination coverage according to World Health Organization 2019 has remind the same over the past few years. For example, during 2019, about 116 million (85%) newborns around the world have received three doses of DTP3 vaccines (diphtheria-tetanus-pertussis), protecting them against infectious diseases that can cause serious illness and disability. The latest data released in 2019, 125 countries have reached 90% coverage of DTP3 vaccine.

Data from Indonesian Demographic and Health Survey 2017 shows that only 59% of children in Indonesia aged 12-23 months have received complete basic immunizations and 6% of children in Indonesia aged 12-23 months have not received any immunizations.¹ Data from Basic Health Research 2018 shows that the proportion of complete basic immunization for children aged 12-23 months in Indonesia is 57,9% while in East Java it is 69,2%.² These data indicate that complete basic immunization coverage in both Indonesia and East Java have not reached the RPJMN's main target, which is 90%. COVID-19 pandemic may be the reason of the decline in the immunization coverage. Study from stated that only 56.4 percent of respondents took the immunization at the Posyandu. Another study stated that there was a significant decrease in the achievement profile of basic immunization and follow-up immunizations for children under two years in Indonesia during the COVID-19 pandemic.^{3,4}

Coverage of complete basic immunization in the city of Surabaya the last five years has always been above 85%.⁵ Even in 2018, based on the Health Profile Surabaya City in 2018, complete basic immunization in the city of Surabaya reached 97,77%. In the same period, complete basic immunization coverage at the Puskesmas Krembangan Selatan has reached 98.91%. The data shows that the complete basic immunization coverage both in Surabaya and Puskesmas Krembangan Selatan has reached the target. However, the Puskesmas Krembangan Selatan experienced obstacles during COVID-19.

During COVID-19, community-based prevention and control are needed because community have an important role to break the chain of COVID-19 transmission⁶ stated that to prevent the transmission, the community should

take precautions including: (a) wash hands regularly with soap and in flowing water for 40 seconds or using alcohol-based antiseptic for 20 seconds; (b) Wear a personal-protective equipment including mask that completely covers the nose and mouth; (c) keep a distance of at least one meter with another; (d) limit social interaction; (e) take an immediate shower and change clothes after returning home; (f) applying a clean and healthy lifestyle; (g) controls for comorbid conditions; (h) managing mental and psychosocial health; (i) practice cough and sneeze ethic; (j) take consultation from health workers if they had COVID-19 symptoms; and (k) practice health protocol in every activities. According to preventive effort include (a) health promotion through socialization and (b) protection activities.⁷

In addition to preventive efforts, rapid case detection can also prevent the transmission of COVID-19 endorsed a policy regarding early detection by all elements of the community with the support of Health Office and local health service facility as the anticipation of COVID-19, and detection of COVID-19 symptom among people who are at the certain location with certain activities, such as workplace or office, public facilities and other activities.⁸

Rapid handling and effective response are needed to control the transmission of COVID-19 stated that effective and relevant responses with the preventive measures of COVID-19 pandemic include: (a) physical or social distancing; (b) practice cough and sneeze ethic; (c) self-isolation for people with mild symptoms without comorbid, patients in supervision, people in monitoring, and had close contact with patient; and (d) quarantining for people who have history of close contact and travel from abroad to anticipate the appearance of symptoms.⁹

Other than community-based prevention, health care facilities also have responsibilities to prevent transmission and provide adequate care. Based on guidelines from, the infection prevention and control health-care facilities include: (a) apply standard precaution; (b) maintain at least 1-metre distance in all areas of health care facilities; prohibits visitor to patient with suspected, probable, or confirmed cases; organize PP logistics; and make relevant policies to protect health workers; (c) provide adequate education and training for health workers about COVID-19.¹⁰

With the obstacles faced by the Puskesmas Krembangan Selatan in implementing immunization during the COVID-19, so we intend to conduct a study on the description of immunization services during the

COVID-19 at the Puskesmas Krembangan Selatan Surabaya. This research was aimed to analyze the description of the implementation of immunization during the COVID-19 at the Puskesmas Krembangan Selatan.

METHOD

The research was conducted in the KIA KB unit of Puskesmas Krembangan Selatan, Pesapen Selatan street No. 70, Krembangan, Surabaya, on January 18 to 26 February 2021. The research uses a qualitative research design using the case study method. This research was conducted using an online system, with the stages namely coordination and interview with two informants and documentation study. In order to produce credible data, researchers ensured minimal mistakes and deficiencies in retrieving the data by asking the interviewees to ensure the data needed. The data validity obtained by conducting a member check, cross-checking the results of interview to the informant, so that it was truly represent the real conditions about immunization services in the Puskesmas Krembangan Selatan. Interviews were conducted online with a guided free implementation method. The output was in the form of interviews as a reference to the effectiveness of the implementation of immunization in the KIA KB unit Puskesmas Krembangan Selatan Surabaya.

The data analysis method used were descriptive analysis by identification of existing problem and in-depth-analysis, so that researchers may give relevant recommendations to be applied at the Puskesmas Krembangan Selatan regarding the immunization implementation during COVID-19. This research uses primary data. Primary data to identify the description of immunization services and obtained from interviews and obtained from interviews with two informants, with institution supervisor and midwife. Interviews were conducted three times. Interviews were conducted by asking about the immunization service recording and reporting system, the activities of UKM and UKP immunization services carried out during COVID-19, and barriers to immunization services during COVID-19.

RESULTS AND DISCUSSION

Puskesmas Krembangan Selatan Surabaya, has several recording systems and monthly reporting systems. In addition, the Puskesmas Krembangan Selatan also has various immunization services consisting of *Upaya Kesehatan Masyarakat* (UKM) and *Upaya Kesehatan Perorangan* (UKP).

“Our immunization recording system uses a cohort book, a help book with SIMPUS, if we report monthly we use PWS, KUPI form and the vaccine logistics form for UKM and UKP, there are actually a lot of activities here”

Based on the interview result with the supervision of the Puskesmas Krembangan Selatan Surabaya, the 2020 immunization service was assisted by 13 people and recorded using cohort books, assisted books and SIMPUS (Puskesmas Information Systems). Monthly report conducted by immunization services in the KIA KB Unit included the monitoring of the local area (PWS), KUPI form (post immunization), and vaccine logistics form. Puskesmas Krembangan Selatan immunization services had several *Upaya Kesehatan Masyarakat* (UKM) and *Upaya Kesehatan Perorangan* (UKP). UKM immunization services include (a) advocacy, socialization, and cross-sector coordination related to the implementation of complete basic immunization; (b) advocacy, socialization, and coordination with cross programs related to the implementation of complete basic immunizations; (c) ‘baby sweeping’ to the infant who had not received complete basic immunization; (d) monitoring and evaluation (Monev) of Implementation of house immunization in each posyandu; (e) BIAS (school children's immunization month); (f) Advocacy, socialization, and coordination of cross-sector and cross programs on the implementation of advanced immunizations under five years of age (Baduta), BIAS, and TT WUS; (g) sweep the targets who had not received Baduta's advanced immunization, BIAS, and TT WUS; (h) Facilitative supervision of immunization services in PBM, hospitals and clinics.

Although the Puskesmas Krembangan Selatan has various *Upaya Kesehatan Masyarakat* (UKM). However, due to the COVID-19 pandemic, UKM activities that can be carried out by the Puskesmas Krembangan Selatan are limited.

“Due to the pandemic, the UKM activities that we can do are limited, so only BIAS is Measles rubella for grade I elementary school in October, Human papillomavirus for grade V and VI elementary school students in October, Tetanus diphtheria for grade I elementary school in November, and Tetanus diphtheria which is grade II and V elementary school in November”

But during COVID-19 pandemic, BIAS were the only UKM activities that could be held, which include (a) Measles Rubella

vaccination for grade I elementary school students in October; (b) human papillomavirus vaccination for grade V and VI elementary school students in October; (c) Tetanus Diphtheria vaccination for grade I elementary school students in November; and (d) tetanus diphtheria for grade II and V elementary school students in November. The activity limitation was aimed to reduce crowd as an effort to control COVID-19 transmission. This is in accordance with research conducted at the Puskesmas Margahayu Selatan Kabupaten Bandung that the Puskesmas Margahayu Selatan Kabupaten Bandung limits the activities of UKM.¹¹

Puskesmas Krembangan Selatan has a variety of *Upaya Kesehatan Perorangan* (UKP). The provision of *Upaya Kesehatan Perorangan* (UKP) immunization services at the Puskesmas Krembangan Selatan is different. Depends on age's target.

"The UKP immunization services include Hepatitis B, BCG, Polio Tetes 1,2,3,4, DPT-HB-Hib 1,2,3, PCV, Polio Suntik (IPV), measles or Measles rubella, DT, TD sama HPV. The time of giving varies depending on age, some are given at school, so not all are given at the same time"

The activities of the UKP of immunization services at the Puskesmas Krembangan Selatan Surabaya were UKP which are included in KIA, including (a) hepatitis B vaccination for newborn less than 24 hours age; (b) *Bacillus calmette-guerin* (BCG) and polio drops 1 vaccination for one month old infant; (c) DPT-HB-Hib 1, polio drops 2, and *Pneumococcal conjugate vaccine* (PCV) for two months old infant; (d) DPT-HB-Hib 2, polio drops 3, and PCV for three months old infant; (e) DPT-HB-Hib 3, polio drops 4, and Polio injection or *Inactivated poliovirus vaccine* (IPV) for four months old infant; (f) measles or *Measles rubella* (MR) for nine-month-old infant; (g) DPT-HB-Hib and measles or MR for 18 months old infant; (h) measles or MR and *Diphtheria tetanus* (DT) for grade I elementary school students; (i) *Tetanus diphtheria* (Td) for grade II elementary school students; (j) Td, *Human papillomavirus* (HPV) for grade V elementary school students; and (k) HPV for grade VI elementary school students.

Although the UKP service of the Puskesmas Krembangan Selatan is still running, during the COVID-19 pandemic, special applications were carried out. This special application is not only carried out in UKP services, but in all activities at the Puskesmas Krembangan Selatan.

"The UKP immunization service activity is still running, but we are adding to it by implementing strict health procedures, such wearing PPE and masks. But for UKM for example Posyandu, that doesn't work in this pandemic. We also don't have a special program, just add to the strict health procedures treatment, and we close the service in the afternoon"

During COVID-19 pandemic, UKP Immunization services at the Puskesmas Krembangan Selatan continued the same as before the pandemic, with the application of a strict health protocol. The difference during COVID-19 pandemic were the health workers should wear personal protective equipment (APD) and patients should wear a mask. However, there were several UKM activities that had to stopped during the pandemic, such as immunization activities at the Posyandu because it include social activities, thus increasing the risk of rapid spread of COVID-19. During the COVID-19 pandemic, there was no special programs in immunization services, but all levels of society should practice health protocol with '3M', include washing hand, wearing a mask, and maintaining safe distance. This is similar to other studies which state that when providing immunization services, puskesmas apply a safety protocol that is the application of 3M, community is taught about health protocol, and uses personal protective equipment (APD).¹² Also, the Puskesmas Krembangan Selatan limited the immunization services working hour to only in the morning and close the service in the afternoon.

This research in line with an online survey conducted at 5329 health centers in 388 districts/cities in Indonesia, the results of which showed that immunization services for the public were disrupted in more than 90% of posyandu and 65% health centers. Disruptions in immunization services are caused by several things, such as the lack of understanding of the public and health centers regarding the guidelines provided by the Ministry of Health, the risk of COVID-19 transmission in the work area of the health center which is quite large, a number of reliable vaccinators being assigned to handle COVID-19 so that vaccinators in immunization reduced, transportation disruptions due to travel restrictions, and school closures due to online schools.¹³

The immunization coverage of the Puskesmas Krembangan Selatan had decreased almost for all types of immunization due to COVID-19 pandemic which greatly

impacted on the aspects of public health. The immunization coverage in 2020 (during the COVID-19) had decreased, compared to the immunization coverage in 2019 (before the COVID-19).

“Our immunization coverage has decreased, unlike in 2019. In 2020, the average is still below the target and the decline is quite drastic. So what has fallen is IDL from 98,4% to 88,7%, then Advanced Immunization of Baduta for 18 to 24 months from 96,9% to 88,3%, DT Immunization for grade 1 elementary school children from 98,3% to 90,3%, Measles Immunization for grade 1 elementary school children from 98,7% to 91,1%, TT immunization for children in grade 2 and 5 elementary school from 99,4% decreased to 90,3%, TT5 immunization for WUS aged 15-49 years dropped drastically from 96% to 70%, the same as TT2 plus Bumil immunization for aged 15-49 years decreased from 140% to 100%”

Based on the results of the interview, showed a decrease immunization coverage in almost all types of immunization in the working area of the Puskesmas Krembangan Selatan. Furthermore, most of the immunization coverage in 2020 had not reached the target. The data was obtained from the Puskesmas Krembangan Selatan from the health centers and other health services facilities in the working area of Puskesmas Krembangan Selatan, such as hospitals, independent practical midwives, public private practice doctors, and clinics.

This is in line with research conducted at the Wangaya Hospital, Denpasar City, the results shown that there is a statistically significant difference between the number of visits to basic immunization services from January to July 2020 and January to July 2019.¹⁴ This is also in line with research conducted by the Ministry of Health, where the results for the January to April 2020 period, 18 provinces in Indonesia, the coverage of MR immunization is still low. The decrease in suspected measles cases from January to May 2020 when compared to 2019 decreased by 50,4%.¹⁵ Another study conducted at Puskesmas Massenga Polewali Mandar in 2019-2020 which resulted a decrease of 11,33% immunization coverage during the COVID-19 pandemic, where before the COVID-19 pandemic the immunization coverage was 4271 and during the COVID-19 pandemic it decreased to 3787.¹⁶

It shows a significant impact of COVID-19 pandemic for the public health center. It was

due to government policies regarding COVID-19 transmission prevention such as social restriction, physical distancing, and self-quarantine. The policies forced people to stay at home during COVID-19 and made people afraid of leaving home, especially to health service facilities. The fear to come to the health service facilities triggered a decline of coverage and participation in immunization activities. This is in line with research conducted in Jakarta, the result of shows that the factors that cause the decline in immunization coverage are the doubts and fears of parents and other problems that exist in immunization in various health facilities.¹⁷

Puskesmas Krembangan Selatan also experienced several obstacles in the course of immunization services during the COVID-19 pandemic. This obstacle occurs for various reasons.

“If there are barriers to immunization during the pandemic, the posyandu is not running, so parents have to go to the health center, then the coordination is also via Whatsapp, the BIAS coverage is still low because schools have not met face to face”

The challenges in immunization services at the Puskesmas Krembangan Selatan during COVID-19 include (a) immunization activities for toddlers in Posyandu had not been implemented, hence the mother should brought their child to the health center or hospital, but they were still worried of being infected after visited the health care facility; (b) Posyandu activities are eliminated because the activity involves community participation, hence the activities were conducted online through WhatsApp application; (c) The coverage of student participation in the school immunization month (BIAS) was still low because the school still had not implemented face-to-face learning, so parents refused to take their children to get immunization because they were worried of being required to go to the puskesmas or school according to the predetermined BIAS schedule.

This is in line with research on basic immunization during the COVID-19 pandemic which states that the obstacles to immunization services during the COVID-19 pandemic are parents worrying that their children will contract COVID-19 when they go to health workers and health facilities, and there is an appeal to do activities from home and limiting activities outside the home that affect access to health service at health facilities, transportation disruptions and economic difficulties, unavailable health workers due to job transfers or job adjustments and vaccination officers who are concerned about the risk of COVID-19

transmission that may occur during immunization service.¹⁸ This is also in line with other studies which state that immunization coverage has decreased due to the impact of COVID-19 which has shifted the focus of health services in various countries, especially on routine immunization services to children.¹⁹ Another study conducted at the Puskesmas Kotabumi II Selatan Kabupaten Lampung Utara, stated that parents and health workers are important factors in the implementation of immunization during the COVID-19 pandemic.²⁰

Although there are several obstacles, the immunization service at the Puskesmas Krembangan Selatan had gone well during the pandemic, however most of the coverage of immunization services at the Puskesmas Krembangan Selatan had not reached the target. Nonetheless, immunization services had a positive impact on the community, as evidenced by no case of Acute Flaccid Paralysis (AFP), tetanus neonatorum (TN), measles, diphtheria, and hepatitis in all group of age throughout 2020.

CONCLUSION

Puskesmas Krembangan Selatan has several recording systems and a monthly reporting system. Puskesmas Krembangan Selatan Surabaya also has various immunization services consisting of *Upaya Kesehatan Masyarakat* (UKM) and *Upaya Kesehatan Perorangan* (UKP). By the time of the COVID-19, immunization services in the Puskesmas Krembangan Selatan had been carried out according to health protocols, but the extent of the immunization in Puskesmas has not reached a predetermined target, as people are still worried about getting to health services.

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