FAMILY HEALTH PROGRAM AND ACCES TO HEALTH CARE FACILITY WITH UNIVERSAL INSURANCE TO MAINTAIN BABIES BORN ALIVE (NEONATAL PERIOD) IN INDONESIA 2018

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ABSTRACT

This study aims to get the evidence of the impact Social Insurance Administration for health (BPJS) and integrated care posts (Posyandu) program to maintain babies born alive in neonatal period. This research conduct using multiple regression Ordinary Least Square (OLS) Cross Section data from 34 province in Indonesia 2018, and data collected from central data Ministry of Health Republic of Indonesia. The number of productive posyandu program have positive impact to number of baby born alive with 17.36206 point, that's mean if productive posyandu program increase one point the number of baby born alive will increase 17.36206 point, and productive posyandu program provide food, medicine, vaccine or pregnant woman, mother and child can control reduce neonatal mortality because this program can maintain the baby born still alive more than neonatal period. Number of puskesmas accept BPJS health insurance have positive impact to number of baby born alive with 42.66397. that's mean if the number of puskesmas accept BPJS health insurance increase one point impact of number of baby born alive increase 42.66397 point. The number of puskesmas accept BPJS health insurance can maintain the baby born still alive because many poor people and family in Indonesia using BPJS health insurance to get access to health care facility

Keyword : *Health Program, Universal Insurance, Neonatal*

1. INTRODUCTION

Maternal and child mortality rates in Indonesia still high. It's caused by malnutrition, infectious diseases and health problem in pregnant women. The complexity of health problems must be a concern for the government. Planning from the government is needed to overcome these various health problems. Health planning is a process for formulating health problems that develop in the community, determining the needs and available resources, setting the most basic program goals and compiling practical steps to achieve the goals set. The success of one program is determined by good planning.

Currently Indonesia have many programs regarding provide health care facility, program to poor people to access health care facility, cash0 transfer program, program to preventing disease including HIV/AIDS, tuberculosis,

preventing child mortality and maternal mortality. Some program successful and another program is failed, but in this research focus on programs to reduce neonatal mortality and babies still alive after the are born. According to WHO neonatal is a child under 28 days of age, during these first 28 days of life, the child is at highest risk of dying. It is thus crucial that appropriate feeding and care are provided during this period, both to improve the child's chances of survival and to lay the foundations for a healthy life. In this research focus chose family program to reduce neonatal mortality and access to health care facility using universal health insurance in Indonesia

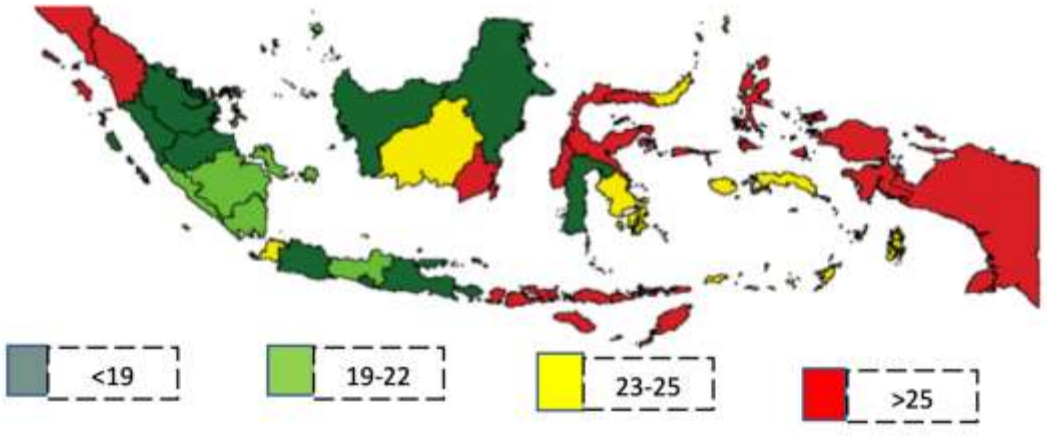
Regarding the family health program in Indonesia, in this research using Posyandu (integrated family health service) program. Anis C (2016) explain regarding purpose Posyandu program is:

1) reduced maternal mortality and child mortality,
2) improving service of maternal health and reducing infant mortality rate
3) Speed up the acceptance of the norm of a happy and prosperous small family,
4) Improving the ability of the community to develop health activities and support the improvement of healthy living,
5) provide basic health facility for family,
6) Improve and foster community participation in the context of technology transfer for public health efforts.

Posyandu is one form of Community Based Health Effort run of, by, for and with the community, in order to empower people and provide convenience to the public in obtaining basic health care. Knowing programs owned posyandu society will be easier to get information and lessons learned about health that will impact the increase in the quality of health from an early age and elderly as well as the conformity of the program posyandu the guidelines posyandu expected to reduce maternal mortality, infant and toddler.

Dian K (2016) explain regarding health system and health facility in Indonesia, health system in Indonesia is decentralized system with most responsibilities shared to district governments. In public sector, district health offices provide public health services; health centers (Puskesmas) and network provide primary care, and district hospitals provide secondary/tertiary care. Puskesmas network includes supporting Puskesmas (Pustu), village midwife (Polindes). There are also integrated care posts (Posyandu) run by cadres with health services provided by Puskesmas doctors, nurses, and midwives. In private sector, there are doctor and midwife practices and hospitals. In terms of maternal health, prenatal and postnatal services are usually provided by public or private primary care facilities. Facility delivery occurs at hospitals, Puskesmas/Pustu, private practices, or Polindes. Community-based facilities include Polindes, private practices, and Posyandu for prenatal and postnatal visits; and exclude Posyandu for delivery.

Picture 1. Neonatal mortality in Indonesia 2002-2012



Sources: Ministry of Health Republic of Indonesia 2013

Regarding universal health insurance in Indonesia, this research choosing Social Insurance Administration for health (Badan Penyelengara Jaminan Soasial (BPJS)) program. BPJS is a new institution formed to organize social security programs in Indonesia that are non-profit based on Law Number 40 of 2004 concerning on the National Social Security System (SJSN). BPJS is a public legal entity formed to organize social security programs, consisting of Health BPJS and Employment BPJS, but in this research just focus on BPJS in health program.

The implementation of the BPJS for several years received positive and negative responses from the public, Yusriadi (2019) explain the positive impact can be seen from the existing procedures, so that requires that before referring to the hospital, BPJS users must first pass an examination at a health facility. If the disease is severe and requires going to the hospital, BPJS users must enter the Community Health Center (Pusat Kesehatan Masyarakat (Puskesmas)) first, but if the illness is adequately treated with medication as needed, BPJS users cannot submit a referral. The BPJS can refer to the hospital directly and meet specialists in dealing with BPJS users' diseases.

Another positive impact, with the BPJS program, can increase the income received by hospitals so that hospitals can improve services for BPJS customers, this procedure can also save time because only patients who most in need can be treated at home getting sick for patients with ailment only processed at the community Health centers. While the negative aspects of the BPJS program such as system complexity and community difficulties when applying for health services are one of the main reasons. Until now the implementation of the BPJS conducted by Community Health Centers and Clinics and Hospitals still encountered several problems. As the number of cases of hospital rejection of BPJS patients is still a problem in the implementation of the program.

According to explanation in background, this research conduct to get empirical evidence from Posyandu program and BPJS program in health toward baby born alive in Indonesia 2018.

- What is impact number of productive Posyandu program as a program to reduce maternal and child mortality in Indonesia to babies born alive (neonatal) in 2018, it is positive significant, positive insignificant, negative significant or negative insignificant?
- What is impact number of puskesmas accept BPJS program to baby born alive (neonatal) in 2018, it is positive significant, positive insignificant, negative significant or negative insignificant?

2. RESEARCH METHOD

This research will conduct using multiple regression Ordinary Least Square (OLS) Cross Section data from 34 province in Indonesia 2018. Data collected from central data Ministry of Health Republic of Indonesia. Steps for method analysis to get empirical evidence regarding impact of family health program and access for health care facility by BPJS insurance toward baby born alive in Indonesia bellow:

1. Collected data of number of programs Posyandu in 34 provinces in Indonesia 2018, data number of puskesmas accept BPJS health insurance in rural area from 32 provinces in Indonesia 2018, and last one data baby born alive in 34 provinces in Indonesia 2018
2. Normality test
3. Multicollinearity test
4. Regress the cross section data with Ordinary Least Square (OLS) Method

   $$\textbf{Neonatal} = \alpha + \beta 1.\ \textbf{posyandu} + \beta 2.\ \textbf{healtfacility} + Ui$$

   Neonatal = number of babies born alive
   Posyandu = number of productive posyandu programs
   Healthfacility = number of puskesmas accept BPJS health insurance in rural area
   Ui = Error term

5. Simultaneous Test (F test)
6. Partial Test (t Test)

3. RESULTS AND DISCUSSION

The family health program existing rural institution named posyandu. A posyandu was an intermittent village health clinic at which mothers and children obtained curative and preventive medical help plus family planning advise and supplies. Posyandu gave successful single purpose health project a novel decentralized way to link together at the the village level so as to provide an efficient integrated impact on the target population. Community volunteers selected the sites and organized the operation of each monthly posyandu

Village volunteers, mostly woman, performed much of the actual health work in these clinics. They weighed children, provide nutrition counseling, supplied medicine, and kept health record. Government health worker usually vaccinators, midwives, or nurse provided immunization and identified high risk mothers. Volunteer time and efforts were estimated to account for half of the project financial value, providing an important contribution to the program sustainability

Samuel (2004) explain regarding impact of posyandu program to reduce child mortality and neonatal mortality in report "US Development Aid-An Historic First, Achievements and failures in the Twentieth Century". In 1990 Indonesia child survival program was reducing infant and child mortality and increasing its own strength through the posyandu Innovation, in 2000 infant mortality was 41 per 1000 live birth, down from 90 in 1980 and mortality for children under 5 was 51 down from 125 in 1980. so it becomes interesting to examine whether the influence of the posyandu program remains same positive to reduce neonatal mortality and child mortality like several decades ago

Regarding health Insurance, Hidayat (2004) examined the effects of mandatory health insurance on equity in access to outpatient care in Indonesia. The study found that a mandatory insurance scheme for Civil Servants had strongly and positive impact on access to public outpatient care, while a mandatory insurance scheme for private employees had a positive impact on access to both public and private outpatient care. The greatest effects of mandatory insurance scheme for private employees were observed amongst poor beneficiaries. A substantial increase in access will be gained by expanding insurance to the whole population.

The Indonesia government try to provide BPJS Universal Health Insurance and different with previous insurance just only to civil servant and private employees, this insurance purpose to capture poor people in Indonesia. The implementation of BPJS Health insurance in the first year succeeded in increasing the likelihood of poor and near poor population for outpatient care in public health facilities than other facilities. Compared to previous health insurance program, the trend of public health facilities utilization is greater in BPJS program

Regarding the private health facilities, Djoni (2015) explain the member of BPJS health insurance has higher tendency of choosing government health facility than private health facility, but for uninsured population has higher tendency of choosing private health facilities among other facilities. In this research prefer to choosing Puskesmas as a government health facility than choosing private facility, because poor people with BPJS insurance have difficult to access private health facility. With easy access of puskesmas health facilty by the poor people with BPJS health insurance, is it have impact or not to maintain the babies born still alive from the poor family and rural area?

1. Data Information

In this research no have three variable, one dependent variable and two independent variables. For dependent variable number of babies born alive have minimum data 12140, this number from Province of North Kalimantan and maximum data 878472, this number from province of West Java. Regarding the Independent variable number of productive posyandu program minimum number 179 from province of Maluku, maximum number 36451 from province of East Java. Another independent variable is number of puskesmas accept BPJS insurance, minimum number is 52 from province of North Kalimantan and maximum number 1066 from province of West Java. We can conclude all the maximum number from the variable from province located in Java Island and all minimum number the variable from outside Java Island and located in East part of Indonesia. The government of Indonesia provided more health care facility in provinces located

in Java island due the big number of population life in this island, more than 57% or approximately 149 million people of Indonesia life in Java Island and government must

Table.1. Data Information

Variable	Obs	Mean	Std. Dev.	Min	Max
numberofba~e	34	141401.5	182569.9	12140	878472
numberprod~u	34	5110.294	9070.6	179	36451
numberofpu~s	34	292.1471	244.3537	52	1066

2. Multicollinearity test

Multicollinearity refers to a situation in which two or more independent variables in a multiple regression model are highly linearly related. It is therefore a type of disturbance in the data, and if present in the data the statistical inferences made about the data may not be reliable. Multicollinearity can cause by inclusion of a variable which is computed from other variables in the data set. Multicollinearity can also result from the repetition of the same kind of variable. Generally, occurs when the variables are highly correlated to each other

Table 2. Multicollinearity test

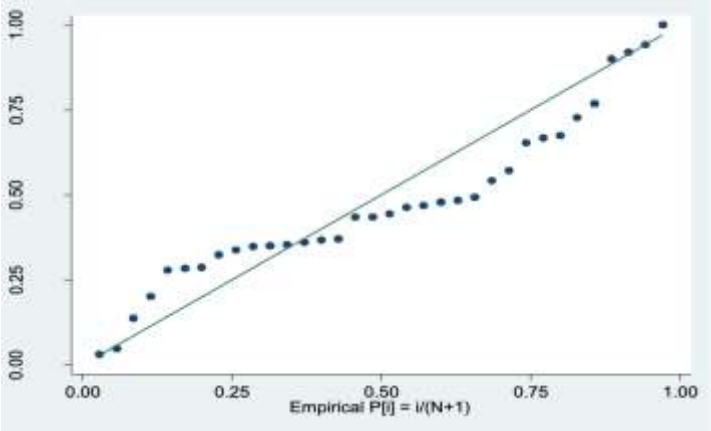
Variable	VIF	1/VIF
numberofpu~s	1.34	0.745579
numberprod~u	1.34	0.745579
Mean VIF	1.34	

Multicollinearities exist in multiple linear regression if value Mean VIF > 10, in this particular the regression model in this research no multicollinearity because the value of mean VIF 1.34 < 10

3. Normality test

Normality tests are used to determine if a data set is well-modeled by a normal distribution and to compute how likely it is for a random variable underlying the data set to be normally distributed. The distribution of residuals looks very regular in picture 4, and we can conclude from the estimation was normal distributed

Graph 1. Normality test of residual



4. Regression Result

Table 3. Normality test of residual

Source	SS	df	MS	Number of obs	=	34
				F(2, 31)	=	75.61
Model	9.1282e+11	2	4.5641e+11	Prob > F	=	0.0000
Residual	1.8713e+11	31	6.0365e+09	R-squared	=	0.8299
				Adj R-squared	=	0.8189
Total	1.0999e+12	33	3.3332e+10	Root MSE	=	77695

numberofbabiesbornalive	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
numberproductiveposyandu	17.36206	1.726836	10.05	0.000	13.84015	20.88396
numberofpuskesmasacceptedbpjsins	42.66397	40.93774	1.04	0.305	-40.82911	126.157
_cons	37940.9	18151.09	2.09	0.045	921.5134	74960.28

From the regression result we can make the regression model among the independent and dependent variable.

Number of babies born alive = 37940.9 + 17.36206 . number of productive posyandu + 42.66397 . number of puskesmas accept BPJS insurance + Ui

The number of productive posyandu program have positive impact to number of baby born alive with 17.36206 point, that's mean if productive posyandu program increase one point the number of baby born alive will increase 17.36206 point, and productive posyandu program provide food, medicine, vaccine or pregnant woman, mother and child can control reduce neonatal mortality because this program can maintain the baby born still alive more than neonatal period.

The variable number of puskesmas accept BPJS health insurance have positive impact to number of babies born alive with 42.66397. that's mean if the number of puskesmas accept BPJS health insurance increase one point impact of number of babies born alive increase 42.66397 point. The number of puskesmas accept BPJS health insurance can maintain the baby born still alive because many poor people and family in Indonesia using BPJS health insurance to get access to health care facility. If the puskesmas (health care facility in rural area) accept this insurance the poor family immediately can get treatment for pregnant woman, and maternity problem in emergency cases without consider the money to pay health service. But now day some puskesmas do not accept the BPJS health insurance and some case puskeasmas reject the patient using BPJS health

Insurance. In this point government must consider the policy how the poor people can get the access to the health care facility immediately in emergency case if the health care facility rejects their insurance

Value of R-Squared 0.8288 meaning the independent variable number productive posyandu program and number of puskesmas accept BPJS health insurance can explain the dependent variable number of baby born alive 82.88% and the remaining 17.12% explain with another variable outside the regression model.

5. Simultaneous test (F test)

Simultaneous test (F test) using for looking globally, whether all independent variables globally have impacted the dependent variable. With hypothesis:

- H0 : $\beta 0 = \beta 1 = \beta 2 = 0$
- H1 : $\beta 0 \neq \beta 1 \neq \beta 2 \neq 0$

Reject H0 if (Prob > F) < α, in this model F test using to get evidence number of productive posyandu and number of puskesmas accept BPJS health insurance globally, it is have impact or not to number of babies born alive. From the picture 5 regarding the result of regression model, the value of (Prob > F) = 0,0000 small than α value = 0.05. the decision is reject H0 and accept H1 that's means all independent variable can explain and have impact to dependent variable.

6. Partial Test (t Test)

Partial test (t test) used to conduct hypothesis test on the regression coefficients obtained in simple linear regression. A statistic based on the distribution is used to test the two-sided hypothesis that the true slope. Simply looking for get evidence impact one independent variable as partial to dependent variable, with hypothesis

- H0 : $\beta k = 0$
- H1 : $\beta k \neq 0$

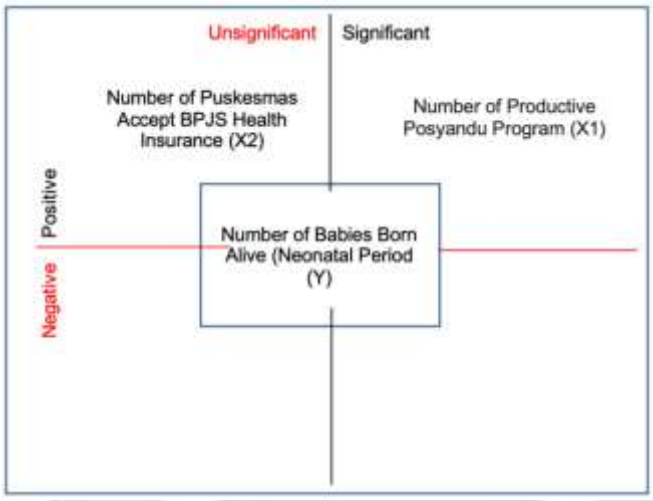
Table 4. Partial test

Independent Variable	**(P>|t|)**	**α**	**coefficient**
Number of productive posyandu program	0.000	0.05	17.36206
Number of Puskesmas accept BPJS health insurance	0.305	0.05	42.66397

Reject H0 if (P>|t|) < α, for independent variable number of productive posyandu the value of (P>|t|) = 0.000 small than α value = 0.05, the decision is reject H0 and accept H1 that mean number of productive posyandu have positive significant impact to babies born still alive and reduce neonatal mortality.

The variable number of puskesmas accept BPJS health insurance have value of (P>|t|) = 0.305, this value bigger than α value = 0.05, the decision is accept H0 and reject H1 that's mean number of puskesmas accept BPJS health insurance have positive but not significant to babies born still alive and reduce neonatal mortality.

Graph 2. Relation between dependent and independent variable



4. CONCLUSIONS

- Productive posyandu program several decades ago have positive impact ko maintain baby born alive with provide immunization, nutrition counseling, supplied medicine, and kept health record and identified high risk mothers. Reducing infant mortality to 41 per 1000 live birth, down from 90 in 1980 and mortality for children under five to 51 down from 125 in 1980
- Member of BPJS health insurance has higher tendency of choosing government health facility than private health facility, and immediately easy get access to puskesmas for emergency case like pregnant woman
- The number of productive posyandu program have positive impact to number of baby born alive with 17.36206 point, that's mean if productive posyandu program increase one point the number of baby born alive will increase 17.36206 point, and productive posyandu program provide food, medicine, vaccine or pregnant woman, mother and child can control reduce neonatal mortality because this program can maintain the baby born still alive more than neonatal period.
- Number of puskesmas accept BPJS health insurance have positive impact to number of baby born alive with 42.66397. that's mean if the number of puskesmas accept BPJS health insurance increase one point impact of number of baby born alive increase 42.66397 point. The number of puskesmas accept BPJS health insurance can maintain the baby born still alive because many poor people and family in Indonesia using BPJS health insurance to get access to health care facility. If the puskesmas (health care facility in rural area) accept this insurance the poor family immediately can get treatment for pregnant woman, and maternity problem in emergency cases without consider the money to pay health service. But now day some puskesmas do not accept the BPJS health insurance and some case puskeasmas reject the patient using BPJS health Insurance. In this point government must consider the policy how the poor people can get the access to the health care facility immediately in emergency case if the health care facility reject their insurance.

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