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## Dynamics of Contraception Use in Indonesia Based on Service Sources at Health Facilities

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## **Abstract**

The current use of contraception is dominated by short term methods with a one month drop out rate for contraception pills and injections that contribute 30.6 percent and 46.3 percent, respectively, for women aged 15-49. The high use of short term contraceptives can result in gaps for acceptors to stop using contraception. The analysis aims to investigate switching behaviour among contraceptive users by different source of health facilities both for modern and traditional methods and the analysis also intends to identify sociodemographic factors characterizing switchers. This analysis resulted in four models of sociodemographic factors and their relationship with the possibility of transferring to another contraceptive method which were analyzed using logistic regression in each unit of analysis based on the source of the health facility. Short term contraception is still the favorite, namely injections (50.5 percent) and pills (19.1 percent) are still the main choice for couple of childbearing age. Around 61.2 percent of acceptors who use injectable contraception survive compared to other contraception use in private and community based health facilities. The pattern of family planning use in health facilities in the government sector is at least able to intervene in acceptors in the use of long term contraception which effectively has a lower dropout rate than the dropout rate for short term contraceptives.

#### Introduction

Indonesia as one of the countries that agreed on the results of the 1994 World Population and Development Conference (ICPD) in Cairo also implemented population management and development policies that focused on reproductive rights and individual reproductive health. (UNFPA, 2004). This is indicated by the role of the government through the National Population and Family Planning Agency (BKKBN) which always provides guidance by conducting outreach to the community on the importance of maintaining reproductive health through planning the number and interval of pregnancies, preventing the risk of maternal and child morbidity and mortality, preventing pregnancy. unwanted and choose a modern contraception method that suits their needs (Kemenkes, BKKBN, 2018)

The use of modern contraception in Indonesia shows a consistent rate in the last 10 years, even tends to decrease until 2018 which is 57 percent, this is evidenced by the results of the Indonesian Nursing Diagnosis Standards 2002-2003, 2007, 2012, 2017; SKAP 2016, 2017, 2018. Trends in the use of modern contraceptionhave always been dominated by the use of short-term contraception, such as the pill, injections and condoms (see Figure 1). The use of modern contraception is relatively in line with the trend in the average number of children born to every woman aged 15-49 years, when the achievement of contraception use does not show a significant increase, the Total Fertilty Rate (TFR) tends to be relatively consistent.

Based on the survey results, modern contraception methods that contributed the most were injections at 30.4 percent and pills by 11.5 percent So that, the contribution of 41.9 percent is the contribution of short-term contraception use. The survey results are in accordance with a study conducted by Pasundani & Bantas (2020), that the most widely used contraception method by women of childbearing age in Indonesia in 2017 was the short-term contraception method, which

was 78 percent, while the users of the long-term contraception method were 22 percent. The figure for the use of modern contraception is mostly served by the private sector by 24.5 percent, then the government sector at 72.5 percent and the remaining 3 percent of family planning services provided by the community (BKKBN, 2018). The high use of short-term contraception can result in gaps for acceptors to stop using contraception.

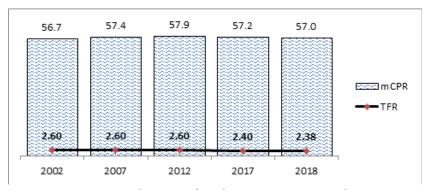


Figure 1. Trends in Use of Modern Contraception and TFR Source: 2003, Central Bureau of Statistics etc., 2008, Central Bureau of Statistics etc., 2013, BKKBN etc.,

2018, BKKBN 2019

In Table 1, the results of the 2018 SKAP show that the rate of discontinuation of the use of short-term and traditional contraception is very vulnerable to the continued use of contraception. The results of the 2017 Indonesian Nursing Diagnosis Standards survey and 2018 SKAP strengthen the finding that the

dropout rate for all contraception methods is 29 percent and 25 percent, respectively. The highest contribution to the drop-out rate came from 1-month injection contraception (46 percent), condoms (55 percent) and pills (31 percent).

**Table 1.** Stop Use Rate for the First 12 Months

| Method                     | Number of Episodes<br>of Use (Month) | Subjects | Median Duration of Use (Month) | 12 Months Discontinuation Rate (%) |
|----------------------------|--------------------------------------|----------|--------------------------------|------------------------------------|
| Implant                    | 3,377                                | 91       | 42                             | 17.95                              |
| IUD                        | 2,828                                | 67       | 47                             | 7.41                               |
| 3 month injection          | 40,988                               | 1,004    | 52                             | 17.19                              |
| 1 month injection          | 4,749                                | 205      | 17                             | 46.31                              |
| Pills                      | 17,071                               | 519      | 34                             | 30.66                              |
| Male condom                | 1,288                                | 72       | 12                             | 54.72                              |
| Female condom              | 3                                    | 2        | 2                              | 100                                |
| MAL                        | 10                                   | 1        | 7                              | 100                                |
| Abstinence periodically    | 2,184                                | 52       | 60                             | 18.15                              |
| Intercourse is interrupted | 2,225                                | 66       | 35                             | 30.05                              |
| Another traditional        | 315                                  | 6        | 61                             | 8.78                               |
| All methods                | 75,038                               | 2,085    | 46                             | 24.95                              |
| Modern method              | 70315                                | 1962     | 45                             | 25.01                              |

The fact that the survey results are needed as a strategy for future family planning programs by knowing the dynamics of contraceptive use for couples of childbearing age in using contraception based on the source of service and the main factors that influence the use of contraception. A lot of research has been done on the dynamics of contraception use ((Ekoriano & Novita, 2018; Kiswanto, 2015; Sumini & Abritaningrum, 2015; Wai et al., 2020), the results of these studies show the dynamics, flow, changes, and trends in contraceptionuse. Then the study conducted by Mog and Mondal (2018) and Gebreselassie et al. (2017), explained the trends and dynamics of the use of contraception in modern and traditional methods. However, research related to the dynamics of contraception use based on service sources from health facilities, both modern and traditional contraceptive methods, is still limited. Thus, the purpose of this study was to determine the use of contraception among contraception use from health facilities, both modern and traditional contraceptiion methods. Health facilities include government, private and community based health facilities. This analysis also aims to identify the sociodemographic factors that cause between contraception use.

## Method

This analysis uses data from the Performance Survey and Government Accountability (SKAP) in 2018 which is conducted annually by the National Population and Family Planning Agency (BKKBN), the survey targets are the population of households, women of childbearing age aged 15-49 years, families and adolescents aged 15-24 years who have not marry. The approach used in this survey is a cluster approach as an enumeration area, while the sample design is stratified multistage random sampling..

Based on the sample calculation conducted by the Central Statistics Agency, the required number of clusters is 1,935 villages spread over 34 provinces and 514 regencies/cities. This village is a cluster which is an enumeration area and has been allocated to each province based on urban and rural strata by considering the wealth index. Each cluster

was selected by systematic random sampling of 35 households, so that the number of households that were successfully interviewed was 66,616 households.

The sampling technique in this survey was carried out through several stages. First, selecting a number of villages using Probability Proportionate to Size (PPS) sampling is with the size of the number of households on the list of all villages. The selection of village samples was carried out independently in urban and rural areas in a district/city. Second, the selection of one cluster from each selected village by PPS sampling with the size of the number of households in the selected cluster. Third, selecting 35 households by systematic random sampling based on the results of household listings conducted by door-to-door interviewers in the selected cluster (BKKBN, 2018).

The target respondents are women of childbearing age (WUS) 15-49 years old, head of household/wife/household member, family, unmarried male and female adolescents aged 15-24 years. All WUS aged 15-49 years in 35 selected households in each selected cluster became the sample of WUS respondents. Data collectors use a smart phone as a data collection tool. Four types of questionnaires are available in the application and all of the questionnaires are interrelated, namely household questionnaires, family questionnaires, WUS questionnaires and questionnaires for unmarried adolescents aged 15-24 years.

The unit of analysis used was obtained from the module for women of childbearing age, which amounted to 28,399 couples of childbearing age between the ages of (15-49) years who are currently using contraception. This study explores the dynamics of the use of contraception methods based on the source of health facilities, including 6,330 married women using government health facilities, 19,633 married women using private health facilities, 938 married women choosing communitybased health facilities and the rest are other sources. Contraception transfer was measured from the use of a contraception method for the first time or not using any method to current contraception use. This analysis resulted in four models of socio-demographic factors and their

relationship with the possibility of transferring to another contraception method which were analyzed using logistic regression in each unit of analysis based on three types of health facility sources (government, private and community-based health facilities).

### **Results and Discussion**

The results show that the selection of short-term contraception is still the main choice of acceptors, the dynamics of the use of contraception nationally, both served by the government, private and other sectors (community-based) so that there is still a possibility for acceptors to discontinue using contraception. Table 2 shows that short-term contraception is still a trend, namely injections

(50.5 percent) and pills (19.1 percent) are still the main choice for couples of childbearing age. The highest contraceptive switching came from couples of childbearing age who used intravaginal contraception to IUD contraception (83 percent), emergency contraception switched to injections (74.3 percent) and those who did not use contraception transferred to male condoms (67.3 percent). Meanwhile, in long-term contraception, the majority of contraception uses were implants (8.4 percent), IUD (7.7 percent) and MOW (5.5 percent). This means that massive and sustainable efforts are needed to the community so that the use of long-term contraceptives is increasingly in demand.

**Table 2.** Percentage of Dynamics of Contraception Use (National)

|                               |                              |     |     |         | Contr | acepti | on m                    | ethod  | being         | usec        | l   |           |             | Total |
|-------------------------------|------------------------------|-----|-----|---------|-------|--------|-------------------------|--------|---------------|-------------|-----|-----------|-------------|-------|
|                               | Family<br>Planning<br>Method | MOW | MOP | Implant | IUD   | Pills  | Emergency Contraception | Condom | Female condom | Intravagina | MAL | Injection | Traditional |       |
|                               | Female sterile (MOW)         | 100 |     |         |       |        |                         |        |               |             |     |           |             | 100   |
|                               | Male sterile<br>(MOP)        |     | 100 |         |       |        |                         |        |               |             |     |           |             | 100   |
|                               | Implant                      | 6,8 | 0,0 | 45      | 4,7   | 9,5    |                         | 2,1    |               |             |     | 29,1      | 2,8         | 100   |
|                               | IUD                          | 9,2 | 0,0 | 4,3     | 54,5  | 7,3    |                         | 2,8    |               |             | 0,1 | 16,4      | 5,4         | 100   |
|                               | Pills                        | 5,5 | 0,4 | 7,6     | 5,0   | 39,4   |                         | 1,9    | 0             |             | 0,1 | 37,2      | 2,9         | 100   |
| Previously used contraception | Emergency<br>Contraception   |     |     |         |       |        |                         | 25,7   |               |             |     | 74,3      |             | 100   |
| methods                       | Female condom                | 20  |     |         | 7,7   |        |                         |        | 56,6          |             |     | 12,7      | 3,0         | 100   |
|                               | Intravagina                  |     |     |         | 83,0  |        |                         |        |               |             |     |           | 17,0        | 100   |
|                               | MAL                          | 8,4 |     | 0,6     | 3,3   | 5,6    |                         | 5,7    |               |             | 6,8 | 41,8      | 27,9        | 100   |
|                               | Not using contraception      | 6,1 |     | 1,9     | 9,0   | 0,3    |                         | 67,3   | 0,3           |             | 0,1 | 2,1       | 12,9        | 100   |
|                               | Injection                    | 4,4 | 0,2 | 7,1     | 5,3   | 16,0   | 0,1                     | 1,9    | 0,0           | 0,0         | 0,2 | 61,0      | 3,9         | 100   |
|                               | Traditional                  | 6,5 | 0,2 | 1,7     | 3,9   | 2,1    |                         | 4,4    |               |             | 0,0 | 8,9       | 72,2        | 100   |
|                               | Total                        | 5,5 | 0,2 | 8,4     | 7,7   | 19,1   | 0,0                     | 2,8    | 0,0           | 0,0         | 0,2 | 50,5      | 5,6         | 100   |

Acceptors who received family planning services through government health facilities (Table 3) used long-term contraception methods, namely IUD, Implant and MOW, while women who initially used traditional methods mostly decided to switch to using the MOW contraception method (33.8 percent), implants (19.8 percent) and Pills (16.3 percent). This proves that although the majority of family planning services are still dominated by the private sector, family planning services provided

by the government sector have attempted to improve long-term family planning services, especially implant contraceptives (24 percent) compared to other sectors of services. The pattern of family planning use in health facilities in the government sector is at least able to intervene in acceptors in the long-term use of family planning which effectively has a lower dropout rate than the short-term contraception dropout rate.

**Table 3.** Percentage Dynamics of contraception use (Public and private health facilities)

| Government                       | Family                     |      |     |         |       | Contra  | ception me  | thod being use | d   | ,         |             | T-4-1 |
|----------------------------------|----------------------------|------|-----|---------|-------|---------|-------------|----------------|-----|-----------|-------------|-------|
| Health<br>Facilities             | Planning<br>Method         | MOW  | MOP | Implant | IUD   | Pills   | Condom      | Intravagina    | MAL | Injection | Traditional | Total |
|                                  | Female sterile<br>(MOW)    | 100  |     |         |       |         |             |                |     |           |             | 100   |
|                                  | Male sterile<br>(MOP)      |      | 100 |         |       |         |             |                |     |           |             | 100   |
|                                  | Implant                    | 11,8 | 0,0 | 65,2    | 4,6   | 4,5     | 0,1         |                |     | 13,7      |             | 100   |
|                                  | IUD                        | 12,3 | 0,1 | 9,1     | 65,1  | 3,3     | 0,8         |                |     | 8,3       | 1,0         | 100   |
| Previously used                  | Pil                        | 12,1 | 1,6 | 22,3    | 9,8   | 28,9    | 0,5         |                |     | 24,5      | 0,2         | 100   |
| contraception<br>methods         | Female<br>Condom           | 66,2 |     |         | 25,5  |         |             |                |     | 8,3       |             | 100   |
|                                  | MAL                        | 27,0 |     | 4,1     | 1,8   | 12,0    | 11,6        |                | 4,6 | 35,3      | 3,7         | 100   |
|                                  | Not using contraception    | 21,4 |     | 1,6     | 25,7  |         | 39,4        |                |     | 2,1       | 9,8         | 100   |
|                                  | Injection                  | 11,1 | 1,0 | 22,4    | 11,3  | 11,0    | 0,3         | 0,0            | 0,2 | 42,4      | 0,4         | 100   |
|                                  | Traditional                | 33,8 |     | 19,8    | 7,7   | 16,3    | 3,3         |                |     | 5,0       | 14,2        | 100   |
|                                  | Total                      | 13,0 | 0,9 | 24,1    | 14,2  | 13,2    | 0,6         | 0,0            | 0,1 | 33,2      | 0,5         | 100   |
| D H M                            | Family                     |      |     |         | (     | Contrac | ception met | hods being use | ed  |           |             |       |
| Private Health<br>Facilities     | Planning<br>Method         | MOW  | MOP | Implant | IUD   | Pills   | Condom      | Female condom  | MAL | Injection | Traditional | Total |
|                                  | Female sterile (MOW)       | 100  |     |         |       |         |             |                |     |           |             | 100   |
|                                  | Implant                    | 3,9  |     | 32,5    | 4,9   | 12,6    | 3,6         |                |     | 42,3      | 0,3         | 100   |
|                                  | IUD                        | 8,1  |     | 2,2     | 53,7  | 9,7     | 3,1         |                | 0,1 | 21,9      | 1,3         | 100   |
|                                  | Pills                      | 3,9  |     | 3,5     | 4,0   | 40,4    | 2,0         | 0,0            | 0,1 | 45,5      | 0,6         | 100   |
| Previously                       | Emergency<br>Contraception |      |     |         |       |         | 25,7        |                |     | 74,3      |             | 100   |
| used<br>contraception<br>methods | female<br>condom           |      |     |         |       |         |             | 84,8           |     | 15,2      |             | 100   |
| methous                          | Itravagina                 |      |     |         | 100,0 |         |             |                |     |           |             | 100   |
|                                  | MAL                        | 8,4  |     |         | 5,5   | 7,1     | 7,3         |                | 6,0 | 65,7      |             | 100   |
|                                  | Not using contraception    | 5,4  |     | 2,0     | 9,1   | 0,4     | 78,5        | 0,5            |     | 2,9       | 1,2         | 100   |
|                                  | Injection                  | 2,8  | 0,1 | 3,0     | 4,0   | 16,8    | 2,0         | 0,0            | 0,1 | 70,6      | 0,7         | 100   |
|                                  | Tradisional                | 15,5 | 0,6 | 1,3     | 11,4  | 3,8     | 10,5        |                |     | 30,2      | 26,7        | 100   |
|                                  | Total                      | 3,7  | 0,0 | 3,9     | 6,4   | 20,4    | 3,0         | 0,0            | 0,1 | 61,4      | 1,0         | 100   |

The dynamics of contraceptive use based on sources of private health facilities and on a community basis shows a similar pattern, especially between private and community-based health facilities (Table 3 & 4). Most of the acceptors who transfer to other contraception tend to feel comfortable when using the injection method. The majority of private health facilities and community-based facilities provide short-term contraception services.

This proves that private health facilities and community bases tend to be more financially profitable because services can be provided in a relatively short period of time with consistent continuity. The interesting thing about family planning services at private and community-based health facilities is that the highest number of acceptors using injection contraception persisted in using the same contraception (61.2 percent) compared to other contraception use.

**Table 4.** Percentage Dynamics of Contraception Use (Community-based Health Facilities)

|   | Family                             |         | Con  | tracept | ion Method | Being Used | i           |       |
|---|------------------------------------|---------|------|---------|------------|------------|-------------|-------|
|   | Planning<br>Method                 | Implant | IUD  | Pills   | Condom     | Injection  | Traditional | Total |
|   | Implant                            | 66,5    |      | 19,2    |            | 14,3       |             | 100   |
|   | IUD/spiral                         | 9,1     | 43,6 | 2,3     | 3,7        | 41,3       |             | 100   |
|   | Pills                              | 9,7     | 1,0  | 43,4    | 0,4        | 44,6       | 0,9         | 100   |
| Previously Used<br>Contraception<br>Methods | Lactational<br>amenorrhea<br>(MAL) | 38,0    |      |         |            | 62,0       |             | 100   |
| Wiethous                                    | No Family<br>Planning              |         | 63,3 |         | 36,7       |            |             | 100   |
|   | Injection                          | 11,0    | 3,6  | 24,1    | 0,0        | 61,2       | 0,1         | 100   |
|   | Traditional                        |         |      | 57,7    |            | 6,4        | 35,8        | 100   |
|   | Total                              | 13,2    | 4,4  | 27,3    | 0,3        | 54,4       | 0,5         | 100   |

Table 5. Logistics Regression Model

|  |        | Mo      | Model 1 (National) | nal)         |                       | Z     | lodel 2 (G | Model 2 (Government_FP Services) | FP Service              | 8           |          | Model 3 ( | Model 3 (Private_FP Services) | Services)             |             |        | Mod     | Model 4 (community<br>based_FP Services) | unity<br>ices)        |               |
|--|--------|---------|--------------------|--------------|-----------------------|-------|------------|----------------------------------|-------------------------|-------------|----------|-----------|-------------------------------|-----------------------|-------------|--------|---------|--|-----------------------|---------------|
| ,  | _      | ij      | Fvn(R)             | 95% (<br>EXI | 95% C.L.for<br>EXP(B) | 2     | ij         | Fyn(B)                           | 95.0% C.I.for<br>EXP(B) | C.I.for (B) | <u> </u> | 5         | Fvn(R)                        | 95% C.I.for<br>EXP(B) | L.for<br>B) | 2      | ij      | Fvn(B)                                   | 95% C.I.for<br>EXP(B) | .I.for<br>(B) |
|  | •      | in<br>S | (a)dva             | Lower        | Upper                 | a     | in<br>5    | (a)dva                           | Lower                   | Upper       | 2        | 10<br>10  | (a)dva                        | Lower                 | Upper       | •      | in<br>5 | (a)dva                                   | Lower                 | Upper         |
| Age group [Ref 15-19]  |        | 0,000   |                    |              |                       |       | 0,000      |                                  |                         |             |          | 0,000     |                               |                       |             |        | 0,021   |  |                       |               |
| Age group [20-24]  | 0,652  | 0,000   | 1,919              | 1,420        | 2,593                 | 0,963 | 900,0      | 2,619                            | 1,325                   | 5,180       | 0,791    | 0,000     | 2,205                         | 1,492                 | 3,258       | 0,816  | 0,201   | 2,262                                    | 0,648                 | 7,897         |
| Age group [25-29]  | 0,673  | 0,000   | 1,960              | 1,461        | 2,630                 | 1,227 | 0,000      | 3,412                            | 1,748                   | 6,662       | 0,701    | 0,000     | 2,016                         | 1,374                 | 2,959       | 0,282  | 0,660   | 1,326                                    | 0,378                 | 4,650         |
| Age group [30-34]  | 1,079  | 0,000   | 2,941              | 2,195        | 3,941                 | 1,859 | 0,000      | 6,420                            | 3,300                   | 12,489      | 1,076    | 0,000     | 2,932                         | 2,002                 | 4,296       | 0,912  | 0,143   | 2,489                                    | 0,734                 | 8,441         |
| Age group [35-39]  | 1,176  | 0,000   | 3,242              | 2,419        | 4,346                 | 1,831 | 0,000      | 6,241                            | 3,208                   | 12,142      | 1,251    | 0,000     | 3,495                         | 2,384                 | 5,123       | 1,052  | 0,093   | 2,863                                    | 0,840                 | 9,755         |
| Age group [40-44]  | 1,491  | 0,000   | 4,441              | 3,307        | 5,963                 | 1,852 | 0,000      | 6,372                            | 3,262                   | 12,449      | 1,607    | 0,000     | 4,987                         | 3,397                 | 7,321       | 0,859  | 0,171   | 2,362                                    | 0,689                 | 8,091         |
| Age group [45-49]  | 1,740  | 0,000   | 5,699              | 4,230        | 7,679                 | 2,220 | 0,000      | 9,204                            | 4,694                   | 18,050      | 1,751    | 0,000     | 5,760                         | 3,903                 | 8,500       | 1,436  | 0,025   | 4,203                                    | 1,195                 | 14,780        |
| Ideal number of children   Ref>=3 <br> Ref>=3 <br> Ideal number of children [0-2]<br> ALH  Ref 0-2 | 0,107  | 0,000   | 1,113              | 1,049        | 1,180                 | 0,328 | 0,000      | 1,388                            | 1,226                   | 1,573       | 0,023    | 0,538     | 1,023                         | 0,952                 | 1,099       | 0,685  | 0,000   | 1,984                                    | 1,410                 | 2,791         |
| ALH [>=3]  | 0,403  | 0,000   | 1,497              | 1,404        | 1,597                 | 0,422 | 0,000      | 1,526                            | 1,332                   | 1,747       | 0,309    | 0,000     | 1,362                         | 1,258                 | 1,475       | 0,149  | 0,423   | 1,161                                    | 0,806                 | 1,673         |
| Level of education<br> Ref_under   |        | 0,000   |                    |              |                       |       |            |                                  |                         |             |          | 0,000     |                               |                       |             |        | 0,253   |  |                       |               |
| Level of education [middle]  | 0,160  | 0,000   | 1,173              | 1,095        | 1,258                 | 0,121 | 0,102      | 1,129                            | 926,0                   | 1,306       | 0,131    | 0,003     | 1,140                         | 1,047                 | 1,242       | 0,184  | 0,343   | 0,832                                    | 0,568                 | 1,217         |
| Level of education [higher]  | 0,254  | 0,000   | 1,289              | 1,198        | 1,387                 | 0,007 | 0,925      | 0,993                            | 0,851                   | 1,158       | 0,280    | 0,000     | 1,324                         | 1,210                 | 1,448       | 0,195  | 0,393   | 1,216                                    | 0,777                 | 1,903         |
| Village [Ref]  |        |         |                    |              |                       |       |            |                                  |                         |             |          |           |                               |                       |             |        |         |  |                       |               |
| City   | 960'0  | 0,001   | 1,101              | 1,040        | 1,166                 | 0,091 | 0,157      | 1,095                            | 996'0                   | 1,241       | 0,079    | 0,025     | 1,082                         | 1,010                 | 1,160       | 0,410  | 0,031   | 1,507                                    | 1,038                 | 2,186         |
| weitare ievei<br>[Ref_lowest]  |        | 0,000   |                    |              |                       |       | 0,000      |                                  |                         |             |          | 0,000     |                               |                       |             |        | 0,001   |  |                       |               |
| Welfare level _middle low  | 0,136  | 0,002   | 1,145              | 1,050        | 1,249                 | 0,182 | 0,026      | 1,200                            | 1,022                   | 1,410       | 0,095    | 660,0     | 1,100                         | 0,982                 | 1,231       | -0,299 | 0,141   | 0,741                                    | 0,498                 | 1,105         |
| Welfare level _middle  | 0,092  | 0,038   | 1,097              | 1,005        | 1,197                 | 0,127 | 0,144      | 1,135                            | 0,958                   | 1,345       | 0,069    | 0,230     | 1,071                         | 0,958                 | 1,198       | 0,033  | 0,883   | 1,034                                    | 0,664                 | 1,611         |
| Welfare level _middle high   | 0,142  | 0,002   | 1,153              | 1,054        | 1,261                 | 0,211 | 0,026      | 1,235                            | 1,026                   | 1,487       | 0,206    | 0,000     | 1,229                         | 1,098                 | 1,375       | 0,228  | 0,351   | 1,257                                    | 0,778                 | 2,031         |
| Welfare level higher  Insurance [Ref_No]   | 0,307  | 0,000   | 1,359              | 1,238        | 1,493                 | 0,792 | 0,000      | 2,209                            | 1,804                   | 2,704       | 0,259    | 0,000     | 1,296                         | 1,153                 | 1,458       | 1,007  | 0,001   | 2,737                                    | 1,504                 | 4,982         |
| Insurance [Yes]  | 0,090  | 0,001   | 1,095              | 1,038        | 1,154                 | 0,062 | 0,289      | 0,940                            | 0,838                   | 1,054       | 0,080    | 0,016     | 1,084                         | 1,015                 | 1,157       | 0,245  | 0,114   | 1,277                                    | 0,943                 | 1,730         |
| $UKP\ /Ref_>=20/$  |        |         |                    |              |                       |       |            |                                  |                         |             |          |           |                               |                       |             |        |         |  |                       |               |
| UKP [<20]  | 0,224  | 0,000   | 1,251              | 1,179        | 1,329                 | 0,218 | 0,001      | 1,244                            | 1,097                   | 1,410       | 0,245    | 0,000     | 1,277                         | 1,187                 | 1,375       | 0,075  | 0,656   | 1,078                                    | 0,774                 | 1,502         |
| Constant   | -2,069 | 0,000   | 0,126              |              |                       | 2,205 | 0,000      | 0,110                            |                         |             | 2,273    | 0,000     | 0,103                         |                       |             | 1,996  | 0,002   | 0,136                                    |                       |               |
| Course CV AD 2018  | _      |         |                    |              |                       |       |            |                                  |                         |             |          |           |                               |                       |             |        |         |  |                       |               |

Source: SKAP, 2018 Apiha: 0,05; Exp (B); CI = confidence interval Sig = significant

The logistic regression model (Table 5) generally shows that women with older age, women with higher parity, living in urban areas, higher education levels, higher welfare levels and women who marry at a younger age tend to have a higher chance of transferring contraception method compared to continuing to use contraception. However, what is different can be seen from the results of the analysis is that family planning services in the government sector that lower secondary education actually have a tendency to change methods to other contraception compared to acceptors with higher education.. This is contrary to the results of the analysis of family planning services provided to the private sector, communitybased and nationally. Based on these findings, it is known that family planning services in the government sector are more in demand by the lower secondary education level, while higher education is more likely to be served in the private sector.

Regarding insurance ownership and sources of family planning services in the private, community-based and national sectors, women tend to change contraception compared to women who do not have insurance, while women who have insurance and receive family planning services in the government sector show the opposite result. This result is of course also influenced by the implementation of the National Health Insurance (JKN) program with all citizens guaranteed their health in 2019, so that Family Planning services which are part of health services of course also affect their participation and choice of contraception in health facilities that have not been integrated so far. (Ardiana et al., 2019).

So that of all the variables used in the analysis, the variable that has the greatest influence on women to transfer contraception nationally, the government sector, the private sector and community-based is the age group variable. The number of children born (national and private), the level of welfare (government and community-based communities) are the next variables that have sufficient influence on the community to change their contraception method.

Table 2 shows that the dynamics of the use of injection contraception and the pill are

still the main choices for Indonesian women (50.5 percent and 19.1 percent), this result is in accordance with the analysis conducted by Ekoriano, M and Novita, F (2018), who stated that short-term contraception such as injections and pills were still the most popular contraceptives (43.4 percent and 30.5 percent) and most of the shift to injection contraception also came from short-term contraception, namely emergency contraception and the Pill, respectively 74, 3 percent and 34.2 percent. Other studies by Rahardja (2011) and Bekele et al., (2014), stated that about 80 percent more acceptors who use implants for Family Planning and 55 percent of women who use IUD contraception decide to transfer to shortterm contraception methods and the majority of women in southeastern Ethiopia also use short-term contraception (injections and pills). They also explained that this was due to women's limited awareness and choice of short-term contraception, especially injection contraception. Meanwhile, for women who did not initially use contraception, the majority switched to using condoms instead of other contraception methods. According to Khraif et al., (2017), those who use contraception methods are very closely related to demographic variables (age, number of marriages, husband's age at first marriage, status of first marriage) and social variables (place of residence, type of family, type of work, level of welfare) as well as rural areas, education level Low also determines the use of contraception. Interventions and promotion of the use of family planning can be done in experienced women to terminate pregnancy (Yussuf et al., 2020).

Based on service sources, survey results show that the majority of family planning services are provided by the private sector compared to the government sector. According to Keesara et al., (2015), This is because women in Kenya believe that private family planning services offer several advantages including convenience (no long waits, polite doctors/midwives), efficiency and privacy. However, other studies are found to be contradictory in Ugandan women with services carried out by the government sector, but the majority use short-term contraception, namely injections (Alege et al., 2016). Although in general the

dynamics of short-term contraception use are still higher than the long-term, the dynamics of contraception use tend to show better longterm contraception use in the government sector compared to family planning services in the private sector and on the basis of public services. The general pattern of contraceptive use (National, private sector, government and community-based) shows that the majority of contraception use occurs in the short term, so there is a need for fostering a better understanding of contraception through quality family planning services, one of which is through high-quality counseling to increase perceptions so that rational, effective and efficient use of contraception, especially for women who stop using contraception methods (Amran et al., 2019). Follow-up from providers provides opportunities for the poor to provide more choices of contraceptive methods and pay attention to their satisfaction (Hameed et al., 2015). The quality of family planning services in Indonesia in the private sector is still considered better than the government sector and for providers the quality of service is still below the standard, it is necessary to formally emphasize the behavior of health service providers as desired and create a postservice scheme. (Ekoriano & Ardiana, 2020). So it can be concluded that perception among acceptors plays an important role in the pattern or dynamics of contraception use (Amran et al., 2019).

The odds ratio in Table 5 explains how women in the older age group, higher parity, living in urban areas, higher education level, women with higher incomes and women who marry at a younger age tend to have a higher chance of transferring to other contraception methods. However, what is different is that it can be seen from the results of the analysis that family planning services in the government sector show that lower secondary education actually has a tendency to change methods to other contraceptions compared to acceptors with higher education. Several sociodemographic variables that contribute to couples of childbearing age to switch to other contraception in this analysis confirm and complement the previous analysis (UNDIKMA, 2020). The results of this study are also the same as the research conducted by Barden-O'Fallon et al., (2018) who explained that contraception transfer method occurred in the older, educated age group, the number of children (the highest at parity 1-2 children), the middle level of welfare, and the source of services. A study conducted in the city of Jijiga, Eastern Ethiopia, found several other things, namely that woman who had used contraception transfer to other contraception methods due to low quality of counseling, short-term use of contraception, and having many children. The reason they change contraception is due to side effects, they want more effective contraception and the method used at that time is not comfortable (Shiferaw & Mekonen, 2018).

The results of another study related to the analysis of the determinants of contraceptive transfer among women in Sri Lanka, in rural areas found that age and education level were significant for changing contraception methods, while welfare level had no significant effect. (Hamill et al., 1990). More specific studies on adolescent women aged (15-24) in Nepal inform the method of Family Planning by injection which is the highest method of family planning compared to other contraceptions and they will use the contraception method at least after having one child. The reasons for side effects and the absence of husband (long distance) are things that influence the dynamics of contraception use (Kafle, 2018). Other researches by Bekele et al., (2014) explained that the highest contraception transfer occurred from Pills to Injections (49.1 percent) and followed later from Pills to Implants (26.7 percent) with the main reason being the inconvenience of the previous method (52.6 percent). Some differences were found in a longitudinal study conducted in Malawi, transfer methods of contraception was only four percent more likely for younger women than older women. Marital status, education level and number of children are not related in transfering contraception methods (Dasgupta et al., 2015).

## Conclusion

Most of the couples of childbearing age (PUS) who decide to contraception transfer tend to choose to use the injectable

contraception method compared to other contraceptive methods, but on the other hand, the use of this contraception is faced with a high risk of discontinuation. Contraception use is more likely to be influenced by less effective and efficient counseling to receptors regarding contraceptive use, limited supply of contraception methods, and some programs that are not well targeted. Policy makers need to be aware of this phenomenon, where a third of women who previously used long-term contraception methods have the possibility to change their contraceptive method to an injectable contraception method, especially in health facilities in the private sector and community-based health facilities. The role of the government in fostering the community in choosing effective and efficient contraception in the future is very important in providing reproductive rights and improving the health of Indonesian families. Further analysis is needed to further explore the quality of family planning services at service delivery points to identify and address the factors that influence women's decisions regarding their contraception choice.

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