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## Analysis of the Use of Contraceptive Devices and Pills for Couples of Fertile Age before and During the Covid-19 Pandemic in Papua Province

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### Abstract

**Background:** Contraceptive services are the provision or installation of contraception or other contraception-related measures to candidates and participants in family planning services carried out in family planning service facilities in order to help married couples give birth at the ideal age, have a number of children, and set the ideal birth spacing of children. The Covid-19 pandemic has created challenges in implementing the Family Planning (KB) Program, particularly limited access to family planning services. **Objectives:** The goal of this study is to describe the use of contraceptive devices and pills, as well as the proportion of acceptors by type, method, and regency, in Papua Province before and during the Covid-19 pandemic. **Methods:** This is a concurrent embedded (unbalanced mix) research that combines quantitative and qualitative research methods with the research population, which is Couples of Fertile Age in Papua Province. The study's sample consists of fertile couples who use family planning before and during the pandemic. The proportion table was used to analyze quantitative data, and the triangulation method was used to analyze qualitative data. **Result:** According to the findings, 34% of contraceptive devices and pills (Alokon) were used prior to the pandemic, and 39% were used during the pandemic.

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The proportion of contraceptive devices and pills used before the pandemic was 29 percent for Long Term Contraception Method (MKJP) and 71 percent for non-MKJP. During the pandemic, MKJP was found in 28% of people and non-MKJP in 72%. Before the pandemic, the proportion of contraceptive devices and pills used by type was 49.27 percent for injection and 0.23 percent for Male Operation Method (MOP). In the event of a pandemic, inject 49.70% and MOP 0.21 percent. The proportion of ALOKON use by regency before the pandemic was 26.47 percent in Jayapura City and 24.35 percent during the pandemic. Before and during the pandemic, Intan Jaya Regency was 0.04 percent.

**Keywords:** Proportion of ALOKON use; Covid-19 pandemic.

## **1. Introduction**

Coronaviruses are a large virus family that causes disease in both humans and animals. It typically causes respiratory tract infections in humans, ranging from the common cold to serious illnesses such as Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS). A new type of coronavirus discovered in humans following an extraordinary event in Wuhan, China, in December 2019, was later named Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-COV2) and caused the disease Coronavirus Disease-2019 (COVID-19) [1].

Almost all outdoor activities have been halted due to the Covid-19 pandemic. As a result of the virus's spread, the government was forced to implement community-wide health protocols. People are required to stay at home in addition to wearing masks and maintaining physical distance (physical distancing). Work and school can be done from home using information and communication technology. This pandemic has a significant impact on the economy, society, culture, and politics. This includes the impact on the administration of government programs. The Family Development, Population, and Family Planning (Bangga Kencana) program, which is a work program of Indonesia's National Population and Family Planning Agency, is one of them. Covid-19 also creates a stumbling block for optimizing family planning services that are closely related to active and new family planning participants. Many current and prospective family planning participants are hesitant to visit health service centers or family planning service centers such as hospitals, health centers, or independent midwife practices. This situation raises concerns that the number of births will rise as a result of the pandemic's disruption of contraceptive services [2].

According to Population Census data, Indonesia's population growth rate (LPP) was 1.36 percent until the end of 2017, which was due in part to a lower birth rate as a result of community participation in the family planning program. This can also be seen in the decrease in the total fertility rate (TFR) according to the 2017 IDHS results, which is 2.4 children per woman, down from 2.6 children per woman in 2013. The birth rate among women aged 15 to 19 years (Age Specific Fertility Rate) fell to 36/1000 births in 2017, down from 46/1000 births in 2013. In 2020, the government intends for the TFR in Indonesia to be 2.26 children per woman, and the ASFR for the 15-19 year old age group to be 25/1000 births. The number of births in Indonesia in 2020 is expected to be around 4.7 million under normal service conditions. However, with the pandemic and delayed services, the possibility of unwanted/planned births or pregnancies may increase. Several indicators show a

decrease in target achievement, such as the Contraceptive Prevalence Rate (CPR) or contraceptive use, which currently shows that the number of family planning participants is only 57.2 percent of the target of 61.2 percent. Furthermore, based on the results of family planning services in February and March 2020, the potential for unplanned pregnancies may increase [2].

According to National Population and Family Planning Agency (BKKBN) data from February and March 2020, almost all family planning methods saw a decrease in acceptors. In February, there were 524,989 injections, while in March, there were 341,109 condom use decreased from 31,502 to 19,583 acceptors. The number of acceptors decreased in the pill method as well, from 251,619 to 146,767. The only thing that saw an increase in the number of acceptors for long-term family planning methods was the use of implants, which increased from 81,062 to 81,536. Meanwhile, other long-term family planning methods declined, with IUDs falling from 36,115 to 23,383, MOPs falling from 2,283 to 1,196, and MOWs falling from 13,571 to 8,093.

Meanwhile, the data recapitulation of family planning services in Papua Province during January-February showed a decrease in the number of new family planning participants in several family planning methods compared to March-April. The MOW method was used by 237 to 153 new participants, implants by 1421 to 1014 new participants, and injections by 6,197 to 4,749 new participants. Meanwhile, the number of new participants in several family planning methods increased, with the IUD increasing from 95 to 104, condoms increasing from 982 to 1195, and pills increasing from 1625 to 2213. Meanwhile, from January to April 2020, MOP was the only method that was not chosen by acceptors. [3].

Based on the background information provided, this research is deemed necessary.

## **2. Methods**

Concurrent embedded (unbalanced mixture) research was used, which is a combination model research method. This method combines quantitative and qualitative research methods by unequally distributing the two methods, i.e., 80 percent quantitative methods and 20% qualitative methods. This study's quantitative research method employs a "retrospective" approach to identify the situation at the time [3]. In this study, the qualitative method employs a case study approach, which is the most basic approach for describing and analyzing phenomena, events, social activities, attitudes, beliefs, perceptions, and thoughts of individuals and groups [4]. The research take place during the second week of February 2021. This study was carried out in Papua Province at the Maternal, Child, and Husband Health Clinic (KIAS) Representative of the Papua Province BKKBN, and the Arso 8 Public Health Center, Keerom Regency as the research observation location. In this study, the quantitative sample consisted of all couples of fertile age who used Alokon in Papua Province. As a result, there were 185,165 couples before the pandemic and 210,930 couples during the pandemic in this study. The qualitative sample in this study is drawn from the general population to serve as informants. There were 11 acceptor informants and 3 informants from the person in charge and program manager.

### 3. Results

#### 3.1. Characteristics of Informants

This study includes the results of interviews with informants, which are thought to represent information and support and strengthen the secondary data obtained, allowing them to provide results that are consistent with the objectives and research questions. The validity of the data submitted must meet trust, transferability, dependability, and certainty, so triangulation of sources and methods was used to find as many as 14 informants who met the required supporting data validity.

##### 3.1.1. Key Informants

The key informants in this study amounted to 3 (three) people who are leaders and policy makers related to the implementation of family planning programs in Papua Province, both at the provincial and regency levels. The three key informants are the Head of the Papua Province BKKBN Representative, the Head of the Keerom Regency Population Control and Family Planning Office, and the Reproductive Health Family Planning Coordinator of the Papua Province BKKBN Representative. Characteristics of key informants can be seen in table 3.1 below.

**Table 3.1:** Key Informants

No.	Informants Code	Age (years)	Sex	Education	Position
1.	IK1	55	Male	S2	Chief representative
2.	IK2	56	Male	S1	Head of Department OPD-KB
3.	IK3	53	Male	S1	Coordinator Field

Source: Primary Data, 2021

##### 3.1.2. Main Informants

This study's main informants were 11 family planning acceptors, both new and active family planning users. Table 3.2 shows the characteristics of main informants:

**Table 3.2:** Main Informants

No.	Informants Code	Age (years)	Sex	Status User KB	Method KB
1.	IU4	24	Female	New	MKJP
2.	IU5	43	Female	Active	MKJP
3.	IU6	41	Female	New	Non-MKJP
4.	IU7	22	Female	New	MKJP
5.	IU8	34	Female	Active	Non-MKJP
6.	IU9	38	Female	New	MKJP
7.	IU10	39	Female	Active	Non-MKJP
8.	IU11	26	Female	Active	Non-MKJP
9.	IU12	24	Female	New	MKJP
10.	IU13	37	Female	Active	Non-MKJP
11.	IU14	29	Female	Active	Non-MKJP

Source: Primary Data, 2021

All main informants were female family planning acceptors met during mass implant family planning services in Keerom Regency, as well as family planning acceptors who visited the KIAS clinic of the Papua Province BKKBN Representative, where services were not provided Men's MOP.

### 3.2. Proportion of Alokon Use Before and During the Pandemic

#### 3.2.1. Secondary Data Results

Secondary data used as a reference in this study include recap reports from 29 regencies/cities that are reported through the monthly routine statistical reporting website, as well as manual reports that are sent monthly by the regency/city OPD KB to the Provincial BKKBN Representative. On a regular basis, this data is used to evaluate the program's material implementation. Table 3.3 shows the proportion of Alokon used before and during the pandemic.

**Table 3.3:** Proportion of Fertile Age Couples Using Contraceptive Devices and Pills Before and During the Pandemic

No.	Contraceptive Devices and pills	Before Pandemic		During Pandemic	
		Total	%	Total	%
1.	IUD	12,683	6.85	13,017	6.17
2.	MOW	4,717	2.55	5,406	2.56
3.	MOP	413	0.22	437	0.21
4.	Condom	7,597	4.10	10,143	4.81
5.	Implant	35,052	18.93	39,608	18.78
6.	Inject	91,234	49.28	104,841	49.70
7.	Pill	33,451	18.07	37,478	17.77
Total Couples of Fertile Age (PUS) Users Contraceptive Devices and Pills		185,165	100	210,930	100
Total Couples of Fertile Age		537,416			
User Proportion Contraceptives Devices and pills			34		39

Source: Secondary Data, Papua Province BKKBN Representatives

Based on the secondary data presented above, it can be seen that out of a total of 537,416 couples of fertile age, 185,165, or 34%, became family planning acceptors/users of contraceptive devices and pills prior to the pandemic. During the pandemic, 210,930 couples of fertile age used contraception devices and pills / family

planning acceptors, accounting for 39% of all couples of fertile age. According to this data, there was an increase in the use of contraceptive devices and pills during the pandemic. PUS who do not use family planning and PUS who use traditional or natural family planning are not included in the number of contraceptive device and pill users listed above.

### ***3.2.2. Results of Interviews with Key Informants***

The secondary data above also forms the basis for interviews with key informants. The following are statements from key informants regarding:

#### ***3.2.2.1. Proportion of contraceptive devices and pills use prior to and during the pandemic period***

“...During the pandemic, many people took part in family planning to maintain their health...” ... (IK1, IK3)

“...The use of contraceptives and pills increases during the pandemic because people really don't want to get pregnant during the pandemic...”... (IK2)

Thus, it can be concluded that the increase in the use of contraceptive devices and pills during the pandemic is caused by the needs of people who really want to use family planning and postpone it pregnancy in order to maintain their health condition.

#### ***3.2.2.2. Strategies to increase the use of contraceptive devices and pills during the pandemic***

“...BKKBN empowers the role of PKB/PLKB in mobilizing family planning services during the pandemic...” ... (IK1)

“...OPD-KB approached religious and community leaders, as well as local governments...”... (IK2)

“...BKKBN cooperates with partners to carry out mass services on momentum activities...”... (IK3)

Thus, it can be concluded that several strategies were carried out in increasing the use of contraceptive devices and pills during the pandemic, among others, by empowering the role of PKB/PLKB in mobilizing family planning services, approaching religious leaders and community leaders as well as local governments, and also conducting mass family planning services.

#### ***3.2.2.3. Support of health personnel and facilities in influencing family planning decisions at PUS during the pandemic***

“...Yes, very influential...” ... (IK1, IK2, IK3)

From the results of interviews with the three key informants, all of them stated that the support of health personnel and facilities also greatly influenced the decision to take family planning for PUS, especially during this pandemic. Officers who serve by paying attention to the implementation of health protocols will be very

helpful a sense of security and comfort for prospective family planning participants and active family planning participants.

### ***3.2.3. Results of Interviews with Main Informants***

Apart from key informants, interviews were also conducted with main informants, namely family planning acceptors. Based on the results of interviews, obtained 5 (five) new family planning users and 6 (six) people active KB users. The following are statements from main informants regarding:

#### ***3.2.3.1. The importance of following family planning during the pandemic***

“... Yes, important...”... (IU4, IU5, IU6).

The statements of the three main informants about the importance of family planning during the pandemic were supported by reasons of wanting to maintain good health conditions; the family's economic condition was unstable and already had enough children.

#### ***3.2.3.2. Support for health personnel and facilities that influence the decision to take family planning***

“... Yes, effect...” ... (IU7, IU8, IU10)

“... No effect...”... (IU9)

The three main informants' statements that the support of health personnel and facilities influenced their decision to participate in family planning were supported by reasons of feeling secure and comfortable when visiting health facilities and being well served by officers who implemented health protocols while on duty. Furthermore, the information and education provided by the officers is one of the reasons why acceptors continue to practice family planning. Meanwhile, for those who responded that it had no effect due to their own desire for family planning.

#### ***3.2.3.3. Family planning services provided before and during the pandemic***

“... Before and during the pandemic the services provided were always good...”... (IU11, IU12, IU13, IU14).

All main informants stated that they had always received good and satisfactory service from officers both before and during the pandemic.

### ***3.3. Proportion of Use of Contraceptive Devices and Pills based on Contraceptive Methods Before and During the Pandemic***

According to the period of use, contraception is divided into long-term contraceptive methods (MKJP) and short-term contraceptive methods. Short-term contraceptive methods consist of injections, pills and condoms and the service is carried out in health care facilities or other facilities. MKJP includes IUD, implant, Male

Operation Method (MOP), and Female Operation Method (MOW).

**Table 3.4:** Proportion of Fertile Age Couples Using Contraceptive Devices and Pills by Method Before and During the Pandemic

No.	Method Contraceptive	Before Pandemic		During Pandemic	
		Total	%	Total	%
1.	MKJP	12,683	6.85	13,017	6.17
2.	Non-MKJP	4,717	2.55	5,406	2.56
Total Couples of Fertile Age (PUS) Users Contraceptive Devices and Pills		185,165	100	210,930	100

Source: Secondary Data, Papua Province BKKBN Representatives

Based on the secondary data table above, it can be seen that the proportion of MKJP use before the pandemic was 29% of the total acceptors and 28% of the total acceptors during the pandemic. Whereas the proportion of non-MKJP users before the pandemic period was 71% of the total acceptors and 72% of the total acceptors during the pandemic.

### **3.4. Proportion of Use of Contraceptive Devices and Pills by Type of Contraception Before and During the Pandemic**

Data on the proportion of the use of contraceptive devices and pills based on the type of contraception before and during the pandemic period were obtained from the recap of reports on the use of contraceptives in 29 regencys/cities in Papua Province. The data can be seen in table 3.5 below.

**Table 3.5:** Proportion of Fertile Age Couples Using Contraceptive Devices and Pills by Type of Contraceptive Before and During the Pandemic

No.	Type of Contraceptive	Before Pandemic		During Pandemic	
		Total	%	Total	%
1.	IUD	12,683	6.85	13,017	6.17
2.	MOW	4,717	2.55	5,406	2.56
3.	MOP	413	0.22	437	0.21
4.	Condom	7,597	4.10	10,143	4.81
5.	Implant	35,052	18.93	39,608	18.78
6.	Inject	91,234	49.28	104,841	49.70
7.	Pill	33,451	18.07	37,478	17.77
Total Couples of Fertile Age (PUS) Users Contraceptive Devices and Pills		185,165	100	210,930	100

Source: Secondary Data, Papua Province BKKBN Representatives

Based on the secondary data above, it can be seen that before the pandemic period there were 185,165 couples



of fertile age as users of contraceptive devices and pills with 91,234 couples using contraceptive injections or 49.28% of the total users. This data shows the drug injections are the most preferred choice for couples of fertile age who became family planning acceptors before the pandemic. Meanwhile, the contraceptive device/drug with the lowest demand was MOP with a total of 413 acceptors or 0.22% of the total acceptors.

Meanwhile, during the pandemic period, it can be seen an increase in the use of contraceptive devices and pills for all types of contraceptive devices and pills. Total users increased to 210,930 with the number of injecting drug users still being the highest at 104,841 users or 49.70% of the total users and MOP still being the lowest choice with 437 users or 0.21% of the total users.

### 3.5. Proportion of Use of Contraceptive Devices and Pills by Regency Before the Pandemic

**Table 3.6:** Proportion of Use of Contraceptive Devices and Pills by Regency Before the Pandemic

No.	Regency	IUD	MO W	MOP	Condo m	Impl ant	Inject	Pill	Total	%
1.	Merauke	32	110	2	22	242	1,033	357	1,798	0.97
2.	Jaya Wijaya	670	99	0	700	1,649	5,906	1,912	10,936	5.91
3.	Jayapura	1,603	87	3	131	3,330	4,273	4,476	13,903	7.51
4.	Nabire	920	1,096	13	163	4,476	10,628	1,686	18,982	10.25
5.	Kepulauan Yapen	14	12	1	5	71	399	41	543	0.29
6.	Biak Numfor	2,015	799	341	1,179	5,933	4,780	4,002	19,049	10.29
7.	Puncak Jaya	10	0	0	195	55	135	142	537	0.29
8.	Paniai	116	23	1	443	651	2,280	7,83	4,297	2.32
9.	Mimika	109	51	0	148	1,329	220	65	1,922	1.04
10.	Sarmi	23	10	0	41	483	1,037	157	1,751	0.95
11.	Keerom	454	266	16	181	1,947	1,430	1,531	5,825	3.15
12.	Pegunungan Bintang	23	7	0	102	362	1,485	254	2,233	1.21
13.	Yahukimo	57	0	0	0	183	468	7	715	0.39
14.	Tolikara	0	0	0	0	0	92	88	180	0.10
15.	Waropen	5	0	0	9	122	1,936	601	2,673	1.44
16.	Boven Digoel	68	33	14	226	980	12,510	5,272	19,103	10.32
17.	Mappi	209	54	0	250	310	3,521	2,480	6,824	3.69
18.	Asmat	64	4	0	251	132	4,311	878	5,640	3.05
19.	Supiori	461	0	1	32	148	168	87	897	0.48
20.	Mamberamo Raya	0	0	0	10	0	277	12	299	0.16
21.	Mamberamo Tengah	0	0	0	15	0	51	10	76	0.04
22.	Yalimo	70	0	0	65	114	148	130	527	0.28
23.	Lanny Jaya	23	6	2	1,580	3,346	4,044	2,724	11,725	6.33
24.	Nduga	0	0	0	0	0	187	59	246	0.13
25.	Puncak	0	0	0	44	12	56	31	143	0.08
26.	Dogiyai	59	0	0	81	414	2,512	201	3,267	1.76
27.	Intan Jaya	0	0	0	0	0	3	71	74	0.04
28.	Deiyai	63	0	0	29	291	1,301	304	1,988	1.07
29.	Jayapura City	5,615	2,060	37	1,695	8,472	26,043	5,090	49,012	26.47
<b>PAPUA</b>		<b>12,683</b>	<b>4,717</b>	<b>431</b>	<b>7,597</b>	<b>35,052</b>	<b>91,234</b>	<b>33,451</b>	<b>185,165</b>	<b>100.00</b>

Source: Secondary Data, Papua Province BKKBN Representatives

Based on the table above, it can be seen that the highest use of contraceptive devices and pills before the pandemic period was found in Jayapura City with a total of 49,012 users or 26.47% of the total users in Papua Province. Meanwhile, the regency with the lowest number of users of contraceptive devices and pills before the pandemic was Intan Jaya Regency with a total of 74 users or 0.04% of the total users.

**Table 3.7:** Proportion of Use of Contraceptive Devices and Pills by Regency During the Pandemic

No.	Regency	IUD	MO W	MOP	Condo m	Impl ant	Inject	Pill	Total	%
1.	Merauke	28	70	2	29	560	1,779	523	2,991	1.42
2.	Jaya Wijaya	692	99	0	721	1,743	6,384	2,082	11,721	5.56
3.	Jayapura	1,608	95	3	134	3,616	4,776	4,566	14,798	7.02
4.	Nabire	908	1,420	13	185	4,916	11,561	1,809	20,812	9.87
5.	Kepulauan Yapen	25	12	1	58	447	1,213	335	2,091	0.99
6.	Biak Numfor	2,043	810	341	1,238	6,399	5,379	4,306	20,516	9.73
7.	Puncak Jaya	10	0	0	134	63	160	168	535	0.25
8.	Paniai	148	37	1	607	855	3,021	948	5,617	2.66
9.	Mimika	116	106	0	127	1,430	1,231	188	3,198	1.52
10.	Sarmi	26	10	0	56	766	1,153	212	2,223	1.05
11.	Keerom	459	292	18	192	2,107	1,682	1,559	6,309	2.99
12.	Pegunungan Bintang	73	10	1	758	778	1,912	301	3,833	1.82
13.	Yahukimo	90	9	0	4	157	543	19	822	0.39
14.	Tolikara	0	0	0	62	1	369	310	742	0.35
15.	Waropen	5	0	0	10	149	2,175	632	2,971	1.41
16.	Boven Digoel	68	33	14	240	996	12,651	5,020	19,022	9.02
17.	Mappi	262	120	0	258	329	4,099	2,857	7,925	3.76
18.	Asmat	76	40	0	270	1,073	4,977	965	7,401	3.51
19.	Supiori	461	0	1	32	171	276	115	1,056	0.50
20.	Mamberamo Raya	0	0	0	33	0	2,180	52	2,265	1.07
21.	Mamberamo Tengah	8	0	0	44	8	291	81	432	0.20
22.	Yalimo	70	0	0	65	114	114	126	519	0.25
23.	Lanny Jaya	23	6	2	1,555	3,341	4,174	2,798	11,899	5.64
24.	Nduga	0	0	0	0	0	117	31	148	0.07
25.	Puncak	0	0	0	1,500	12	1,229	1,565	4,306	2.04
26.	Dogiyai	59	0	0	83	473	2,628	229	3,472	1.65
27.	Intan Jaya	0	0	0	0	0	3	71	74	0.04
28.	Deiyai	71	0	0	32	104	1,351	303	1,861	0.88
29.	Jayapura City	5,688	2,237	40	1,716	9,000	27,383	5,307	51,371	24.35
<b>PAPUA</b>		<b>13,017</b>	<b>5,406</b>	<b>437</b>	<b>10,143</b>	<b>39,608</b>	<b>104,841</b>	<b>37,478</b>	<b>210,930</b>	<b>100.00</b>

Source: Secondary Data, Papua Province BKKBN Representatives

Based on the table above, it can be seen that the highest use of contraceptive devices and pills during the pandemic was also found in Jayapura City with a total number of 51,371 or 24.35% of the total users and the regency with the lowest number of users was Intan Jaya Regency which did not experience a change in the number of users from before the pandemic period, namely 74 users or 0.04% of the total users during this period pandemic.

#### **4. Discussion**

##### ***4.1. Overview of the Use of Contraceptive Devices and Pills for Couples of Fertile Age Before and During the Pandemic COVID-19***

The reasons for couples of fertile age (PUS) who do not use family planning tools/pills/methods both before Covid-19 and during Covid-19 are important to know as a basis for program intervention. There are several reasons that PUS did not use family planning before and during Covid-19, including wanting to get pregnant/children, side effects, being pregnant, health reasons, having just given birth and feeling infertile, husband/family refusing, access and not knowing. Apart from that, there were other reasons that PUS revealed, such as not knowing about family planning, religious reasons and having just given birth/still breastfeeding. The biggest reason for PUS not having family planning is because they want to get pregnant/children both before and during Covid-19, which is 36.6 percent before Covid-19 and 34.4 percent during Covid-19 [5].

Government Indonesia has declared a non-natural disaster that spreads Covid-19 as a National Disaster. In dealing with the Covid-19 non-natural disaster outbreak, a Large-Scale Social Restriction (PSBB) policy was implemented to prevent the transmission of Covid-19. This condition has an impact on the continuity of health services community, including family planning and reproductive health services. Outbreaks of infection have the potential to undermine family planning programs; for example, contraceptive distribution declined by 65% in Liberia and 23% in Sierra Leone at the height of the West African Ebola Epidemic. In this pandemic condition, it is hoped that PUS, especially PUS with 4 Too (4T) is not expected to get pregnant, so health workers need to make sure they continue to use contraception. Therefore, reproductive counseling should be carried out during the Covid-19 Pandemic, based on the latest guidelines and papers on Covid-19 and contraception. There will be changes in the behavior of couples of fertile age with the PSBB rules, such as reducing visits to health facilities, all gathering activities at home, work, school, and other activities that will result in the behavior of PUS.

The decline in the use of contraceptives during this pandemic seems to have occurred in many countries. Research in Turkey also describes the same condition, the rate of contraceptive use has decreased from 41.3 to 17.2 percent during the Covid-19 pandemic [6].

The results of research conducted by Pembajeng and his colleagues (2020) on the use of contraceptives in Indonesia during the Covid-19 pandemic decreased by 35% to 47%. This is not in accordance with the government's program to promote the Family program Planning (KB) [7]. The visible impacts as a result of the Covid-19 pandemic on family planning services include a decrease in the number of participation in the use of contraception; increasing number of contraceptive dropouts, especially users of short-term contraception such as injections, pills and condoms; increasing number of unmet need for family planning and increasing unwanted pregnancies [8].

During the Covid-19 pandemic, the family planning program experienced decrease due to limited public access to facilities health when it is not too emergency to suppress the spread of the Covid-19 virus infection. This has great potential occurrence of unwanted pregnancies. During time Covid-19 pandemic there are 1,946

pregnancies or there is an increase of 67 pregnancies from the previous year. This also happened in West Java experienced a 10% increase in pregnancies. The increasing pregnancy rate during the pandemic is influenced by several factors, including the use of contraceptives. The data shows a decrease in the use of contraceptives from February to March 2020 by 40%.

The results of a survey of couples of fertile age on contraceptive use during the Covid-19 pandemic conducted by the BKKBN showed that the prevalence of using modern family planning tools/pills/methods during the pandemic decreased by around four percent compared to before the pandemic, which was from 63.7 percent to 59.6 percent. In contrast, the use of traditional contraceptives actually increased during the pandemic from 4.5 percent to 5.2 percent. The increase in the prevalence of traditional family planning pills/methods may reflect the need for PUS to prevent pregnancy when they cannot get services for modern family planning tools/medicines/methods due to access restrictions or concerns about making physical contact with the provider. During the pandemic, PUS tends to look for alternatives to the contraceptive methods they previously used. However, the shift from the use of modern contraception to the traditional one is a better choice than stopping use so that PUS can still be protected from unwanted pregnancies [5].

The results of this study, it is known that in Papua Province there was an increase in the use of contraceptive devices and pills during the pandemic compared to the period before the pandemic. Before the pandemic, the total users of contraceptive devices and pills in Papua Province were 185,165 acceptors or 34% of the total existing couples of fertile age and during the pandemic period increased to 210,930 acceptors or 39% of the total couples of fertile age.

Based on the results of interviews with the key informants and main informants in this study, the increase in the number of users of contraceptive devices and pills / acceptors during the pandemic are supported by several factors, including the decision of couples of fertile age who want to delay pregnancy in order to maintain and increase body immunity in the face of the pandemic. In addition, unstable economic conditions due to the Covid-19 pandemic are also one of the driving factors for couples of fertile age to decide to become a family planning acceptor. Not only in terms of family and economic health, couples of fertile age too decided to become a family planning acceptor because of the support from in terms of family planning services. Adequate health facilities and personnel and always apply health protocols in providing services Family Planning, counseling services through communication media by officers health and mass family planning services by applying the protocol health also supports couples of fertile age to decide to remain an active family planning participant or to become a new family planning participant. In addition, the increase in the use of contraceptive devices and pills during the pandemic period in Papua Province, it was also supported by several strategies carried out by the Provincial BKKBN Representative Papua, Regency/City OPD and also related work partners including:

- a. Propose alternatives to the use of short-term alokon (pills, injections and condoms) during the pandemic;
- b. Actively mobilizing the IEC pattern (online media/social media), to be able to provide an understanding of the need for family planning services by following the Covid-19 Prevention procedures;
- c. Empowering the role of PKB/PLKB to play an active role in mobilizing family planning services during

- the pandemic;
- d. Conducting mass family planning services at momentum activities;
- e. Advocating to local governments to increase commitment support for family planning programs during the pandemic;
- f. Approaching religious leaders and community leaders;
- g. Providing food assistance to people who are economically affected by the pandemic;
- h. Providing PPE grant assistance to independent midwife practices through IBI so that they can continue to carry out family planning services during the pandemic.

This is in line with several policies issued by the BKKBN as a government agency responsible for the provision of contraceptive devices and pills. Although due to various changes in the pandemic situation, services to the community must continue to be carried out, including family planning services as part of basic health services. In an effort to keep continuity of contraceptive use and providing services to new family planning participants in emergency/special situations, BKKBN issued Circular Number 08 of 2020 concerning Family Planning Participation Guidance in the Covid-19 Situation. In addition, the Acting Deputy for KBKR issued a letter number 457/I/KB.06/02/E1/2020 dated April 9, 2020 which encouraged Provincial BKKBN Representatives to create innovations and breakthroughs in accordance with local wisdom, together with OPD KB and other related partners by implementing the movement to prevent discontinuation of contraceptive use during the Covid-19 pandemic. The movement to prevent discontinuation of contraceptive use aims to maintain the continuity of active family planning participants and increase the achievement of new family planning participants, because during the pandemic there is potential for family planning acceptors to stop using Alokon or prospective acceptors delay using contraception [5].

#### ***4.2. Overview of the Use of Contraceptive Devices and Pills based on Methods Before and During the COVID-19 Pandemic***

In choosing a contraceptive method, Article 22 of the Regulation of the Minister of Health of the Republic of Indonesia number 97 of 2014 concerning Health Services Before Pregnancy, Pregnancy, Childbirth and After Childbirth, Service Implementation Contraception, as well as Sexual Health Services, stated that married couples must consider age, parity, number of children, health conditions and religious norms. Choice of contraceptive method follow rational contraception according to the phase faced by the husband wife, which includes:

- a. Postponement of pregnancy for young couples or mothers who are not yet 20 years old;
- b. Spacing of pregnancies in married couples between the ages of 20-35 years; or
- c. Restriction of pregnancy for married couples over the age of 35 who do not wish to become pregnant.

According to the period of use, contraception is divided into long-term contraceptive methods (MKJP) and short-term contraceptive methods. Short-term contraceptive methods consist of injections, pills and condoms and their services are carried out in health care facilities or other facilities. Long-term contraceptive methods

include Intrauterine Contraceptive Devices (IUD), Under the Skin Contraceptives or implants, Male Surgical Methods (MOP), and Methods Women's Surgery (MOW). In addition to short-term and long-term contraceptive methods, emergency contraception is also given to women who are not protected by contraception or are victims rape to prevent pregnancy as regulated in Article 23 of the Regulation of the Minister of Health of the Republic of Indonesia Number 97 of 2014 [5].

Indonesia is a developing country with the 4th largest population in the world (China, India, and the United States), with a relatively high growth rate. Spread of COVID-19 increasingly widespread implications for various aspects of life including health, social and economic. Reproductive health is one of the aspects affected by Covid-19, including in contraceptive services and the continued use of contraception for couples of fertile age (PUS) in Indonesia. Couples of fertile age mostly use short-term contraception, such as birth control injections (29 percent) and birth control pills (11 percent) that require repeat services. Meanwhile, married women aged 15-49 years using the Long-Term Contraceptive Method (MKJP) is only 14 percent while the national target for the use of MKJP in Indonesia is expected to reach 26.7% in 2014 [5].

#### ***4.3. Overview of the Use of Contraceptive Devices and Pills by Type of Contraception Before and During the COVID-19 Pandemic***

In 2017, 63.22 percent of couples of reproductive age in Indonesia used active family planning, while 18.63 percent had never used contraception. According to the pattern of contraceptive choice, most active family planning participants picked injections and pills as contraceptives, and they were even extremely dominating (more than 80%) when compared to other methods; injections 62.77 percent and pills 17.24 percent.

Anita and his colleagues (2019) discovered that injectable family planning users outnumbered other contraception users by 54.6 percent at the PMB clinic Anik Setyowati Ngemplak Boyolali [9].

According to data from family planning reports at the Lancirang Health Center in Sidenreng Rappang Regency in 2016, there were 791 couples of reproductive age in Pitu Riawa Regency, with 282 persons using short-term contraceptive methods (injections, pills, condoms). Several factors determine the number of family planning acceptors who utilize injections and pills. Due to the restriction of mobility for medical workers, the availability of expert doctors to provide regular family planning services is extremely limited. Another cause is a lack of coordination between the use of free contraception and the services still provided in health care institutions. In addition, the availability of facilities and infrastructure (Obgyn bed, IUD KIT, ABPK) is not evenly distributed in all districts and cities. Another obstacle is the existence of cultural influences that cause people to be reluctant to install the IUD because of shame and prohibition from their husbands and the low participation of men taking family planning specifically for MOP because there are still many husbands who are afraid to join MOP. There are many rumors about the failure of the IUD that make people afraid to use MKJP family planning, which is another reason that makes family planning acceptors prefer short-term contraceptive methods [10].

According to the findings of this study, injectable drugs were the most widely used type of contraception by acceptors prior to the pandemic, accounting for as many as 91,234 users or 49.27 percent, followed by KB

implant users as many as 35,052, KB pills as many as 33,451, IUD as many as 12,683, condoms as many as 7,597, MOW as many as 4,717, and MOP as many as 431 users. The use of all methods of contraception and medicines has grown during the pandemic. Injectable KB grew to 104,841 users (49.70%), followed by 39,608 implants, 37,478 tablets, 13,017 IUDs, 10,143 condoms, 5,406 MOW and MOP with the fewest users (437 acceptors). This study did not look at the factors that influence the selection of contraceptive devices and pills for acceptors.

According to Setiasih in Anita and his colleagues (2019), acceptors' choice of family planning methods is influenced by behavioral characteristics unique to each individual. According to Lawrence Green's Behavioral theory, three elements determine behavior. The first component is a predisposing factor, which is a factor that facilitates or predisposes a person's conduct and can be seen in age, education, knowledge, attitude, parity, and medical history. The second component is the enabling factor, which is the factor that allows or facilitates behavior or action; family planning services are an example of this factor (rooms, tools, and transportation). The third component is the reinforcing factor, which is the factor that strengthens the behavior, in this case the husband's support and the support of others [9].

#### ***4.4. Overview of the Use of Contraceptive Devices and Pills by Regency in Papua Province Before and During the COVID-19 Pandemic***

According to the 2017 Indonesian Demographic and Health Survey (IDHS), the total birth rate (TFR) in Papua Province is 3.3. Although it is lower than the 2017 IDHS (3.5), it is still quite high when compared to the national average TFR of 2.4. According to another source, the 2019 Program Performance and Accountability Survey (SKAP), the 2019 Papua Province TFR was 2.81. This statistic is lower than the IDHS results from 2017. However, the TFR value for Papua Province from the 2019 SKAP results did not match the national TFR figure of 2.45. This suggests that there is still room for improvement and the development of a good strategy to reduce the birth rate in Papua. TFR reduction in Papua Province is also possible if the undesired birth rate is reduced by providing contraception to all couples of reproductive age who require it [2].

Papua Province divides 5 (five) customary territories to classify existing regencies and cities, namely MAMTA (5 Regencies/Cities): Jayapura City, Jayapura Regency, Keerom, Sarmi and Mamberamo Raya; SAIRERI (4 Regencies): Biak Numfor, Yapen Islands, Waropen and Supiori; LA PAGO (10 Regencies): Bintang Mountains, Jayawijaya, Lanny Jaya, Yahukimo, Tolikara, Yalimo, Nduga, Puncak Jaya, Central Mamberamo and Puncak; MEE PAGO (6 Regencies): Mimika, Nabire, Paniai, Dogiyai, Deiyai and Intan Jaya; ANIMHA (4 Regencies): Merauke, Asmat, Mappi and Boven Digoel. In addition, a classification of 3 (three) topographical characteristics, namely Mountains and Highlands with Difficult Access (16 Regencies): Mimika, Nabire, Paniai, Dogiyai, Deiyai, Intan Jaya, Bintang Mountains, Jayawijaya, Lanny Jaya, Yahukimo, Tolikara, Yalimo was also made. , Nduga, Puncak Jaya, Mamberamo Tengah and Puncak; Coastal and Lowlands Difficult Access (6 Regencies): Asmat, Mappi, Boven Digoel, Supiori, Waropen and Mamberamo Raya; Coastal and Lowlands Easy Access (7 Regencies/Cities): Jayapura, Keerom, Sarmi, Yapen Islands, Biak Numfor, Merauke and Jayapura City.

The results of this study indicate that before and during the pandemic, the highest family planning users were found in Jayapura City with 49,012 users before the pandemic and as many as 51,371 during the pandemic, where Jayapura City is included in the coastal and lowland topographic areas with easy access. Meanwhile, the regency with the lowest family planning users both before and during the pandemic was Intan Jaya Regency with a total of 74 acceptors in the pre-pandemic period and did not experience a change in the number of users during the pandemic. In terms of topography, Intan Jaya Regency is included in the classification of mountains and highlands with difficult access. Other regencies that have also experienced a decline in the number of family planning users during the pandemic are Puncak Jaya, Boven Digoel, Yalimo, Lanny Jaya, Nduga and Deiyai regencies, all of which are located in topographical areas with difficult access. Structural barriers as a result of the Covid-19 pandemic have caused several problems, such as the potential for discontinuation of contraceptive use, especially for MKJP acceptors whose active period has expired; there is a delay for prospective acceptors who want to use modern family planning tools/medicines/methods; and the lack of readiness of Midwife Independent Practice (PMB) to protect themselves in providing services. However, regencies that experienced an increase in the number of family planning users during the pandemic were more likely to affect the increase in total family planning users during the pandemic in Papua Province. Several things that support the increase in the number of family planning users in regencies during the pandemic are, among others, due to the regional approach and local wisdom so that they do not clash with local culture. In addition, the commitment of OPD-KB in the Regency/City is also very supportive of increasing the number of family planning users during the pandemic. This commitment is manifested in the form of guarantees for the availability and distribution of Alokon at all levels to health facilities; conduct KIE and family planning counseling using online media and social media or make direct visits by complying with the safe distance rules by KB/PLKB extension workers in coordination with the closest health facilities (doctors/puskesmas/midwives) and practice independent midwives; distribution of repeated contraceptive pills and condoms is carried out by KB/PLKB extension workers under the supervision of local health centers/doctors/midwives.

This is in line with the Management of the Family Planning Program handled by the BKKBN in accordance with the provisions of Article 53 of Law 52 of 2009 concerning Population Development and Family Development. In carrying out its role and to realize the mandate of the National Development Priority Agenda (Nawa Cita), namely the 5th Cita "Improving the Quality of Life of Humans and Indonesian People", one of the BKKBN's targets is to improve the quality of family planning and reproductive health services (including the provision of tools/medicines/ methods of contraception, as well as providing continuous information for the continuation of family planning participation). This target is implemented, among others, through a strategy of providing facilities and infrastructure as well as ensuring the availability of adequate contraceptive tools and pills in every family planning and reproductive health health facility and service network, which is supported by the utilization of health service facilities for family planning services (distribution of health facilities for family planning services, both health services and family planning services). Family planning is static or mobile. The provision of contraceptive methods according to the choice of married couples is the obligation of the Government and local governments, in accordance with Article 23 of Law Number 52 of 2009 [2].

## **5. Conclusion**



After conducting research on the use of contraceptive devices and pills before and during the pandemic in Papua Province, it can be concluded as follows:

1. The use of contraceptive devices and pills for couples of fertile age (PUS) before the pandemic period in Papua Province was 185,165 acceptors (34%).
2. The use of contraceptive devices and pills during the pandemic has increased to 210,930 acceptors (39%).
3. The proportion of users of contraceptive devices and pills based on contraceptive methods for couples of fertile age in Papua Province before the pandemic period was 52,883 MKJP family planning users (29%) and 132,282 non-MKJP family planning users (71%). During the pandemic, there were 58,468 (28%) MKJP family planning users and 152,462 (72%) non-MKJP family planning users from the total users of contraceptive devices and pills in Papua Province.
4. Based on the type of contraception, before the pandemic, there were 91,234 (49.27%). During the pandemic it increased to 104,841 users (49.70%). MOP before the pandemic was used by as many as 431 users (0.23%). During the pandemic to 437 users (0.21%).
5. The proportion of use of contraceptive devices and Pills by regency before and during the pandemic was highest in Jayapura City. Before the pandemic period, users of contraceptive devices and pills in Jayapura City were 49,012 (26.47%). During the pandemic, the number of users of contraceptive devices and pills in Jayapura City increased to 51,371 users (24.35%). The lowest proportion of users of contraceptive devices and pills before and during the pandemic was found in Intan Jaya Regency, namely 74 acceptors (0.04%).

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