

# REPORT

## BASELINE DATA ANALYSIS: STRATEGIC HEALTH PURCHASING FOR MATERNAL HEALTH PROGRAM



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## SUMMARY

*U.S. Agency for International Development Health Financing Activity (USAID HFA)* supports the Government of Indonesia to maintain and improve efficiency in health financing to improve financial protection, equitable access to quality health services, and health outcomes, particularly in priority programs i.e., HIV, tuberculosis (TB), and maternal and newborn health (MNH). HFA is a five-year project (2019-2024) that provides technical assistance to strengthen government capacity in financial analysis, stakeholder engagement, learning, and decision-making. Strategic Health Purchasing for Maternal and Newborn Health (SHP MNH) services is part of the USAID HFA activity that addresses the second objective of strategic health purchasing mechanisms and capacities improved. This baseline study is part of the monitoring and evaluation activities for strategic health purchasing for MNH in Kabupaten Serang. This study aimed to obtain basic information regarding access to and quality of MNH services, data recording and reporting systems, and continuity of care for pregnant women before the SHP MNH pilot will be implemented in Kabupaten Serang in 2022.

Baseline data for SHP MNH was collected from May to June 2021 in four sub-districts in Kabupaten Serang: the three SHP intervention areas of Cikande, Kragilan, and Kramatwatu, and the control area of Tirtayasa. An additional health provider survey was conducted in two sub-districts for control areas Kibin and Ciruas in April 2022. The provider survey, using purposive sampling, included a total of 85 health providers (i.e., puskesmas, private clinics, private midwives, and village midwives), and the mothers survey included 557 pregnant women and mothers. In addition, secondary data was collected for the period of January 2019 to December 2021 from the Maternal and Child Health (MCH) Local Area Monitoring (PWS-KIA)<sup>1</sup> and puskesmas monthly report (LB-3).

The results of the baseline survey shows that only a small number of service providers have the capacity to provide complete ANC 10T and 3E services. The main obstacles are limited capacity of the laboratory and the capacity of the health workers. The empanelment of private providers to Badan Penyelenggara Jaminan Sosial Kesehatan (BPJSK), the national Healthcare and Social Security Agency, is still low. The design of the SHP pilot includes provider networks of private midwives with puskesmas or private clinics. The SHP pilot is designed to increase access to and quality of MNH services provided by improving supervision of midwives, referral systems, and access to lab services. In addition, the network of service providers is expected to improve the recording and reporting of patient data, and monitoring and management of high-risk pregnant women to ensure that pregnancy risks can be detected early and treated properly.

The mothers survey identified a tendency to change health providers for MCH services. Distance from home, quality of services, and cost were the main reasons to change health providers; therefore, the SHP design's focus on increasing quality of services and financial protection (membership of mothers to JKN and empanelment of providers to BPJSK) is validated as promising interventions to increase the retention of pregnant women with the same health provider and ensure continuity of care.

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<sup>1</sup> PWS-KIA or MCH Local Area Monitoring is a recording and reporting management tool to continuously monitor MCH program implementation and MCH service coverage in a district or municipality.

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## LIST OF ABBREVIATIONS

AMP-SR	Audit Maternal Perinatal–Surveillance and Response
ANC	Antenatal care
ANC1-4	First-fourth antenatal care visit
BPJSK	Badan Penyelenggara Jaminan Sosial Kesehatan (Healthcare and Social Security Agency)
BOK	Bantuan Operasional Kesehatan (Health Operational Assistance Fund)
CHEPS	Center for Health Economics and Policy Studies
CHPM	Center for Health Policy and Management
DHS	Demographic and Health Survey
DHO	District Health Office
DJSN	Dewan Jaminan Sosial Nasional (National Social Security Council)
FFS	Fee for services
FKTP	Fasilitas Kesehatan Tingkat Pertama (Primary Health Facilities)
FKRTL	Fasilitas Kesehatan Rujukan Tingkat Lanjut (Referral Health Facilities)
GOI	Government of Indonesia
GP	General practitioners
HFA	Health Financial Activity
HIV	Human immunodeficiency virus
INA-CBG	Indonesia case-based group
IMR	Infant mortality rate
IUD	Intra uterine device
Jampersal	Jaminan Persalinan (Security Childbirth)
JKN	Jaminan Kesehatan Nasional (National Health Insurance Scheme)
KB	Keluarga Berencana (Family planning)
K1	Coverage of first ANC visit
K4	Coverage of completed fourth ANC visit
Kf1	Coverage of the first PNC visit
Kf3	Coverage of completed third ANC
KIBBLA	Jejaring Kesehatan Ibu dan Bayi Baru Lahir (Maternal and Neonatal Health Services Network)
Labkesda	Laboratorium Kesehatan Daerah (Regional Health Laboratory)
LB-3	Puskesmas monthly report
MCH	Maternal and child health
MMR	Maternal mortality ratio
MNH	Maternal and newborn health
MOH	Ministry of Health
ObGyn	Obstetric gynecology specialist
OOP	Out-of-pocket payments
PHC	Primary health care
PNC	Postnatal care

PONED	Pelayanan Obstetri Neonatal Emergensi Dasar (Basic Emergency Neonatal Obstetric Services)
Posyandu	Pos Pelayanan Terpadu (Integrated Services Post)
PPJK	Pusat Pembiayaan dan Jaminan Kesehatan (Health Insurance and Financing Center)
PPSDM	Center for Research and Human Resource Development
Puskesmas	Pusat Kesehatan Masyarakat (Public Health Center)
PWS-KIA	Pemantauan Wilayah Setempat Kesehatan Ibu dan Anak (Monthly Maternal and Child Health Reporting System)
RPJMN	Rencana Pembangunan Jangka Menengah (Medium-Term National Development Plan)
R4D	Results for Development
SHP	Strategic health purchasing
SISMONEV	Sistem Monitoring dan Evaluasi Jaminan Sosial (Social Security Monitoring and Evaluation System)
SUPAS	Intercensus population survey
TB	Tuberculosis
TBA	Traditional birth attendance (Paraji/Dukun)
UGM	Universitas Gadjah Mada
USAID	U.S. Agency for International Development
USG	Ultrasound
WHO	World Health Organization
3E	Triple Elimination (Hepatitis B, HIV, and syphilis)
5T	body weight and height measurement, blood pressure examination, fundal height measurement, iron supplementation, and fundal heart beat and presentation
10T	Ten antenatal services defined by Minister of Health Regulation No. 21/2021

## 1. INTRODUCTION

Maternal health is a priority in Rencana Pembangunan Jangka Menengah (RPJMN), Indonesia's Medium-Term National Development Plan 2020-2024, which has mandated acceleration in the decline of maternal mortality (Government of Indonesia, 2020). The intercensus population survey (SUPAS) of 2015 showed a maternal mortality ratio (MMR) of 305 per 100,000 live births, while the Indonesian Demographic and Health Survey (DHS) in 2017 showed an infant mortality rate (IMR) of 24 per 1,000 live births. One main target in RPJMN for this priority is to reduce the MMR from 230 per 100,000 live births in 2020 to 183 per 100,000 live births by 2024.

However, improving maternal health has never been an easy task in Indonesia. While 96.4% of pregnant women surveyed had received their first antenatal care (ANC) visit (ANC1), only 88.5% completed the fourth antenatal care visit (ANC4) in 2019. To reduce MMR, women need high quality antenatal and postnatal care (PNC), delivery by skilled health workers at an appropriate facility. Basic health research, or riset kesehatan dasar, conducted in 2018 by the Ministry of Health (MOH) showed that the main health care provider for MNH is midwives (84.8%), followed by obstetricians (14.1%) and general practitioners (GP) (0.9%). Quality of maternal health services is defined by the MOH as the provision of all ten basic ANC services known as ANC 10T. A study conducted in 2017 by the Center for Research and Human Resource Development (PPSDM) found that only a small proportion of midwives can perform at least nine out of ten basic ANC services, despite being the main MNH providers in Indonesia.

### Box 1. Standard ANC 10T Services

According to Minister of Health Regulation No. 21/2021 (Ministry of Health, 2021), ANC 10T services consist of ten services:

1. Body weight and height measurement
2. Blood pressure examination
3. Fundal height measurement
4. Tetanus immunization and status
5. Iron supplementation
6. Upper-arm measurement and nutritional
7. Laboratory examinations
8. Fetal heart beat and presentation examination
9. Counseling
10. Case management or treatment

Health financing is a powerful policy instrument to improve the health system's ability to maintain and improve people's health and economic status. The purpose of health financing is to provide funds, establish appropriate financial incentives for service providers, and ensure that all individuals have access to adequate public and private health care (WHO 2010). The health financing functions are revenue collection, pooling of revenue from different sources, and purchasing of (payment for) health care.

The purchasing function can play an important role by incentivizing provision of good quality, efficient health services. Purchasing is divided into two types: passive purchasing and active or strategic

purchasing. Passive purchasing is when the purchaser only follows a predetermined budget allocation. Meanwhile, active or strategic purchasing consists of finding the most effective way to optimize the health system's performance (Hidayat and Nurwahyuni 2017). Strategic purchasing can increase efficiency, effectiveness, and responsiveness to contribute to the achievement of health outcomes. In the purchasing process, purchasers can influence providers' performance, especially in terms of the quality of services provided by health facilities. (Figueras, Robinson, and Jakubowski 2005).

Indonesia's National Health Insurance system, JKN, has an essential role in paying for health services, including MNH services for pregnant women. The Healthcare and Social Security Agency (BPJSK) is responsible for the purchasing function because it contracts with and pays public and private providers to serve JKN members. For primary care, BPJSK pays the PHC provider a fixed amount per person per month, known as a capitation payment. In addition, BPJSK pays non-capitation tariffs for specific ANC, PNC, and other services. For inpatient care, BPJSK pays the hospital a fixed amount for each inpatient case within a diagnostic group. For example, within the diagnostic group of Female Reproductive System, BPJSK pays a fixed tariff for a caesarean-section delivery. This is known as the Indonesia case-based group (InaCBG) payment system. Because of its role as the purchaser, BPJSK has the power and opportunity to pay providers strategically to influence their behavior to increase access and quality of service delivery.

U.S. Agency for International Development's Health Financing Activity (USAID HFA) is a five-year project (2019-2024) that supports the Government of Indonesia to implement evidence-based health financing policies to improve financial protection, equitable access to quality health services, and health outcomes, particularly in priority programs i.e., HIV, TB, and maternal health. HFA provides technical assistance to strengthen government capacity in financial analysis, stakeholder engagement, learning, and decision-making.

HFA is implemented by a consortium of organizations led by ThinkWell, including Results for Development (R4D), Center for Health Economics and Policy Studies (CHEPS) University of Indonesia, and Center for Health Policy and Management (CHPM) at Gadjah Mada University (UGM). The HFA team works closely with its government partner, the Health Insurance and Financing Center (PPJK) in the Ministry of Health to achieve two main objectives:

1. Improved sustainability of GOI financing for health
2. Strategic health purchasing mechanisms and capacities improved

The overall goal of the activities under objective 2 is to improve the ability of key health governance stakeholders (MOH, BPJSK, MOH, DJSN, and local governments) to purchase health services strategically to get the most value for health funds in line with health sector priorities. HFA is supporting these GOI stakeholders to design and implement pilots of SHP for MNH and TB care. R4D provides technical assistance in SHP design, implementation, and evaluation. The Center for Health Policy and Management UGM is responsible for SHP MNH and TB monitoring and evaluation using outcome evaluation and implementation research.

This baseline study was conducted in 2021 and April 2022 as part of the monitoring and evaluation activities for strategic health purchasing for MNH in Kabupaten Serang. This baseline study report presents basic information regarding access and quality of MNH services, recording and reporting systems, and

continuity of care for pregnant women prior to implementation of the SHP MNH pilot in Kabupaten Serang in Q3 of 2022.

### Introduction to Kabupaten Serang District

Kabupaten Serang is one of eight districts in Banten Province, approximately 70 kilometers from Jakarta, the capital city of Indonesia. As of 2020, Kabupaten Serang has an area of 1,467.35 km<sup>2</sup> which consists of 29 sub-districts and 326 villages. Kabupaten Serang has a total population of 1,508,397; 764,097 males and 744,300 females. Kabupaten Serang has one public hospital type B, Drajat Prawiranegara Hospital Serang, which is the referral hospital for Kabupaten Serang, Kota Serang (Serang City), and two other districts in Banten Province: Kabupaten Pandeglang and Kabupaten Lebak. Travel time to Drajat Prawiranegara referral hospital ranges from 15 minutes to two hours. Three private hospitals help reduce travel time for hospital care, namely Hermina Ciruas hospital, Kurnia hospital, and Permata hospital. The health infrastructures in Kabupaten Serang can be seen in the table below.

**Table 1.** Health Infrastructures in Kabupaten Serang<sup>2</sup> (DHO, 2020b)

Health Infrastructures	Total
Public Hospital	1
Private Hospital	3
Maternal and Child Hospital	1
Puskesmas Perawatan (Inpatient Public Health Center)	15
Puskesmas Non Perawatan (Outpatient Public Health Center)	16
Puskesmas Keliling (Mobile Public Health Center)	31
Puskesmas Pembantu (Supporting Public Health Center)	42
Primary Clinics	96
Secondary or Main Clinics	2
Traditional Medicines Practice	1043
Posyandu (Pos Pelayanan Terpadu) or Integrated Services Unit	1533
Regional Health Laboratory	1

<sup>2</sup> Data source: Health Profile of Kabupaten Serang 2020 (DHO, 2020b)

## 2. OBJECTIVES

This baseline analysis was conducted as part of the outcome evaluation for SHP MNH in Kabupaten Serang, Indonesia. The outcome evaluation design for SHP MNH is a quasi-experimental with control area. The analysis method will use difference-in-difference and descriptive statistics such as T-test and exploratory regression. The purpose of this baseline study was to obtain the background information regarding the quality of maternal health services, providers empaneled with BPJSK to serve patients covered by JKN, and maternal health recording and reporting system. Findings from this baseline study will inform implementation of the SHP pilot in 2022.

## 3. METHODOLOGY

This baseline study included a maternal health provider survey, mother survey, and secondary data analysis. Data collection was done in the three intervention sub-districts: Kecamatan Cikande, Kecamatan Kragilan and Kecamatan Kramatwatu; and the control sub-district of Kecamatan Tirtayasa in April-May of 2021. An additional health provider survey was conducted in Kecamatan Kibin and Kecamatan Ciruas as control areas in April 2022. The selection of intervention and control areas were based on discussion between local government (i.e., District Health Office (DHO) in Kabupaten Serang), national government (i.e., Ministry of Health, BPJSK, and the team from HFA).

The sample size procedure uses the Slovin method, which is simply given as follows:

$$n = \frac{N}{(1 + Ne^2)}$$

Where  $n$  is the minimum sample to be used,  $N$  is the population (assuming it is known), and  $e$  is the margin of error. The population of the private clinics, private midwives, village midwives, and mothers (given the inclusion criteria as explained later) in each sub-district in this study is as follows:

**Table 2.** The Population and Sample of Provider and Mother Survey in Kabupaten Serang

	Kabupaten Serang	
	Intervention Sub-districts	Control sub-districts
<b>Sub-district Intervention Area</b>	Kecamatan Cikande, Kragilan and Kramatwatu	Kecamatan Tirtayasa, Kibin and Ciruas
<b>Number of Provider empaneled with BPJSK</b>	Puskesmas: 4 Clinic: 11	Puskesmas: 3 Clinic: 9
<b>Number of Puskesmas</b>	Kragilan: 2 Cikande: 1 Kramatwatu: 1	Tirtayasa: 1 Kibin: 1 Ciruas: 1
<b>Number of Private Clinics</b>	Kragilan: 10 Cikande: 8 Kramatwatu: 7	Tirtayasa: 2 Kibin: 6 Ciruas: 5
<b>Number of Private Midwives</b>	Kragilan: 17 Cikande: 23	Tirtayasa: 15 Kibin: NA

	Kramatwatu: 22	Ciruas: NA
<b>Number of Village Midwives</b>	Kragilan: 6 Cikande: 13 Kramatwatu: 15	Tirtayasa: 14 Kibin: NA Ciruas: NA
<b>Number of Pregnant Women<sup>3</sup></b>	5394 (DHO, 2021a)	3175 (DHO, 2021a)
<b>Sample Size for Mother Survey (CI=95%, Margin of Error 5%)</b>	359	343
<b>Sample for Baseline Data Collection</b>	Health providers survey: 57 i.e., 4 puskesmas, 9 private clinics, 36 private midwives and 8 village midwives  Mothers survey: 442 mothers	Health providers survey: 28 i.e., 3 puskesmas, 11 private clinics, 6 private midwives and 8 village midwives  Mothers survey: 115 mothers
<b>Timeline</b>	April-May of 2021	Tirtayasa: April-May of 2021 Kibin and Ciruas: April 2022

### 3.1. Secondary Data Collection

Secondary data was collected for the SHP MNH outcome evaluation indicators to measure the effectiveness of the intervention in achieving its outcomes. There are two types of Maternal and Child Health regular reporting system, reported from Puskesmas to DHOs:

1. Pemantauan Wilayah Setempat Kesehatan Ibu dan Anak (PWS-KIA) or Local Area Monitoring System for Maternal and Child Health: Including coverage of 1<sup>st</sup> ANC, coverage of 4<sup>th</sup> ANC, coverage of 1<sup>st</sup> PNC, coverage of 3<sup>rd</sup> PNC and total estimated of pregnant women.
2. Laporan Bulanan-3 (LB-3) or puskesmas monthly report: Including the number of birth delivery in each type of health facilities, the number of birth delivery based on assistance, and the number of referrals for obstetric complications.

Secondary data collection including PWS-KIA and LB-3 period of 2019 and 2020 was conducted during Q3 of 2021 from the family health division of District Health Office in Kabupaten Serang, and PWS-KIA and LB-3 period of 2021 was collected in Q1 of 2022.

In addition, the immunization report period of 2020 and 2021 was collected from Disease Prevention and Control Division of District Health Offices, and BPJSK claims period of 2019 and 2020 was collected from the research and innovation division of BPJSK through Information and Documentation Manager or Pengelola Informasi dan Dokumentasi ( E-PPID) website in October 2021.

### 3.2. Maternal Health Provider Survey

The SHP MNH pilot focuses on primary health care (PHC) providers providing maternal and neonatal services in the intervention (i.e., Cikande, Kragilan, and Kramatwatu) and control sub-districts (i.e.,

<sup>3</sup> Data source: Local Area monitoring Maternal and Child Health 2020 (District Health Office, 2021)

Tirtayasa, Ciruas, and Kibin) in Kabupaten Serang. Providers categorized as PHC included puskesmas (public health centers), private clinics, private midwives, and village midwives. Private midwives practice midwifery individually at their own locations. Village midwives have a midwife practice permit at a puskesmas and get an assignment from the District Health Office to perform midwifery in the village where they reside within the catchment area of puskesmas. The survey in Cikande, Kragilan, Kramatwatu, and Tirtayasa was conducted from May-June of 2021. An additional health provider survey in Kibin and Ciruas was conducted in April 2022. The total number of MNH providers to be surveyed was 85 health providers, including seven puskesmas, 20 private clinics, 42 private midwives, and 16 village midwives.

The survey specifically aimed to do the following:

1. Obtain information regarding health providers' satisfaction towards health service tariffs and the claims and payment mechanism administered by BPJSK
2. Assess the flow and efficiency of the provider claims and payment mechanism
3. Obtain information about monitoring and evaluation system for maternal health program
4. Obtain information about the maternal health provider network
5. Explore professional behavior of health providers when providing maternal health services and whether health providers comply with standardized maternal health reporting mechanisms
6. Obtain information about maternal health providers empaneled with BPJSK

The inclusion criteria for maternal health health provider survey respondents included the following:

1. Primary health providers, both public and private (i.e., puskesmas, private clinics, private midwives, and village midwives)
2. Located in SHP maternal health program intervention and control areas
3. Health providers in the intervention areas planned to participate in the SHP MNH pilot
4. Health providers were willing to participate in the survey and complete informed consent

The exclusion criteria for maternal health health provider survey respondent included the following:

1. Primary health providers, both public and private operating less than one year
2. Providers not willing to participate in the survey and/or not willing to complete informed consent.

### **3.3. Mothers Survey**

The survey questionnaire for mothers was developed and administered for women accessing maternal health services (antenatal care, birth delivery, and postnatal care services) from the health providers in the SHP intervention and control areas in Kabupaten Serang. The sampling method for this survey was random sampling. The survey was conducted between May and June 2021. The number of mothers surveyed was 557 mothers.

This survey specifically aimed to do the following:

1. Obtain information regarding pregnant women's health-seeking behavior
2. Obtain information about financing sources

3. Evaluate conformity between MCH Handbook and Mother Card
4. Understand mothers' behavior towards Maternal Health services
5. Understand factors influencing mothers' retention in similar health providers
6. Understand factors influencing mothers to drop out or be lost to follow-up

The inclusion criteria for mother survey respondents included the following:

1. Pregnant women receiving ANC services, at least in the second trimester or completing two ANC service visits in certain health providers
2. Postpartum women after receiving maternity services
3. Postpartum women receiving postnatal care services
4. Pregnant women who were lost to follow-up
5. Pregnant women and postpartum mothers who were willing to participate and complete informed consent

The exclusion criteria include the following:

1. Pregnant women, postpartum mothers who were ill or under intensive care
2. Pregnant women in first trimester
3. Pregnant women and postpartum mothers with a mental health condition
4. Pregnant women and postpartum mothers who received maternal health services more than two years ago
5. Pregnant women and postpartum mothers not willing to participate and/or complete informed consent

## 4. FINDINGS

### 4.1. Secondary Data Analysis

Secondary data related to the SHP MNH outcome evaluation indicators were collected as baseline data from the MCH recording and reporting system (i.e., LB-3, PWS-KIA, and immunization report) from the District Health Office in Kabupaten Serang and MNH capitation claim data in Kabupaten Serang from BPJSK.

The SHP MNH outcome indicators are coverage of 1<sup>st</sup> ANC visit (K1), coverage of completed 4<sup>th</sup> ANC visit (K4), coverage of 1<sup>st</sup> PNC visit (Kf1), coverage of completed 3<sup>rd</sup> PNC visit (Kf3), the number of birth delivery based by location and type of assistance, as well as indicators related to financing i.e., the number of people enrolled in JKN, utilization rate, and the MNH service non-capitation claims received and payments made by BPJSK during the 30-month period of Q1 2019 to Q2 2021.

#### Box 2. Definition of K1, K4, Kf1 and Kf3 indicators

Indicator program to see access to MCH services in the districts includes the following:

1. Coverage of 1<sup>st</sup> ANC or Kunjungan 1 (K1): The percentage of coverage is defined as the number of pregnant women with minimum one visit to a health provider (numerator) divided by estimated number of pregnant women (denominator).
2. Coverage of 4<sup>th</sup> ANC or Kunjungan 4 (K4): The percentage of coverage is defined as the number of pregnant women with completed four-time visits to health providers (numerator) divided by estimated number of pregnant women (denominator).
3. Coverage of 1<sup>st</sup> PNC or Kunjungan Nifas 1 (Kf1): The percentage of coverage is defined as the number of postnatal mother with minimum one visit to health providers (numerator) divided by estimated number of postnatal mothers (denominator).
4. Coverage of 3<sup>rd</sup> PNC or Kunjungan Nifas 3 (Kf3): The percentage of coverage is defined as the number of postnatal mothers who have completed three visits to health providers (numerator) divided by estimated number of postnatal mothers (denominator).

The baseline study found that coverage of ANC services in Kabupaten Serang is quite high; however, coverage of 1<sup>st</sup> ANC visit is consistently lower for the 4<sup>th</sup> ANC visit. Coverage of ANC visits in the intervention areas includes Kecamatan Cikande, Kragilan, and Kramatwatu, while coverage of ANC visits in the control areas includes Kecamatan Tirtayasa, Kibin, and Ciruas. The coverage of ANC visit in 2021 has covered the value from January to December of 2021. The denominator of estimated pregnant women in each sub-district may differ in each period of 2019, 2020, and 2021.

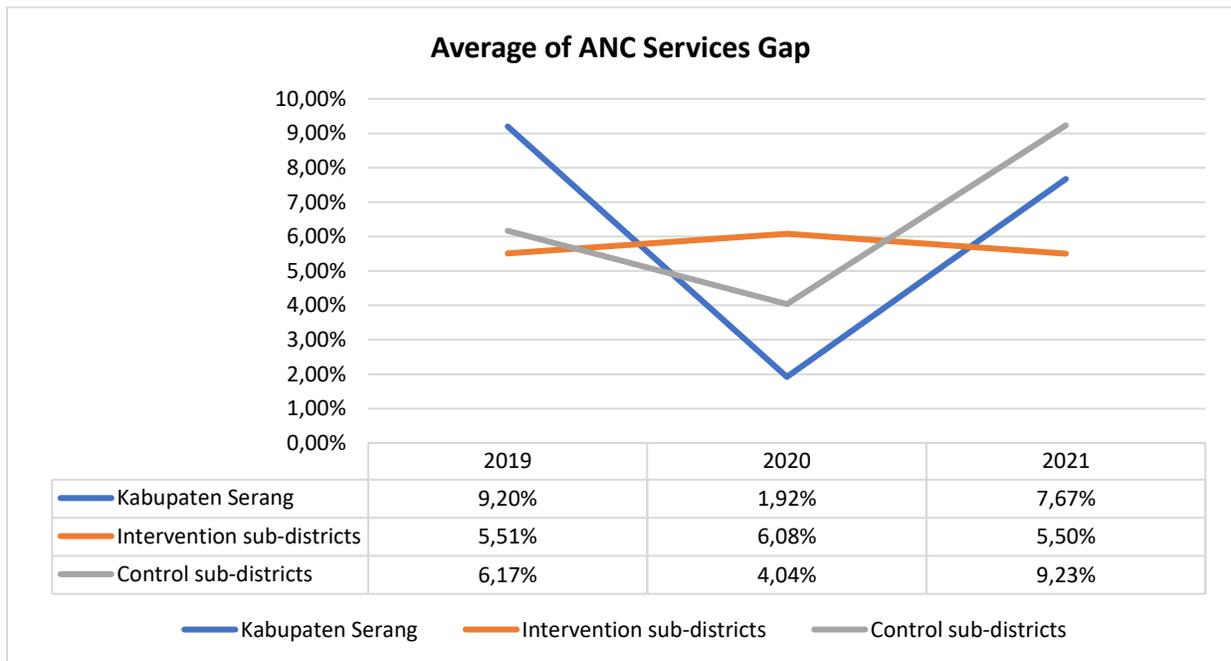
**Table 3.** Coverage of 1<sup>st</sup> ANC and 4<sup>th</sup> ANC in the Kabupaten Serang, Intervention Sub-districts, and Control Sub-districts

	2019	2020	2021
<b>Coverage of 1<sup>st</sup> ANC service</b>			
<b>Kabupaten Serang</b>	105.78%	106.49%	99.65%
<b>Intervention sub-districts</b>	107.73%	109.34%	99.35%
<b>Control sub-districts</b>	106.10%	117.48%	99.67%
<b>Coverage of 4<sup>th</sup> ANC service</b>			
<b>Kabupaten Serang</b>	96.58%	104.56%	91.97%
<b>Intervention sub-districts</b>	102.22%	103.26%	93.85%
<b>Control sub-districts</b>	99.93%	113.45%	90.44%

Data Source: Local Area Monitoring Maternal and Child Health 2019-2021 (DHO, 2022a; DHO,2021; DHO,2020a)

The average ANC service gap is described as the difference between the coverage of 1<sup>st</sup> ANC visit and the coverage of 4<sup>th</sup> ANC visit. The lower the ANC service gap number, the better the ANC services provided.

**Figure 1.** Average gaps in ANC services

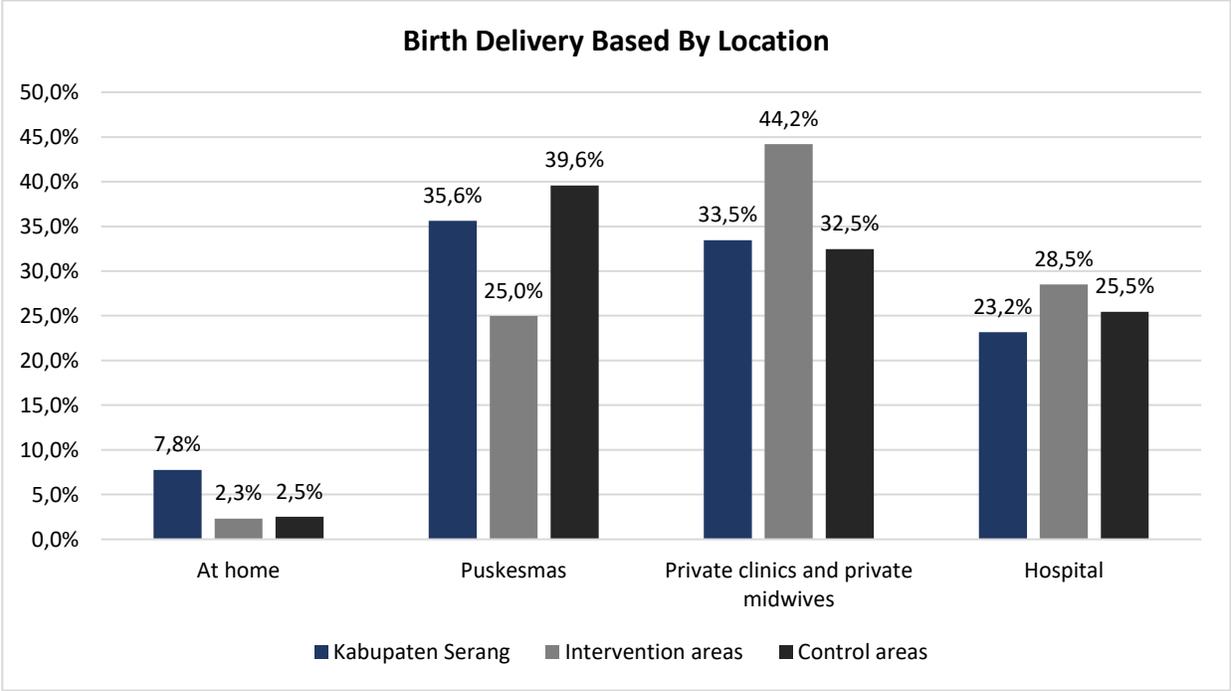


Data Source: Local Area Monitoring Maternal and Child Health 2019-2021 (DHO, 2022a; DHO,2021; DHO,2020a)

Figure 1 shows the average gaps in ANC services between 1<sup>st</sup> ANC coverage and 4<sup>th</sup> ANC coverage in the intervention areas, control area, and Kabuparen Serang district level. As shown in the graphic, ANC gaps have been decreasing from 9.2% to 7.67% in the district level, meanwhile, the ANC gaps remain around 5.5% in the intervention areas and increased from 6.17% to 9.23% in the control area. To ensure the continuity of care in MNH services, the gaps between services is recommended to be reduced.

Selection of the delivery location and type of birth attendance is essential to ensure mothers are properly assisted if any complication occurs. There was a total of 5,895 births in the intervention area (i.e., Kragilan, Cikande, and Kramatwatu) between January and December 2021, most deliveries (44.2%) took place in private clinics and with private midwives, higher than the delivery service in private facilities at the district level (33.5%), as shown in Figure 2. Meanwhile, a majority (39.2%) of 3,862 birth deliveries in the control area (i.e., Tirtayasa, Kibin, and Ciruas) took place in puskesmas. In addition, both in the intervention and control area, delivery at home is still found.

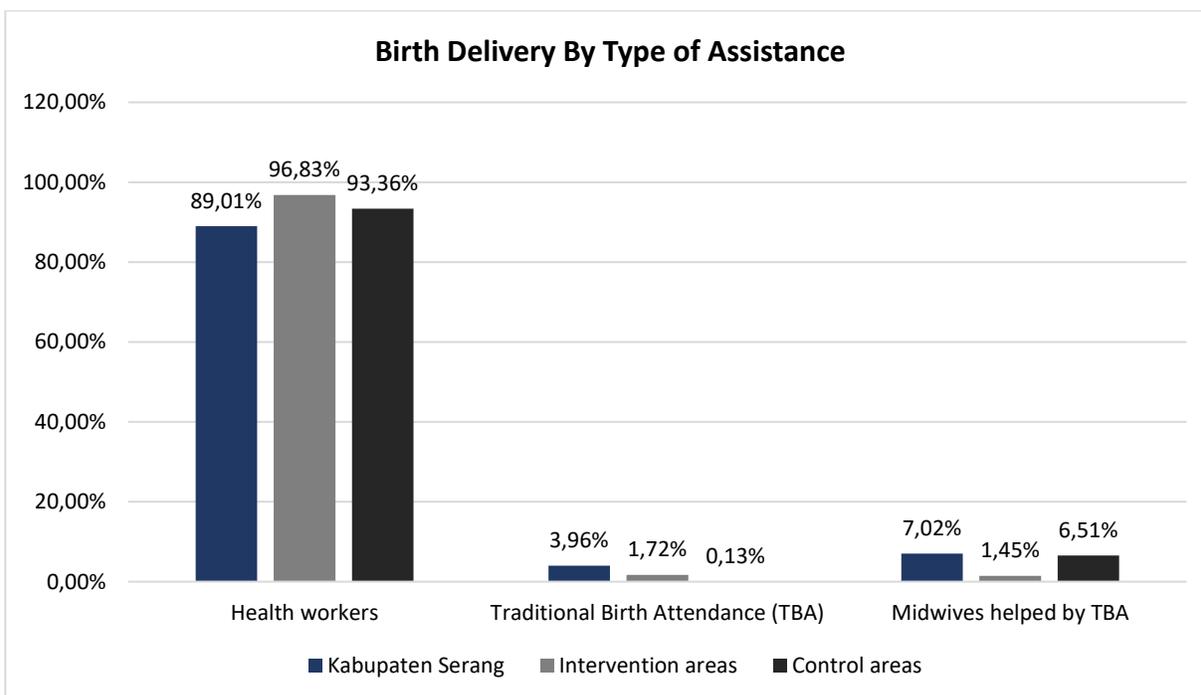
**Figure 2.** Birth delivery based on location in the Kabupaten Serang, intervention, and control areas



Data source: Monthly Report LB-3 Kabupaten Serang 2021 (DHO, 2022b)

Total birth deliveries in 2021 were also sorted by type of attendance during delivery. Secondary data shows that traditional birth attendance (TBA) is still found in the intervention and control areas in Kabupaten Serang. Figure 3 below shows the skilled birth attendance vs. traditional birth attendance in the Kabupaten Serang, intervention area, and control area.

**Figure 3. Birth deliveries by type of assistance in Kabupaten Serang, intervention, and control areas**



Data source: Monthly Report LB-3 Kabupaten Serang 2021 (DHO, 2022b)

Birth delivery assisted by traditional birth attendance or dukun is still about (3.96%) of the total birth deliveries in Kabupaten Serang. The deliveries assisted by dukun in the intervention and control areas are lower than the percentage at the district level. To reduce the number of deliveries by TBA alone, the DHO of Kabupaten Serang issued regulations for TBA and midwife partnership, which state that the TBA’s role is to assist the midwife during childbirth.

The source of financing for MNH services is very relevant to strategic purchasing. Based on data from the Social Security Monitoring and Evaluation System hosted by the National Social Security Council (DJSN), as of March 2022, JKN coverage of the population in Kabupaten Serang was 73.5% in 2019, 67.3% in 2020, and 73.5% in 2021. The data shows that the portion of the population covered by JKN has slightly increased in the last two years. JKN coverage is important for the SHP pilot because only the MNH services financed by JKN will be subject to strategic purchasing. Detailed information on the mother’s financial sources will be described in the mother’s survey results.

Another measure of JKN’s influence is the number of health providers empaneled with the purchaser, BPJSK. Health provider empanelment (i.e., via contract) with BPJSK in Kabupaten Serang is still low. As described in Table 5, all puskesmas in the intervention and control areas have contracted with BPJSK. Meanwhile, from the total of 38 private clinics, only 20 have empaneled with BPJSK, i.e., 11 clinics in the intervention area and nine clinics in the control area. Only one private midwife in Kramatwatu has contracted with BPJSK through clinics, and there is no village midwife contracted directly with BPJSK because they are associated with the puskesmas.

**Table 4.** Health Providers Empanelment to BPJSK

Name of Health Providers	Type of Health Providers	Sub-district
Puskesmas Cikande	Puskesmas	Cikande
Puskesmas Kragilan	Puskesmas	Kragilan
Puskesmas Pematang	Puskesmas	Kragilan
Puskesmas Kramatwatu	Puskesmas	Kramatwatu
Puskesmas Tirtayasa	Puskesmas	Tirtayasa
Puskesmas Kibin	Puskesmas	Kibin
Puskesmas Ciruas	Puskesmas	Ciruas
Modern Medika	Private clinic	Kragilan
Andri Medistra 2	Private clinic	Kragilan
Mitra Medika Cisait	Private clinic	Kragilan
Murasaki Medika	Private clinic	Kragilan
Elni Medika	Private clinic	Kragilan
Griya Sehat	Private clinic	Kramatwatu
Fatahilah Medika	Private clinic	Kramatwatu
Ambon Era Medika	Private clinic	Kramatwatu
Gandi Medika	Private clinic	Cikande
Nurhikmat Medika	Private clinic	Cikande
Mitra Medika	Private clinic	Cikande
Sapta Medika	Private clinic	Kibin
Muchibat	Private clinic	Kibin
Modern Medika	Private clinic	Kibin
Multazam	Private clinic	Kibin
Tambak Medika	Private clinic	Kibin
Klinik Kibin	Private clinic	Kibin
Khoirunnisa	Private clinic	Ciruas
Andri Medistra	Private clinic	Ciruas
Asyifa Tazkia Medika	Private clinic	Ciruas

Data source: BPJSK, 2021a

BPJSK has two payment mechanisms for Primary Health Facilities (FKTP) empaneled: capitation for general primary care and non-capitation payments for MNH services. Non-capitation payments for MNH services include antenatal care, postnatal care, normal vaginal delivery, normal vaginal delivery with basic emergency in puskesmas (PONED), pre-referral services for obstetrics, and neonatal and family planning. Table 5 presents the total number of claims and cost of non-capitation payments for MNH services in the four SHP pilot areas in Kabupaten Serang in 2019 and 2020.

**Table 5. Maternal Health Non-Capitation Claims and Costs (IDR) in Primary Health Facilities in the Four SHP Pilot Areas<sup>4</sup> in Kabupaten Serang**

Services	2019		2020	
	Total Claims	Total Cost (IDR)	Total Claims	Total Cost (IDR)
Vaginal delivery with basic emergency treatment	226	214,700,000	119	112,800,000
Normal vaginal delivery (midwives)	1,291	903,700,000	1,276	893,200,000
Normal vaginal delivery (physician)	31	24,800,000	23	18,300,000
1 <sup>st</sup> ANC service	109	5,450,000	179	8,950,000
2 <sup>nd</sup> ANC service	147	7,350,000	200	10,000,000
3 <sup>rd</sup> ANC service	166	8,300,000	221	11,050,000
4 <sup>th</sup> ANC service	80	4,000,000	27	1,350,000
Family planning service: Intra-uterine device removal/implant	1	100,000	1	100,000
Family planning service: Intra-uterine device insertion/implant	367	36,700,000	197	19,700,000
Family planning service: Injection	1,432	21,450,000	814	12,210,000
1 <sup>st</sup> PNC service	124	3,100,000	24	600,000
2 <sup>nd</sup> PNC service	148	3,700,000	52	1,300,000
3 <sup>rd</sup> PNC service	148	3,700,000	26	650,000
4 <sup>th</sup> PNC service	12	300,000	22	550,000
Pre-referral service for obstetric complications	663	82,875,000	705	88,125,000
Postpartum treatment service	3	525,000		
<b>Total</b>	<b>4,658</b>	<b>1,320,750,000</b>	<b>3,886</b>	<b>1,178,885,000</b>

Data source: BPJSK, 2021b

<sup>4</sup> BPJSK claim data covered four sub-districts Kecamatan Cikande, Kragilan, Kramatwatu, and Tirtayasa in Kabupaten Serang in 2019 and 2020.

It can be seen that the total non-capitation claims for MNH services declined from 2019 to 2020. Specifically, the number of non-capitation claims for ANC services increased; however, claims for childbirth and postnatal services decreased. It is possible that more patients are seeking these services at a hospital. To confirm this hypothesis, secondary data from the INA-CBG claims system related to BPJSK payments to hospitals needs to be collected to compare the number of claims and payments for MNH services in primary and secondary health facilities.

The results of secondary data analysis showed that the coverage of the first ANC visit and completed 4<sup>th</sup> ANC visits in the Kabupaten Serang, intervention area, and control area were quite high, but gaps in the ANC service coverage were still found. This is consistent with the findings from PWS-KIA data presented in Figure 1. Although the coverage of ANC services is high, findings about the quality of ANC services provided will be presented in the next section. Private providers are the main providers for MNH services; however, empanelment of private providers in BPJSK is still quite low. The following section will also analyze provider empanelment with BPJSK in more detail.

## 4.2. Maternal Health Provider Survey

### 4.2.1 Basic Information

This section will describe the findings in the maternal health provider’s survey that was conducted between April and May 2021. There was a total of 74 health providers included in the baseline survey in 2021; 57 (77%) providers in intervention sub-districts (Cikande, Kragilan, and Kramatwatu) and 17 (23%) providers in control sub-district (Tirtayasa).

The health providers in the survey are categorized into public and private facilities as shown in Table 6. Public health providers included puskesmas and their affiliated village midwives, while private clinics and private midwives are categorized as private providers. There were more private health providers, 53 in total, than public providers, 21 in total, in all sub-districts.

*Table 6. Types of Health Providers Included in the Survey*

Sub-district	Health Providers				Total
	Public		Private		
	Puskesmas	Village Midwife	Private Midwife	Private Clinic	
Kragilan	2	4	9	4	19
Cikande	1	4	13	2	20
Kramatwatu	1	0	14	3	18
Tirtayasa	1	8	6	2	17
<b>Total</b>	<b>5</b>	<b>16</b>	<b>42</b>	<b>11</b>	<b>74</b>

#### 4.2.2 Quality of Antenatal Care Services

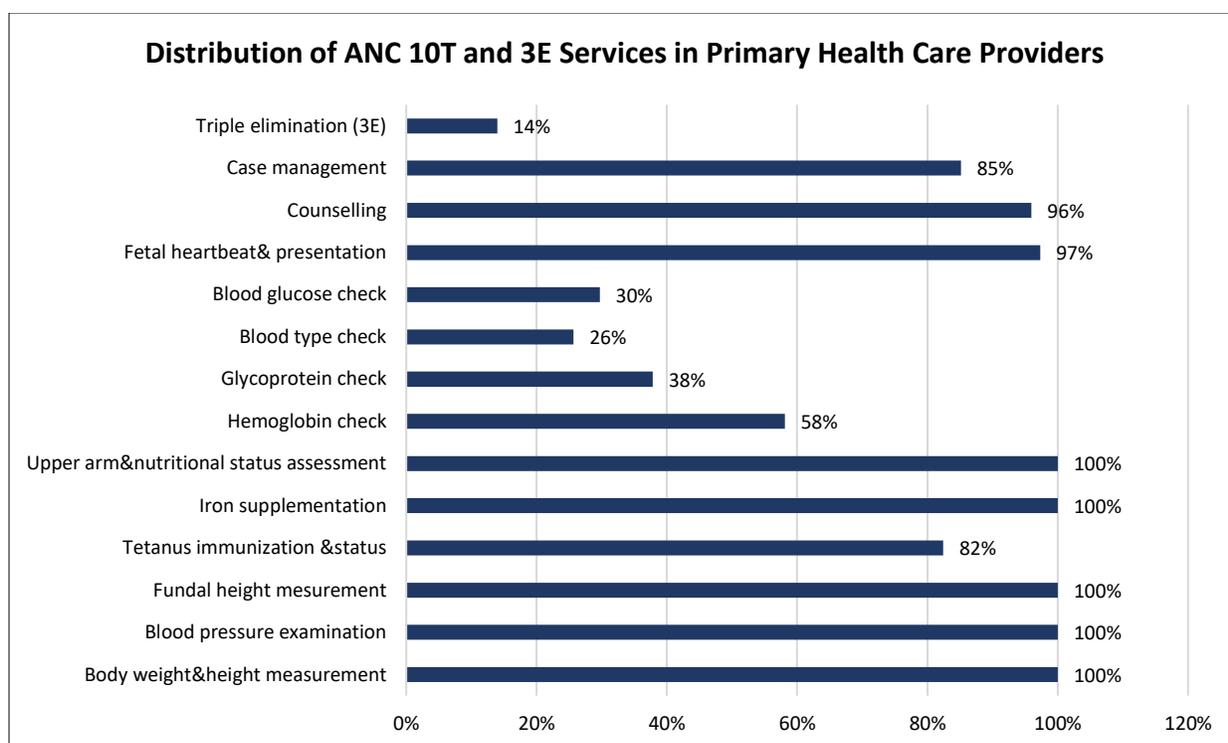
Quality of Antenatal Care Services is one of the indicators assessed in the SHP Maternal Health pilot. According to the Regulation of the Minister of Health No. 21 of 2021, there are ten services that must be provided during the Antenatal Care (ANC) period at the primary care (FKTP) level. The regulation is better known as ANC 10T and specifies services and standards (Box 1). Antenatal services according to standards are essential and integrated with early detection of risk or complicated problems, preparation for delivery and planning, and early preparation for referrals in case of complications.

The table below presents data on adherence to ANC 10T and 3E by the type of primary health provider surveyed.

*Table 7. Adherence to ANC 10T and 3E*

<b>Providers</b>	<b>Reporting to comply with ANC 10T services</b>	<b>Actually, providing ANC 10T services</b>	<b>Reporting to comply with 3E services</b>
Puskesmas	5 (100%)	5 (100%)	5 (100%)
Private clinics	9 (82%)	2 (18%)	3 (27%)
Private midwives	33 (78.6%)	4 (9.5%)	1 (2%)
Village midwives	8 (50%)	1 (6%)	1 (6%)
<b>Total</b>	<b>55 (74%)</b>	<b>12 (16%)</b>	<b>10 (13.5%)</b>

Standardized ANC requires health providers to perform 10T and triple elimination (3E) services to all pregnant women. Table 7 shows that from 74 health providers, only 12 (16%) have capacity to provide all ANC 10T services. The 12 health providers were five puskesmas (100%), two private clinics (18%), four private midwives (9.5%), and one village midwife (6%). As described in the previous section, private midwives are the primary providers for maternal health services; however, only a small number of private midwives (9.5%) are able to provide all ANC 10T services. Similarly, only ten providers (13.5%) reported that they provide 3E services. All puskesmas performed the standardized ANC services, but not all private providers (i.e., private clinics and private midwives) provided them, particularly the 3E services.



**Figure 4.** Distribution of ANC 10T and 3E services in primary health care providers

Figure 4 shows that there were at least five types of ANC 10T services performed by all health providers. These included 1) body weight and height measurement, 2) blood pressure check, 3) fundal height measurement, 4) iron supplementation, and 5) maternal nutritional status assessment. Less than 50% of health providers provide laboratory-based services in ANC 10T such as glycoprotein check (38%), blood type check (26%), blood glucose check (30%). Furthermore, only slightly more than 50% of health providers provided hemoglobin check, and only 14% provided triple elimination services. It was also found that not all health providers, in particular private facilities, perform fetal heartbeat and presentation examinations, counseling, and case management. The proportion of ANC 10T and 3E services per type of health provider can be seen below.

**Table 8.** Types of ANC 10T and 3E Services by Health Provider Types

ANC 10T & 3E Services	Health Facilities			
	Puskesmas	Private Clinics	Private Midwives	Village Midwives
Body weight & height measurement	5 (100%)	11 (100%)	42 (100%)	16 (100%)
Blood pressure examination	5 (100%)	11 (100%)	42 (100%)	16 (100%)
Fundal height measurement	5 (100%)	11 (100%)	42 (100%)	16 (100%)
Tetanus immunisation & status	5 (100%)	5 (45%)	35 (83%)	16 (100%)
Iron supplementation	5 (100%)	11 (100%)	42 (100%)	16 (100%)

Upper arm & nutritional status assessment	5 (100%)	11 (100%)	42 (100%)	16 (100%)
Hb check	5 (100%)	6 (55%)	24 (57%)	8 (50%)
Glycoprotein check	5 (100%)	5 (45%)	12 (29%)	6 (37.5%)
Blood type check	5 (100%)	5 (45%)	8 (19%)	1 (6%)
Blood glucose check	5 (100%)	6 (55%)	7 (17%)	4 (25%)
Fetal heartbeat & presentation	5 (100%)	10 (91%)	41 (98%)	16 (100%)
Counselling	5 (100%)	9 (82%)	41 (98%)	16 (100%)
Case management	5 (100%)	8 (73%)	36 (86%)	14 (87.5%)
Triple elimination	5 (100%)	3 (27%)	1 (2%)	1 (6%)

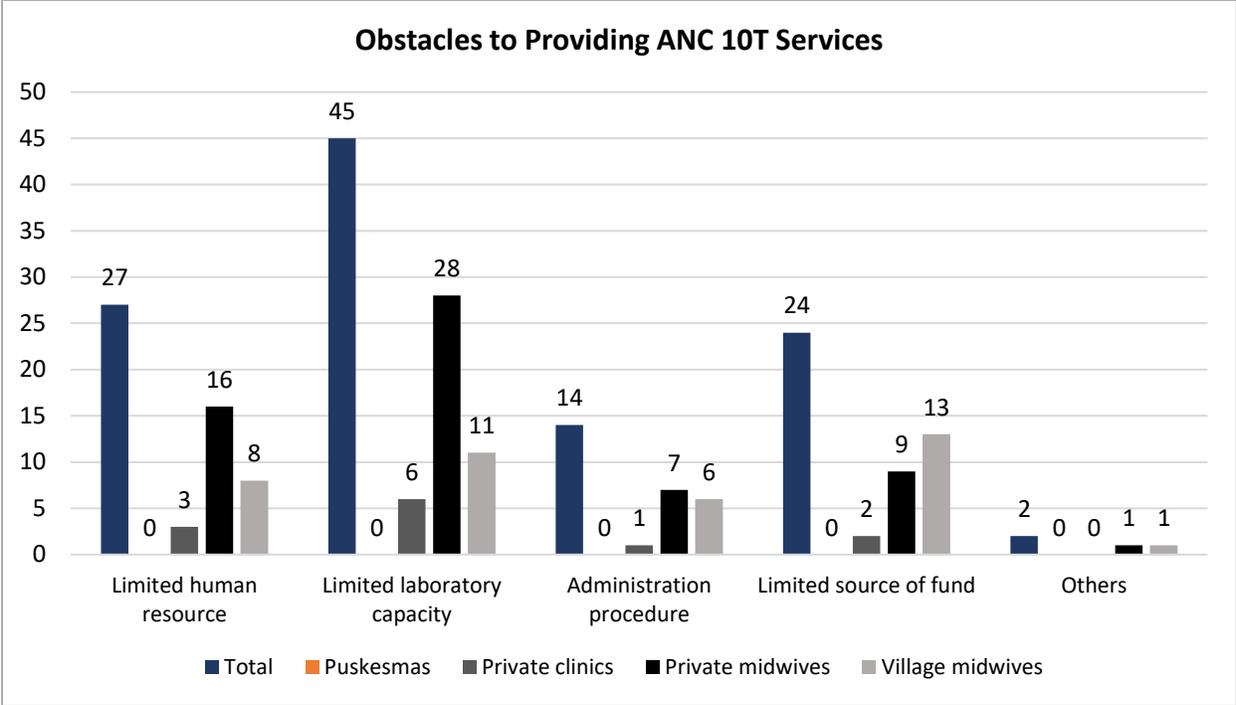
Table 8 shows that only puskesmas could deliver all four ANC laboratory services. As for other types of health facilities, the capacities varied. For example, the capacity of private midwives to deliver ANC laboratory services was very limited. Only a small proportion of them reported providing tests such as glycoprotein (29%), blood type (19%), and blood glucose tests (17%), respectively.

**Table 9.** Distribution of Number of ANC Laboratory Examination Services by Type of Health Provider

Health Facilities	Number of ANC Lab Services					Total
	0	1	2	3	4	
Puskesmas	0	0	0	0	5 (100%)	5
Private clinic	4 (36.4%)	2 (18.2%)	0	0	5 (45.5%)	11
Private midwife	18 (43%)	10 (23.8%)	5 (11.9%)	5 (11.9%)	4 (9.5%)	42
Village midwife	8 (50%)	1 (6%)	4 (25%)	2 (12.5%)	1 (6%)	16
<b>Total</b>	<b>30 (40.5%)</b>	<b>13 (17.5%)</b>	<b>9 (12%)</b>	<b>7 (9%)</b>	<b>15 (20%)</b>	<b>74</b>

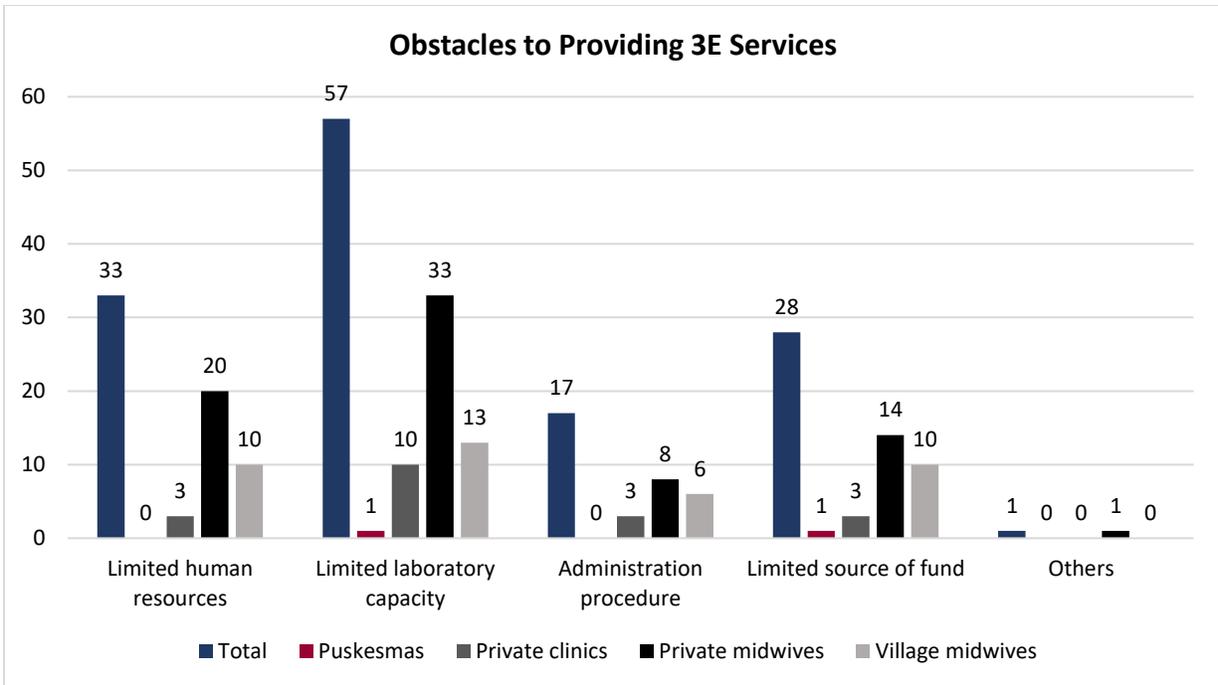
Table 9 further shows that 40.5% of the health facilities in the survey provide no laboratory services for ANC patients, except for puskesmas. On the other hand, 20% of health facilities could provide all four ANC laboratory services. These included all five puskesmas (100%), five private clinics (45.5%), four private midwives (9.5%), and one village midwife (6%).

The majority (74%) of health providers reported that they faced obstacles to perform ANC 10T (Figure 5). Limitation in laboratory capacity was the most reported obstacle by 45 health providers participating in the survey, followed by limited human resources (27), limited financial resources (24), and administration procedure (14). Another obstacle reported was the limited availability of the tetanus vaccine.



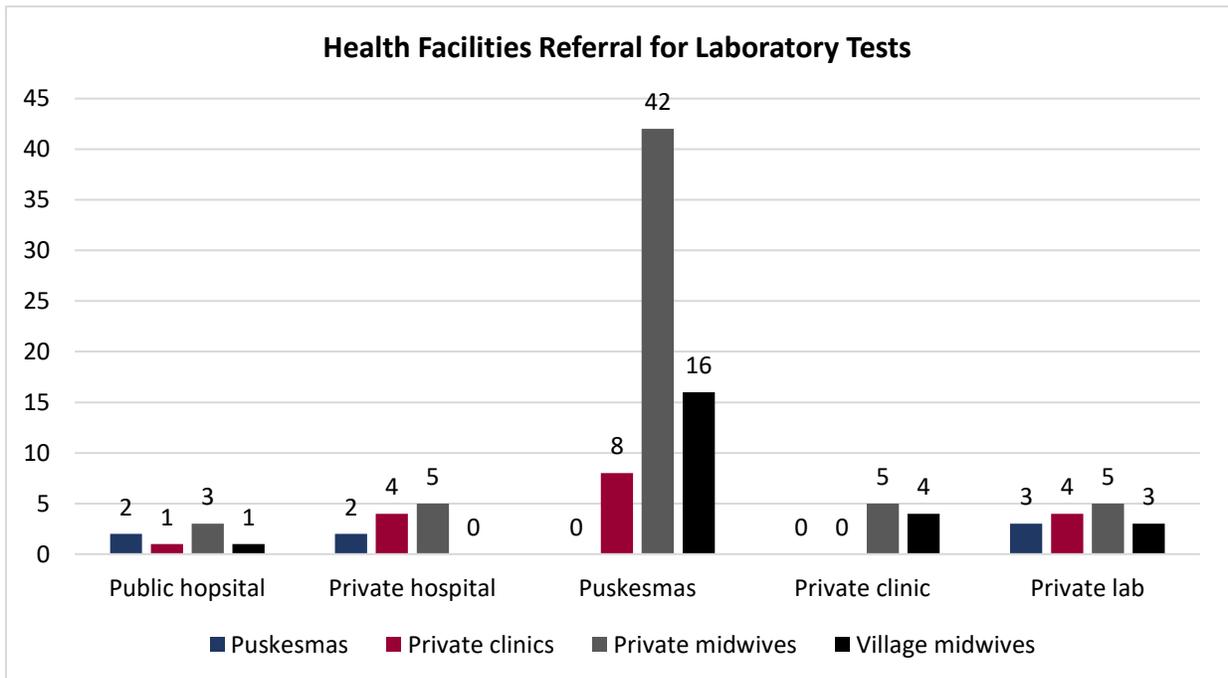
**Figure 5.** Obstacles to providing ANC 10T services

In addition, 64 health facilities (86%) reported that they encountered obstacles in providing triple elimination services (Figure 6). Similar to ANC 10T, limited laboratory capacity was reported as the main obstacle encountered by 57 health providers, followed by human resources, financial resources, and administration procedure. Interestingly, although all puskesmas in this survey were able to provide 3E services, one puskesmas reported that they have limited laboratory and financial resources. One private midwife reported “location” as an obstacle for providing 3E services.



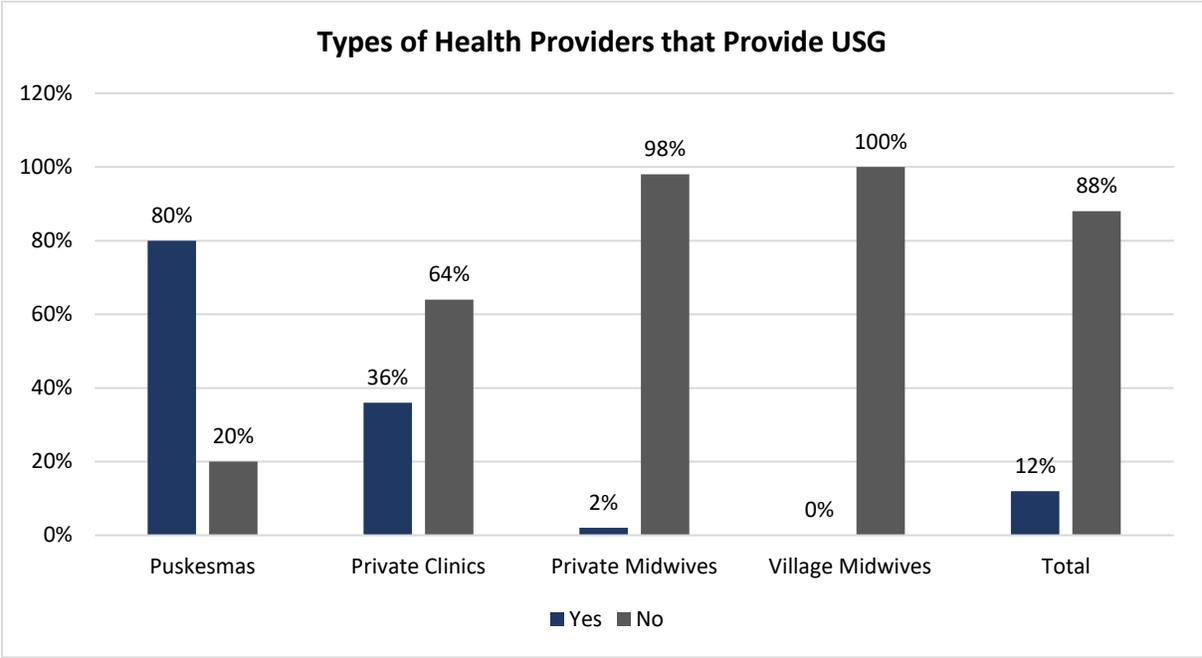
**Figure 6.** Obstacles to providing 3E services

All 57 providers without laboratory capacity refer their patients for lab tests to a health facility such as to a puskesmas, hospital, private clinic, or lab. The number of referrals for lab tests in Figure 7 is higher than 57 because respondents can make lab referrals to more than one facility. Only puskesmas kratatwatu did not refer to other health facilities for laboratory tests. Private clinics, private midwives, and village midwives rely primarily on puskesmas for laboratory referrals, as shown in Figure 7 below.



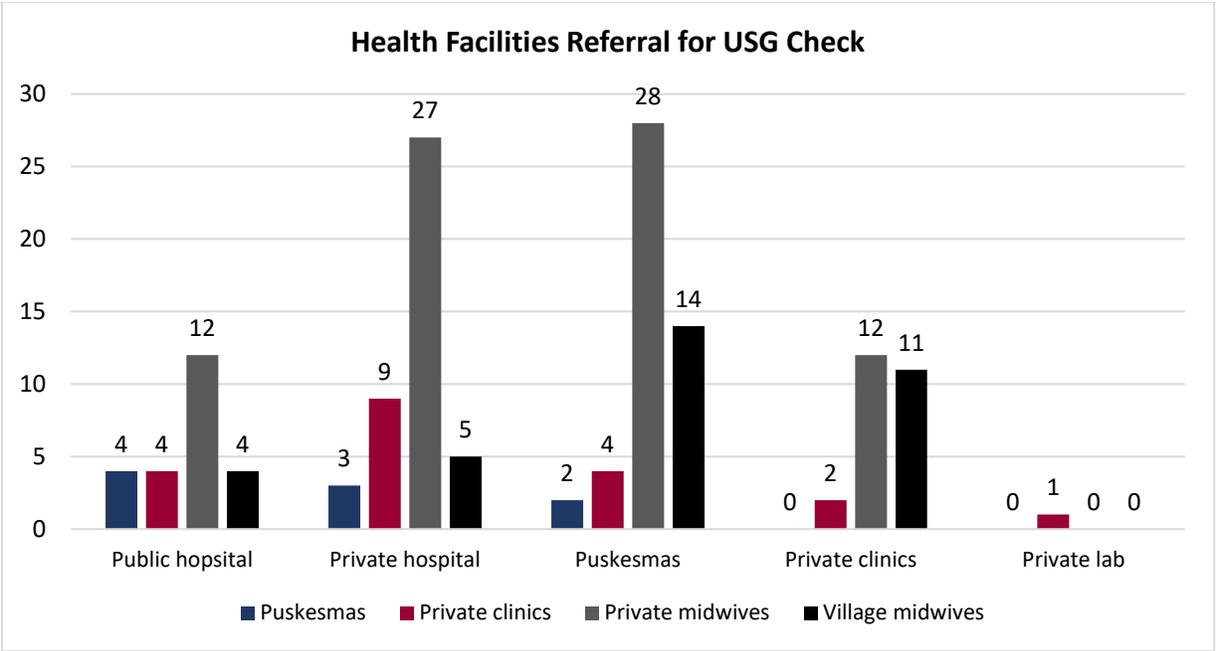
**Figure 7.** Health facilities referral for laboratory tests

Ministry of Health Regulation No. 21 of 2021 recommends at least six antenatal care visits, including at least two visits with examinations by a doctor. Ultrasound (USG) service is one of the recommended examinations to be provided. The findings show that that only 12% of health providers have USG (Figure 8). Among them, four of the five puskesmas surveyed own a USG device (80%) followed by private clinics (36%). There was also a small number of private midwives reported having the USG (2%).



**Figure 8.** Types of health facilities that provide ultrasound

Because 65 of the 74 surveyed providers (88%) do not have USG devices, they refer their patients to a facility with USG. Again, the number of facility referrals is higher because a provider may use more than one facility for USG referrals. Puskesmas are the main referral facilities for USG services as shown in Figure 9.



**Figure 9.** Health facilities referral for ultrasound<sup>5</sup>

Figure 9 shows that the one puskesmas without USG refers its patients to public and private hospitals. Meanwhile, the majority of private midwives refer to puskesmas and private hospitals. Private clinics tend to refer to private hospitals. Village midwives refer mostly to puskesmas, but also rely on private clinics. In conclusion, puskesmas and private hospitals are the main referral facilities for USG.

**4.2.3. Quality of Birth Delivery Services**

Quality of Birth Delivery Service can be assessed using indicators deliveries carried out in health care facilities attended by at least two health workers in the case of uncomplicated deliveries. Standards of quality for delivery services include seven aspects: making clinical decisions, early initiation of breastfeeding, infection prevention, prevention of mother-to-child transmission of disease, clean delivery, recording and medical records of delivery care, and referral of cases of maternal and neonatal complications.

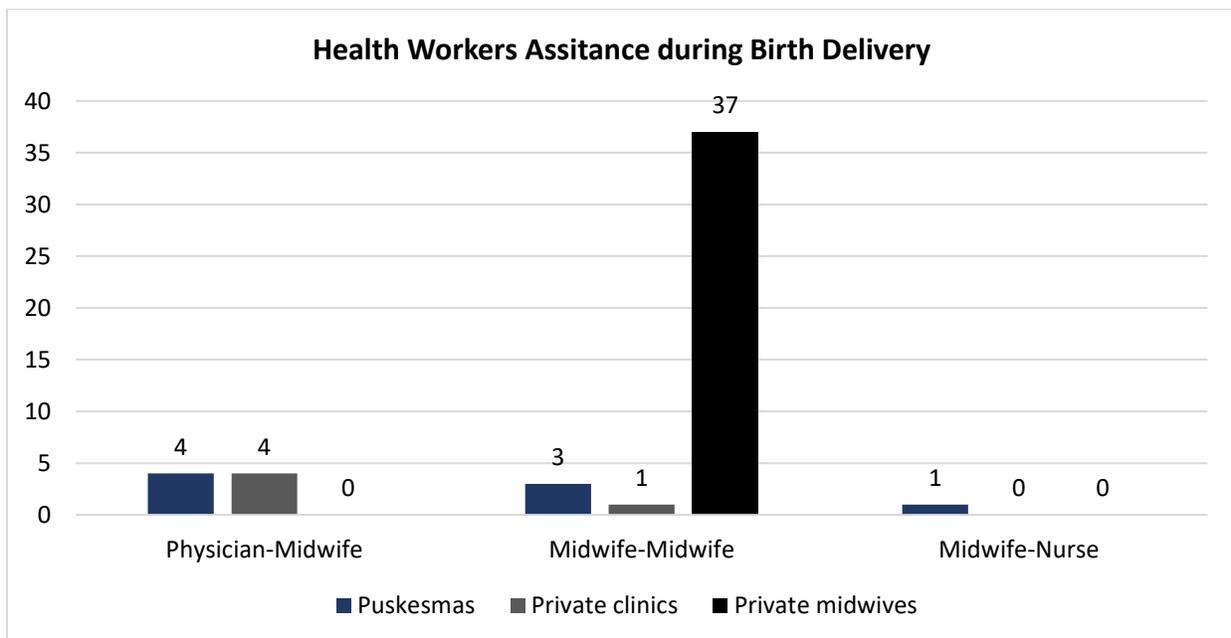
The survey assessed the capacity of health providers to provide birth delivery service according to the standard guideline of a minimum of two health workers. The findings show that 47 of the 74 health providers surveyed could provide delivery services meeting the standard of two health workers (Table 10). All five puskesmas reported providing delivery services meeting the standard. For the majority (80%), delivery was part of the puskesmas Basic Obstetric and Neonatal Emergency Services (PONED), with 24-hour access. Among private providers, 45% of private clinics and 88% of private midwives provided delivery services meeting the two health worker standard. Meanwhile, 100% of village midwives reported they did not meet the standard because the place where they were posted was usually not adequately equipped, and as puskesmas staff they were mandated by regulation to refer mothers in labour to puskesmas for delivery.

<sup>5</sup> The health provider may use more than one facility for USG referrals.

**Table 10. Adherence to Birth Delivery Standard Guideline**

Health providers	Adherence to Birth Delivery Assisted by Minimum of Two Health Workers	
	Yes	No
Puskesmas	5 (100%)	0
Private clinics	5 (45%)	6 (55%)
Private midwives	37 (88%)	5 (12%)
Village midwives	0	16 (100%)
Total	47	27

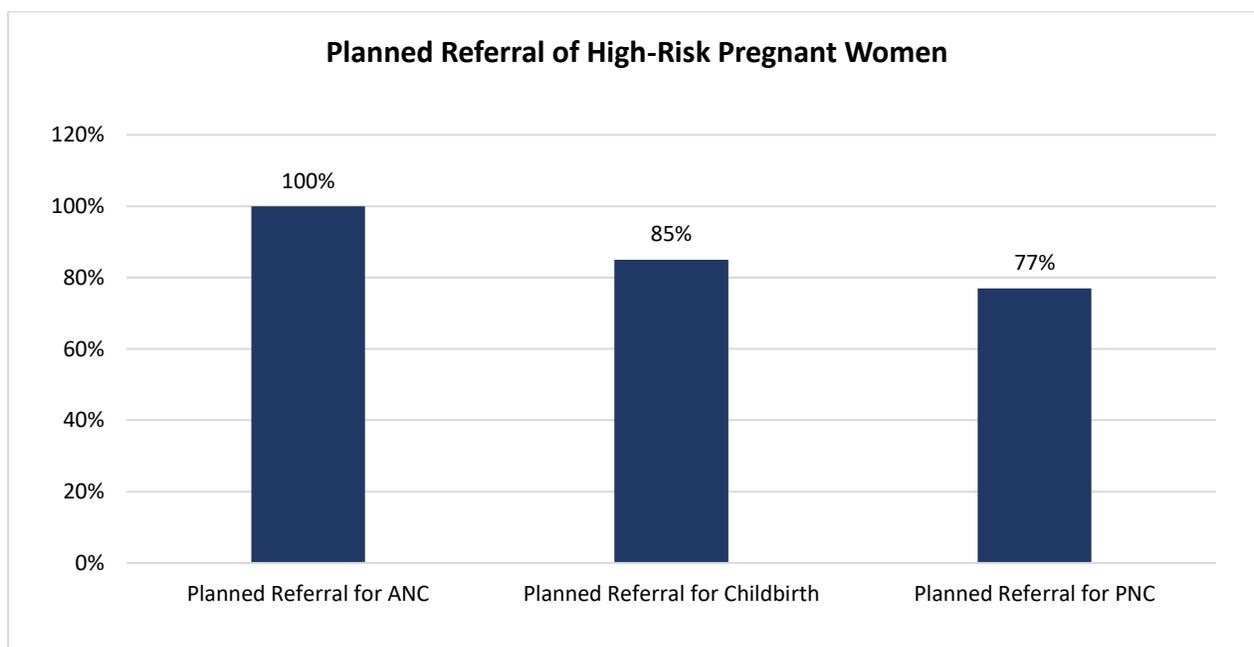
Figure 10 shows which types of health workers were paired to attend birth delivery services meeting the two health worker standard. The survey found that the health worker pairs were dominated by midwife-midwives followed by physician-midwives and midwife-nurses.



**Figure 10. Health worker pairs attending birth delivery by type of health workers**

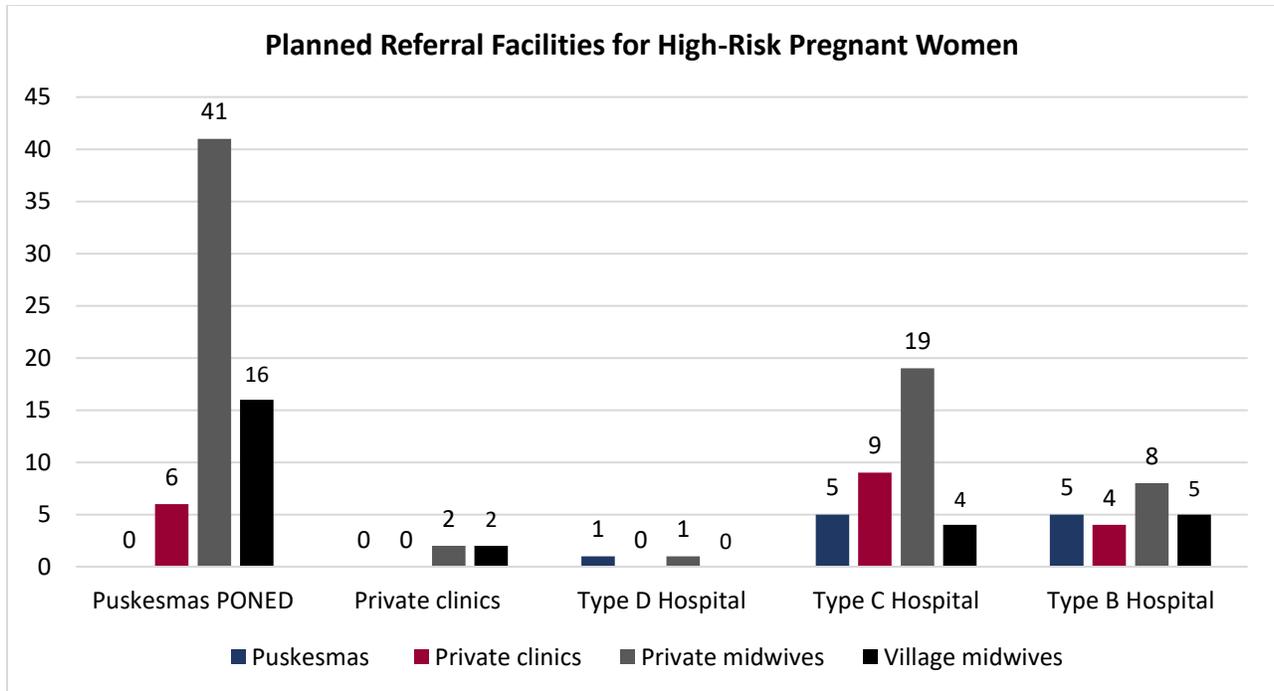
#### 4.2.4 High-Risk Pregnant Women Referral in Health Providers

Early detection of high-risk pregnant women in health facilities and planning for risk management and delivery—including planning for referrals during pregnancy and childbirth to health providers with required levels of competency—are ways to prevent maternal and infant mortality. Hence, early detection and delivery planning are one of the quality indicators in MNH services which were assessed. There are two types of referral for management of high-risk pregnant women: planned referral and emergency referral. Planned referral means referrals which are planned and carried out when risk factors are identified during antenatal care. The study found that all health providers reported having a plan for referral for women with a high-risk pregnancy for ANC phase. Planned referral declines to 85% of health providers for delivery and 77% for PNC (Figure 11).



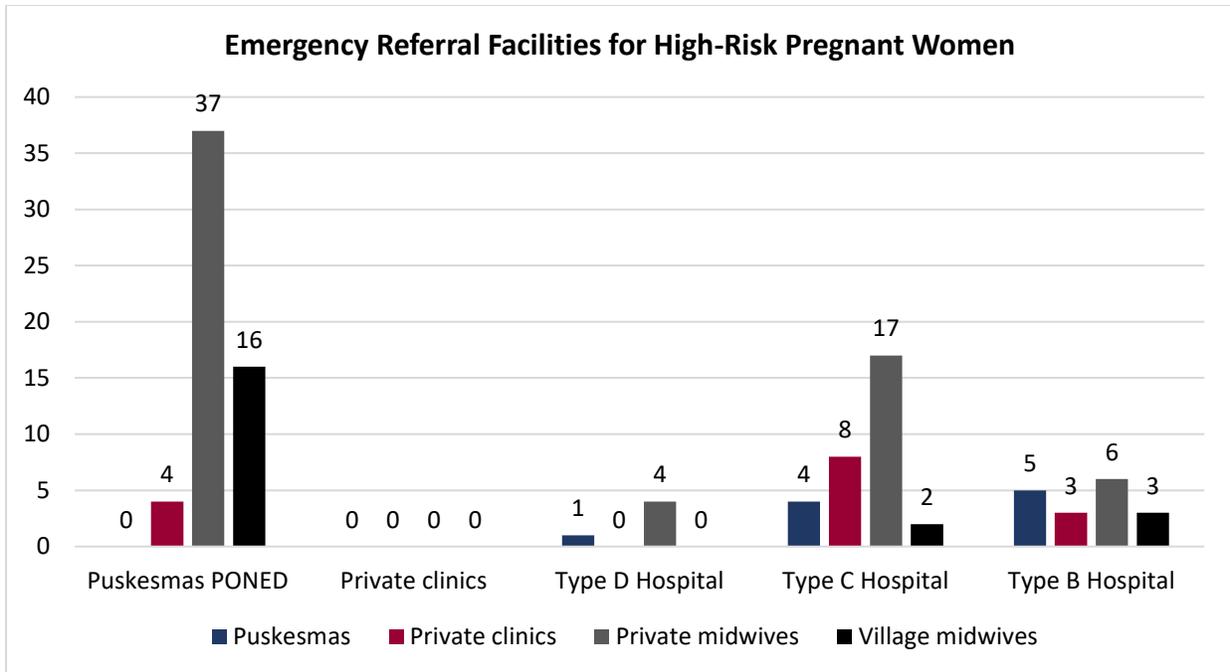
**Figure 11.** *Planned referral of women with high-risk pregnancy by phase of the pregnancy*

Figure 11 shows which type of health facility the surveyed providers plan to refer their high-risk patients for antenatal care and deliveries. The majority of puskesmas and private clinics reported planning to refer their patients to hospitals, while the majority of private midwives and village midwives reported planning referral to puskesmas.



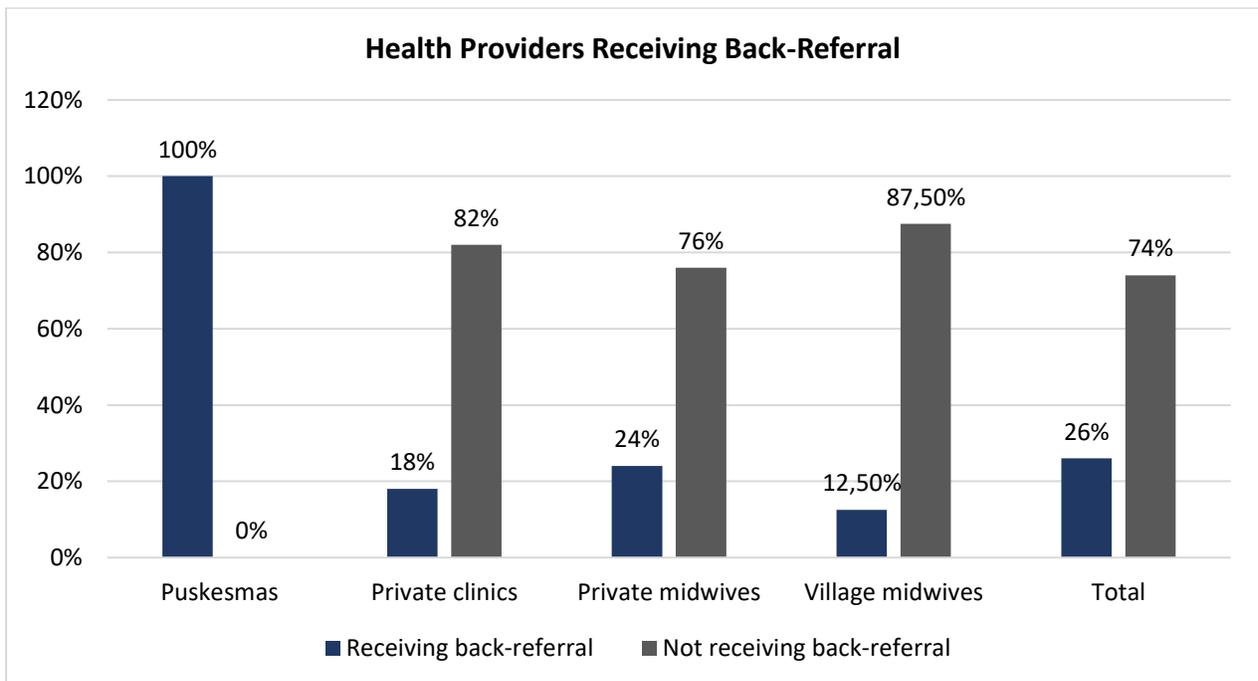
**Figure 12.** Planned referral facilities for women with high obstetric risk by type of primary health provider

Meanwhile, emergency referrals are carried out if there are cases of unexpected complications. All puskesmas and the majority of private clinics reported making emergency referrals directly to the hospital. The majority of private midwives and village midwives reported referring their patients to the puskesmas PONED.



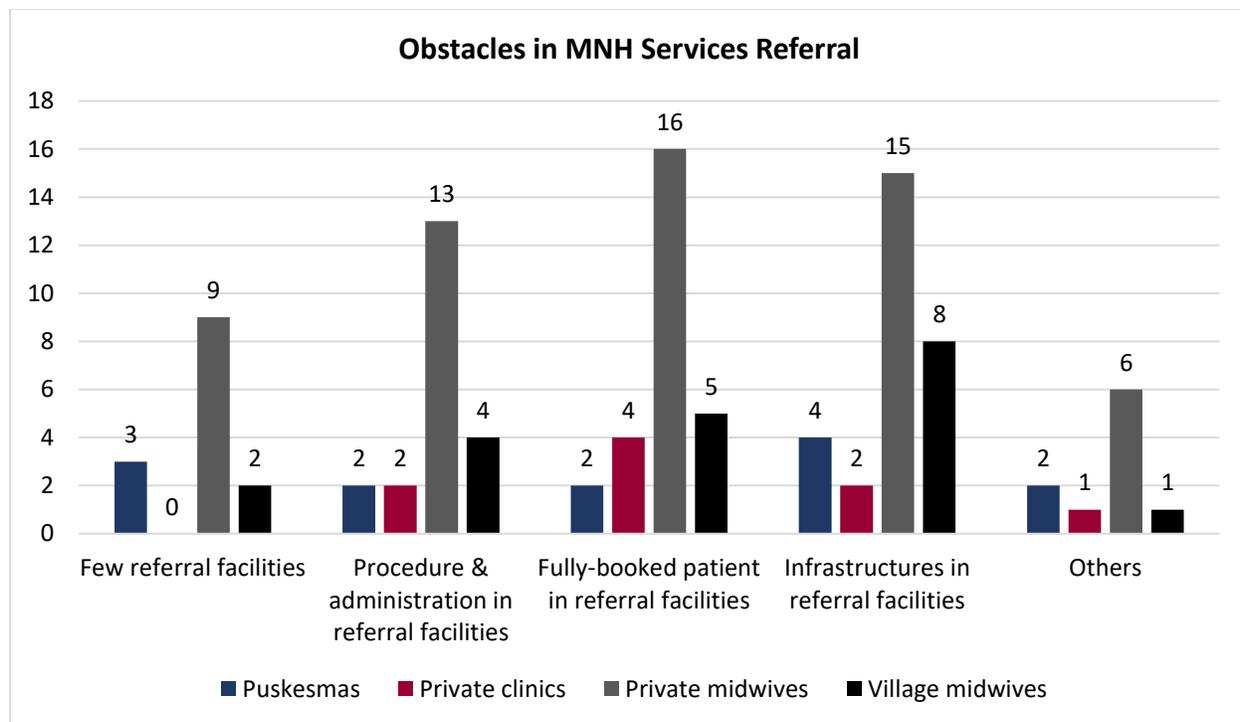
**Figure 13.** Emergency referral facilities for women with high obstetric risk based on type of primary health provider

The survey found that not all pregnant women who were referred to another health facility were referred back to their original provider after complications were treated. All puskesmas reported receiving back-referrals for pregnant women they had referred to a hospital, while 87.5% of village midwives, 82% of private clinics, and 76% of private midwives reported not receiving back-referrals (Figure 14).



**Figure 14.** Back referral facilities for women with high obstetric risk by type of primary health provider

The survey found that 49 (66%) health providers encountered obstacles when referring high-risk patients for MNH services (Figure 15). Lack of capacity in referral facilities because they were fully booked or occupied was the main problem reported. Other obstacles cited were problems with the referral facility's infrastructure and administrative obstacles. A few providers reported patients refusing to be referred.



**Figure 15.** Obstacles in MNH services referral

#### 4.2.5 Maternal and Neonatal Health Providers Network

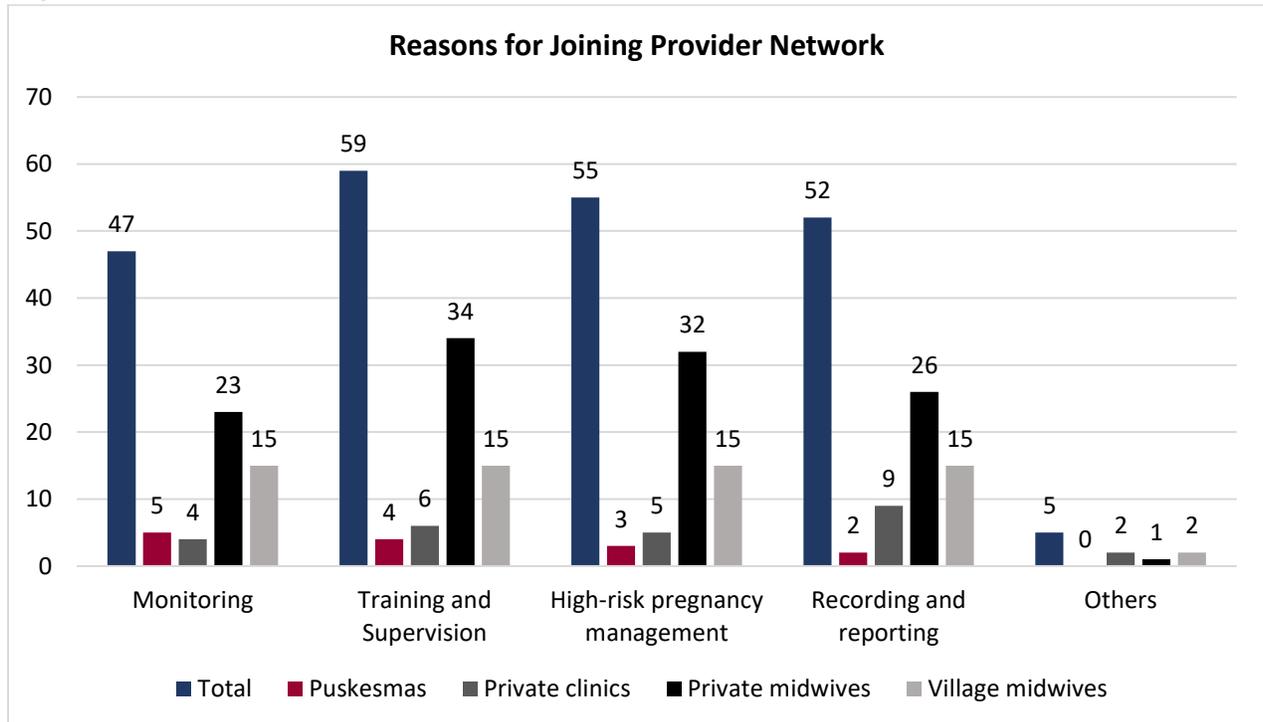
Monitoring is one of the interventions to be implemented in the SHP MNH pilot. The SHP design calls for establishing maternal health provider networks to monitor their providers to ensure the services delivered meet the new quality standards for payment. Network coordinators will have the responsibility to review all claims before submission to BPJS to evaluate the quality of health services provided, ensure alignment with requirements for payment, and make recommendations to improve the effectiveness, accessibility, and quality of care. They will support patient case management through care coordination, preventing loss-to-follow-up, and helping to link patients to services at multiple levels of care.

Similar to the network proposed by the SHP pilot, an innovation from the DHO Kabupaten Serang to reduce MMR and the neonatal mortality rate was to create in 2019 a provider network to manage high-risk pregnant women. The DHO innovation is called Kesehatan Ibu dan Bayi Baru Lahir (KIBBLA) or Maternal and Neonatal Health Network. KIBBLA aims to strengthen the referral pathway for maternal emergency using a WhatsApp group consisting of selected physicians (Dokter KIBBLA) in the puskesmas and hospitals and other providers of MNH services. According to the provider survey, 45 providers (61%) reported already joining the KIBBLA network, including five puskesmas, two private clinics, 22 private midwives, and all village midwives (Table 11).

**Table 11. Health Providers Joining KIBBLA Network**

Health Providers	Joining KIBBLA network	
	Yes	No
Puskesmas	5 (100%)	0
Private Clinics	2 (18%)	9 (82%)
Private Midwives	22 (52%)	20 (48%)
Village Midwives	16 (100%)	0

Importantly for the SHP pilot which includes a maternal health provider network, the survey found that 73 health providers (98.6%) stated that they need to join a provider network, citing a variety of reasons (Figure 16).



**Figure 16. Reasons for joining provider network**

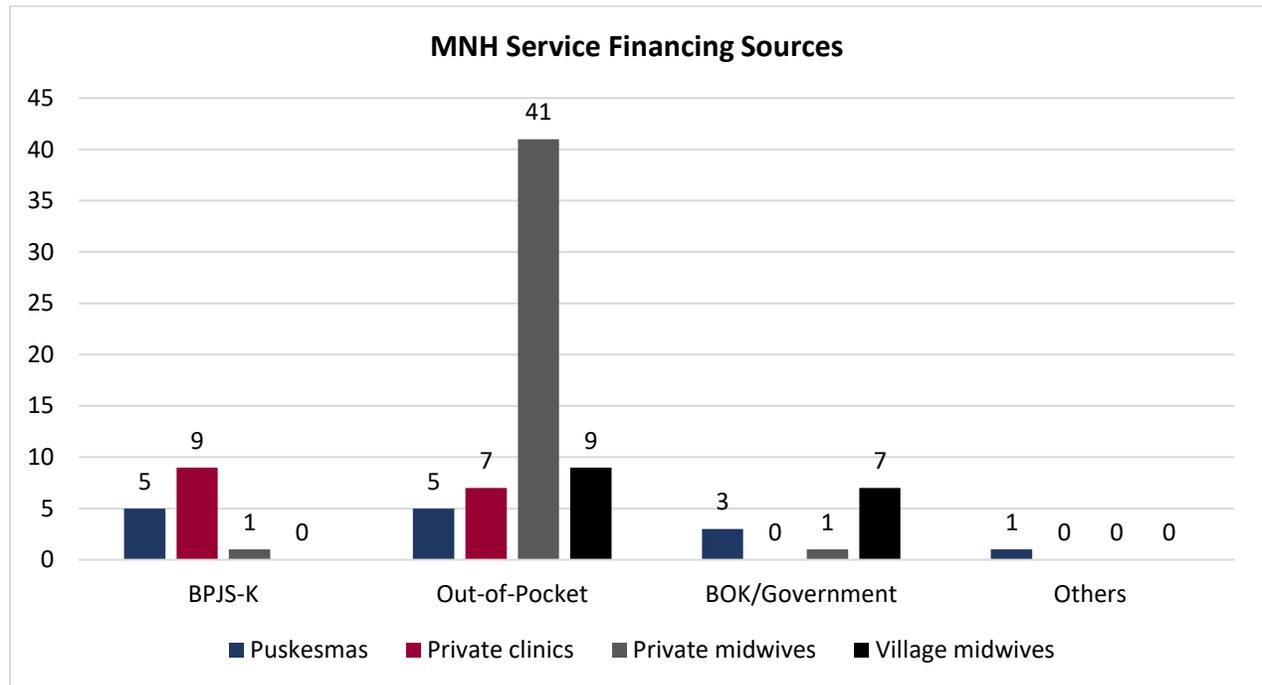
Most health facilities expressed that they need training and supervision from the provider’s network. Many of them also expect to be supported to manage high-risk pregnancy, recording and reporting, and monitoring functions.

#### 4.2.6 Financing Sources of MNH services

Understanding the sources of financing for MNH services is critical to the strategic health purchasing pilot because BPJSK is the purchasing agency for JKN. The next three sub-sections present findings about MNH financing and BPJSK contracting and purchasing.

Survey respondents identified three primary sources of financing of MNH services: BPJSK payments (capitation and non-capitation), government health operational assistance funds (BOK), and out-of-pocket payments from patients (OOP). OOP was observed in all types of health facilities—public and

private—except for village midwives. OOP was identified as the primary source of funds for private midwives (Figure 17).

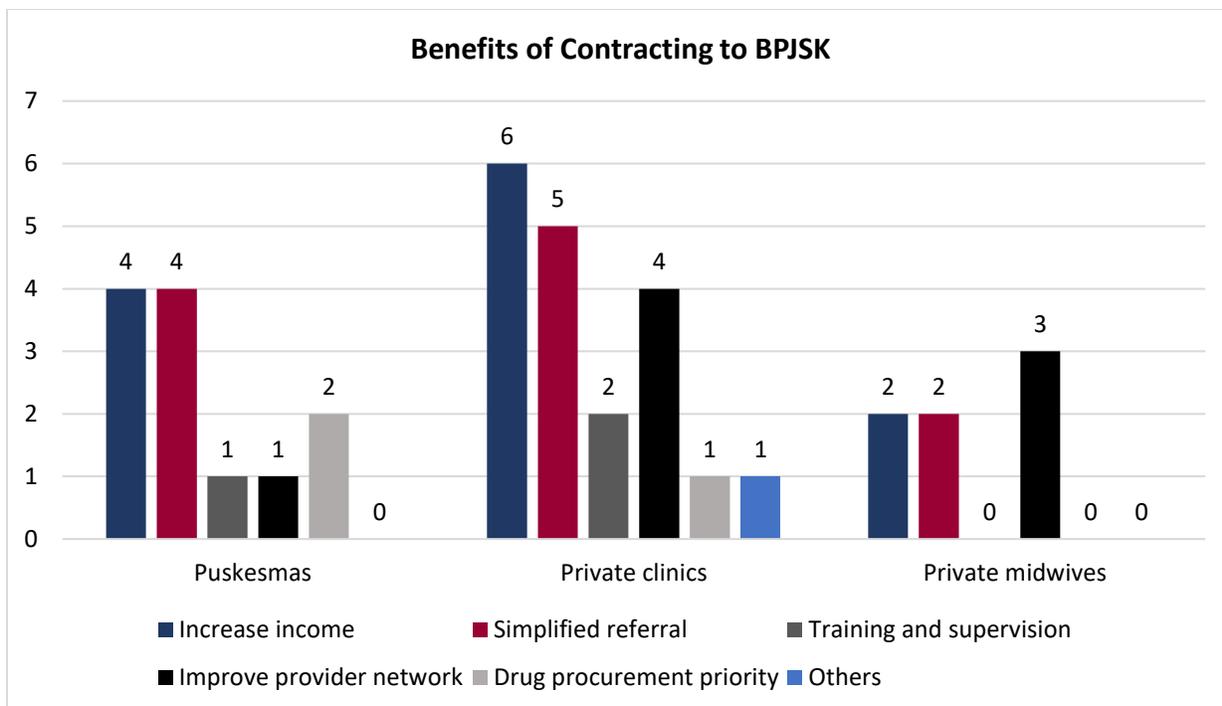


**Figure 17.** Health provider financing sources by type of health provider

#### 4.2.7 Provider Empanelment with BPJSK

As previously written in the secondary analysis section, provider empanelment with BPJSK in Kabupaten Serang is still considered low. The provider survey found that the majority of the health providers (76%) have never been empaneled with BPJSK. At the time of the survey, only 15 (20%) health providers were empaneled with BPJSK including all five puskesmas, nine (82%) private clinics, and only one (2.5%) private midwife. Village midwives are not empaneled directly with BPJSK because they are contracted under puskesmas.

The majority of providers contracted by BPJSK cited benefits. The main benefits cited by puskesmas and private clinics were increased income and simplified referrals, while improved provider network was most cited by private midwives (Figure 18).



**Figure 18.** Benefits of contracting with BPJSK by type of benefit

Among the 56 health service providers who have never had a contract with BPJSK, several stated that they were not yet interested in contracting with BPJSK because of the long time to process claims to get paid, followed by inappropriate tariffs. Two private clinics in Tirtayasa sub-district that have not yet contracted with BPJSK reported that the rates are not appropriate, the claim process is long, and there is difficulty in the registration procedure.

#### 4.2.8 BPJSK Payment Mechanism

BPJSK makes payments for MNH services to primary health care facilities (FKTP) in two ways, capitation and non-capitation payments (BPJSK, 2017). The capitation payment is a fixed monthly payment paid in advance by BPJSK to FKTP based on the number of registered JKN participants without taking into account the type and number of health services provided. In contrast, the non-capitation payment is the amount claimed by the FKTP provider for specific services that are eligible for non-capitated payment by BPJSK according to a tariff schedule that stipulates the price for each service. MCH services eligible for non-capitated payment include antenatal care, postnatal care, normal vaginal delivery, vaginal delivery with basic emergency measures at the puskesmas PONED, pre-referral services for obstetric and neonatal complications, and family planning (KB) services. The capitation system is an example of a prospective payment method because it is paid in advance before service, while the non-capitation payment method is an example of a retrospective payment that is paid after the service is completed.

Based on Minister of Health Regulation No. 52 of 2016, the tariffs for health services eligible for non-capitated payment must be reviewed at least every two years; however, since 2014 there has been no review or change in the tariff schedule for maternal health services in FKTP. One of the reasons the tariffs have not been updated is the high number of emergency referrals. The quality of maternal services at the primary level has not met the 10T standard so that high-risk pregnancies are not properly identified. This

leads to more than 20% of pregnancies requiring an emergency referral to a hospital, according to the findings of the fact checking technical working group of SHP. The high number of emergency referrals is an administrative and cost burden for BPJSK.

The survey assessed providers' perceptions of the efficiency of the payment process and suitability of capitation and non-capitation payment systems. Levels of satisfaction with capitation and non-capitation payment systems among the 15 service providers empaneled with BPJSK are shown in the table below

**Table 12. Perspective of Provider's Satisfaction for Capitation and Non-capitation Payment**

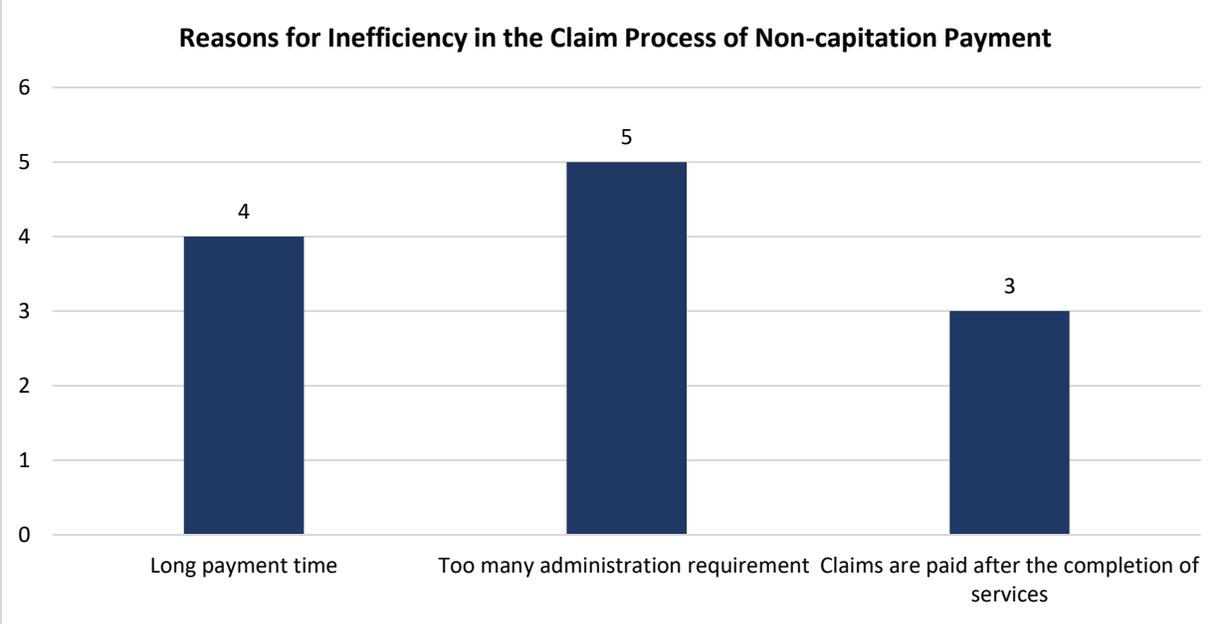
	Level of satisfaction				
	Not satisfied	Less satisfied	Good enough	Satisfied	Very satisfied
<b>Capitation payment</b>					
Total	1/15	2/15	6/15	6/15	0/15
Puskesmas	0	2	2	1	0
Private clinics	1	0	3	5	0
Private midwives	0	0	1	0	0
<b>Non-capitation payment</b>					
Total	0/15	4/15	8/15	3/15	0/15
Puskesmas	0	2	3	0	0
Private clinics	0	2	4	3	0
Private midwives	0	0	1	0	0

The majority of providers stated that they are satisfied enough with the non-capitation payments for MNH services. Timeliness of payment and clarity of information are the main reasons providers chose "less satisfied" with non-capitation payment. Providers reported that the average time from submission to payment for non-capitation claims to be processed ranges from 1-4 months (Table 13).

**Table 13. Non-Capitation Claim Payment Time**

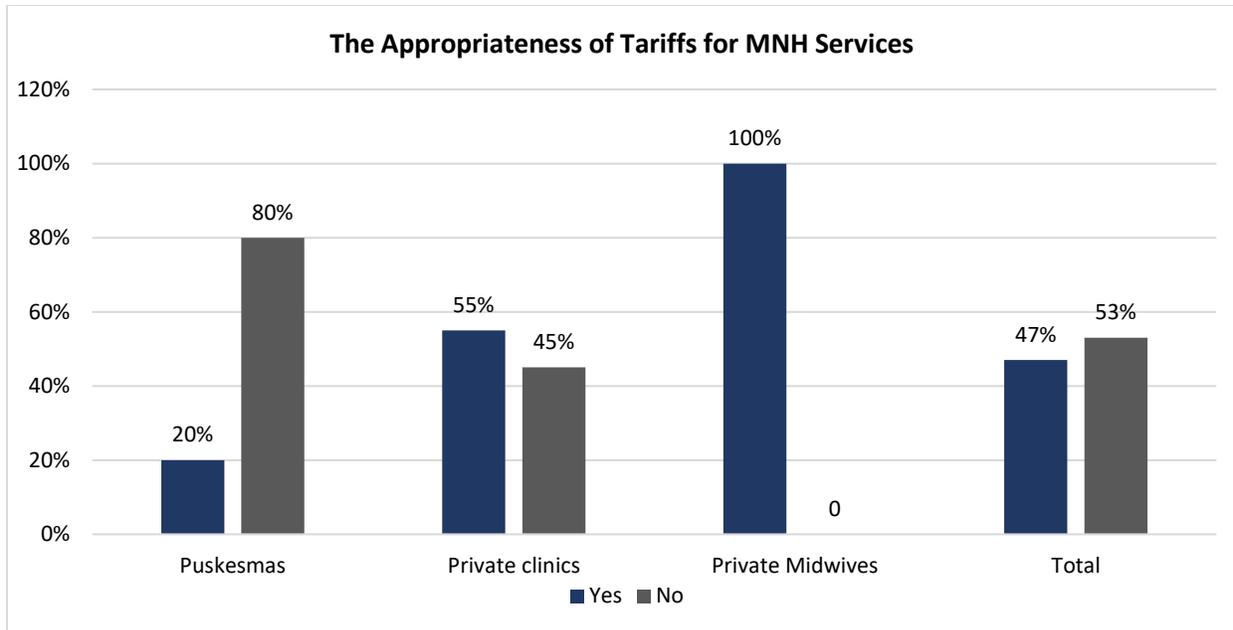
Health providers	Average length of time for non-capitation claims to be paid			
	< 2 Weeks	2-4 Weeks	1-2 Months	> 2 Months
<b>Submission-Verification</b>				
Total	3/15	4/15	5/15	3/15
Puskesmas	3	0	0	2
Private clinics	0	3	5	1
Private midwives	0	1	0	0
<b>Verification-Payment</b>				
Total	1/15	3/15	9/15	2/15
Puskesmas	0	1	2	2
Private clinics	1	2	6	0
Private midwives	0	0	1	0

The provider survey found that six (40%) providers stated that the non-capitation claim process was quite efficient, five said (33%) it was less efficient, and four (27%) said it was efficient. Of the five providers who stated that the non-capitation system was less efficient, all of them cited the reason of too many administrative requirements (Figure 19).



**Figure 19.** Reasons why providers perceived the maternal health non-capitation claims process as less efficient

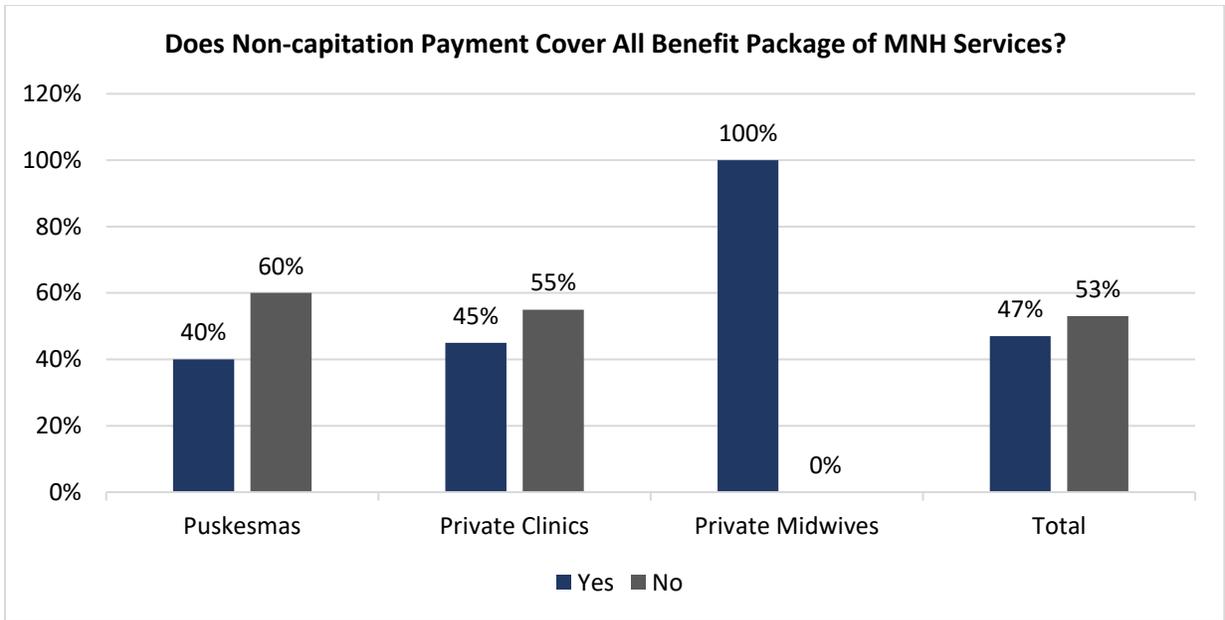
As mentioned before in the previous section, one of reasons the majority of providers (43) do not want to contract with BPJSK is the service tariffs for both capitation and non-capitation payments. A majority (53%) of these health providers stated that the current BPJSK tariffs for MNH services were not appropriate, including 20% of puskesmas, 55% of private clinics, and 100% of private midwives (Figure 20).



**Figure 20.** The perceived appropriateness of tariffs for maternal health services among providers choosing to not contract with BPJSK

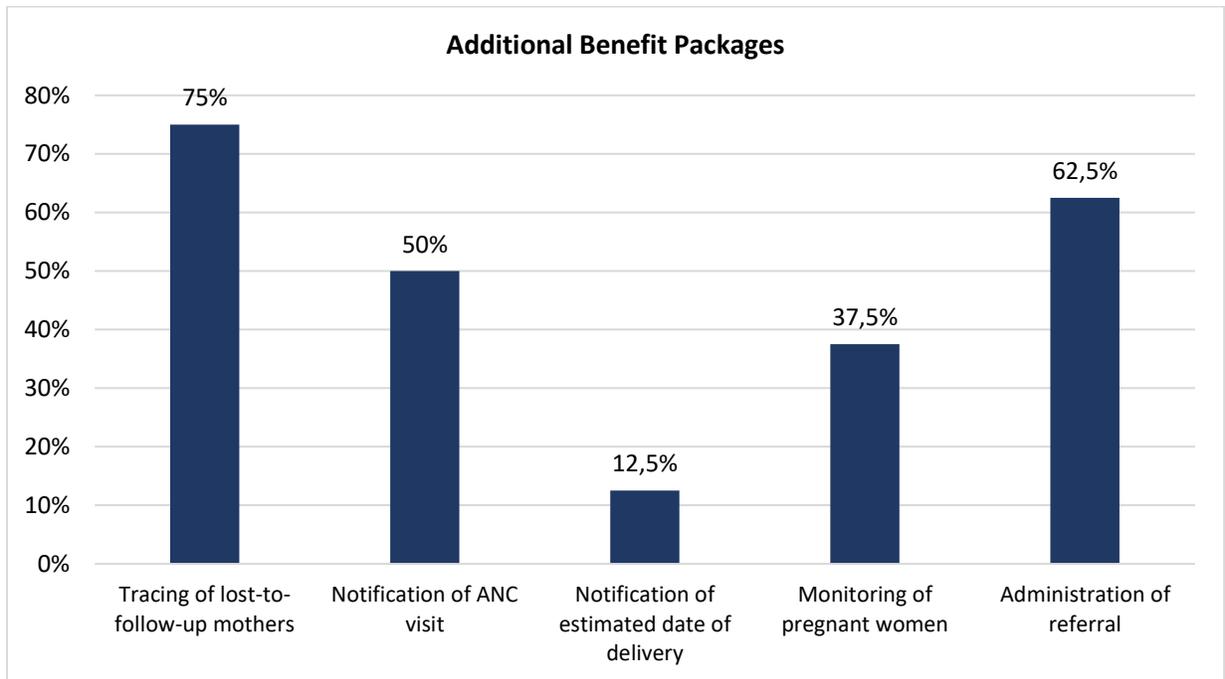
The most common reason why the tariffs were perceived as not appropriate was that the tariffs did not cover all types of services provided (75%); the second most common reason was that the tariff is too low (25%).

Specification of the benefit package is one of the SHP MNH pilot interventions. The pilot will refine the set of maternal health services being purchased and specify requirements for quality based on the updated MOH Clinical Guidelines for antenatal, delivery, and postnatal care. The baseline found that the majority (53%) of service providers perceive that the current non-capitation payment system does not cover all the services and quality standards expected in the current MNH benefit package (Figure 21).



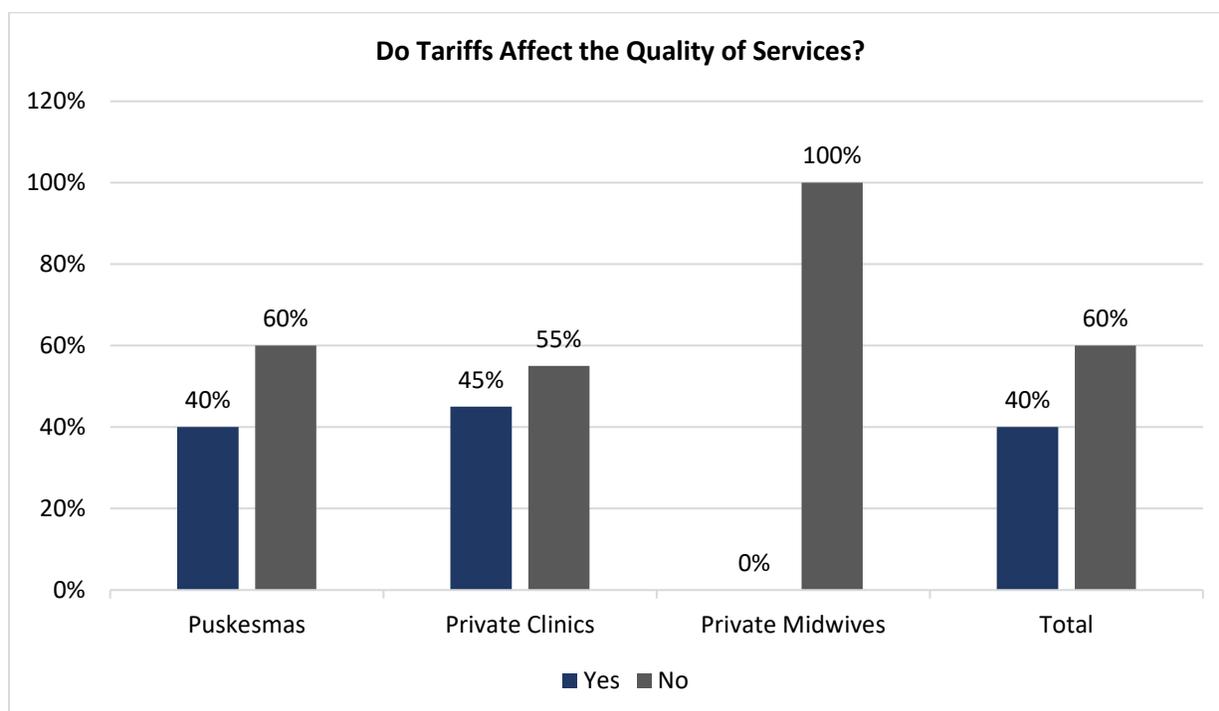
**Figure 21.** Non-capitation payment covers all benefits package of maternal health service

Figure 22 presents the additional services that providers recommended to be added to the MNH benefit package and the non-capitated payment system. These included payments for tracing pregnant women who are lost to follow-up (75%), the administration of the referral process (62.5%), ANC visit notification (50%), monitoring of pregnant women 37.5%, and notification of an estimated day-of delivery (12.5%).



**Figure 22.** Additional services recommended by providers for the MNH Benefit Package

The baseline study assessed provider perceptions of how service tariffs affect the quality of services provided. Most health providers (60%) believed that tariffs did not affect the quality of services they provided; however, 40% of health providers stated otherwise (Figure 23).



**Figure 23.** Provider perceptions of whether tariffs affect the quality of services

Four health providers (67%) felt that increased tariffs would slightly improve the quality of services they provide, while the other health providers (33%) think that increased tariffs would much improve the quality of services.

As explained earlier, BPJSK uses two payment methods: prospective (capitation) and retrospective (non-capitation). The baseline survey assessed providers' perspective of the most effective time to pay for services relative to when services were rendered (Table 14). The majority of service providers wanted payment to be made at the end after the service was rendered (50%).

**Table 14.** Provider Perceptions of the Most Effective Time to Pay Relative to When Services Were Rendered

Health providers	Most effective payment mechanism			
	Before services	Middle of services	After service completed	Divided into before and after completion
Puskesmas	0 (0%)	2 (40%)	3 (60%)	0 (0%)
Private clinics	0 (90%)	1 (9%)	8 (73%)	2 (18%)
Private midwives	6 (14%)	1 (2%)	23 (55%)	12 (29%)
Village midwives	12 (75%)	0 (0%)	3 (19%)	1 (6%)
<b>Total</b>	<b>18 (24%)</b>	<b>4 (5%)</b>	<b>37 (50%)</b>	<b>15 (20%)</b>

The implications of these findings for increasing provider empanelment with BPJSK and therefore opportunities to implement strategic purchasing are discussed in Section 5.

#### **4.2.9 Maternal Health Services Recording and Reporting System**

Adherence of health providers to MNH reporting requirements is one of the indicators being assessed in the SHP MNH pilot intervention. Complete and accurate data regarding MNH services delivered and patient outcomes is essential for monitoring and evaluating the SHP MNH pilot.

The data recording and reporting system for MNH services at the primary care level includes a maternal cohort in the form of a book or e-cohort, a maternal register, and a mother card. The puskesmas report aggregate data to the District Health Office through the Local Area Monitoring–Maternal and Child Health (Pemantauan Wilayah Setempat Kesehatan Ibu dan Anak [PWS-KIA]) and Monthly Reports (LB-3). In addition, each pregnant woman keeps an MCH Handbook in which providers record data about her status and visits. Private clinics and midwives are expected to record data in the patient’s MCH Handbook and report data through PWS-KIA to the puskesmas in their sub-district.

##### **Box 3. MCH Recording and Reporting System in the District**

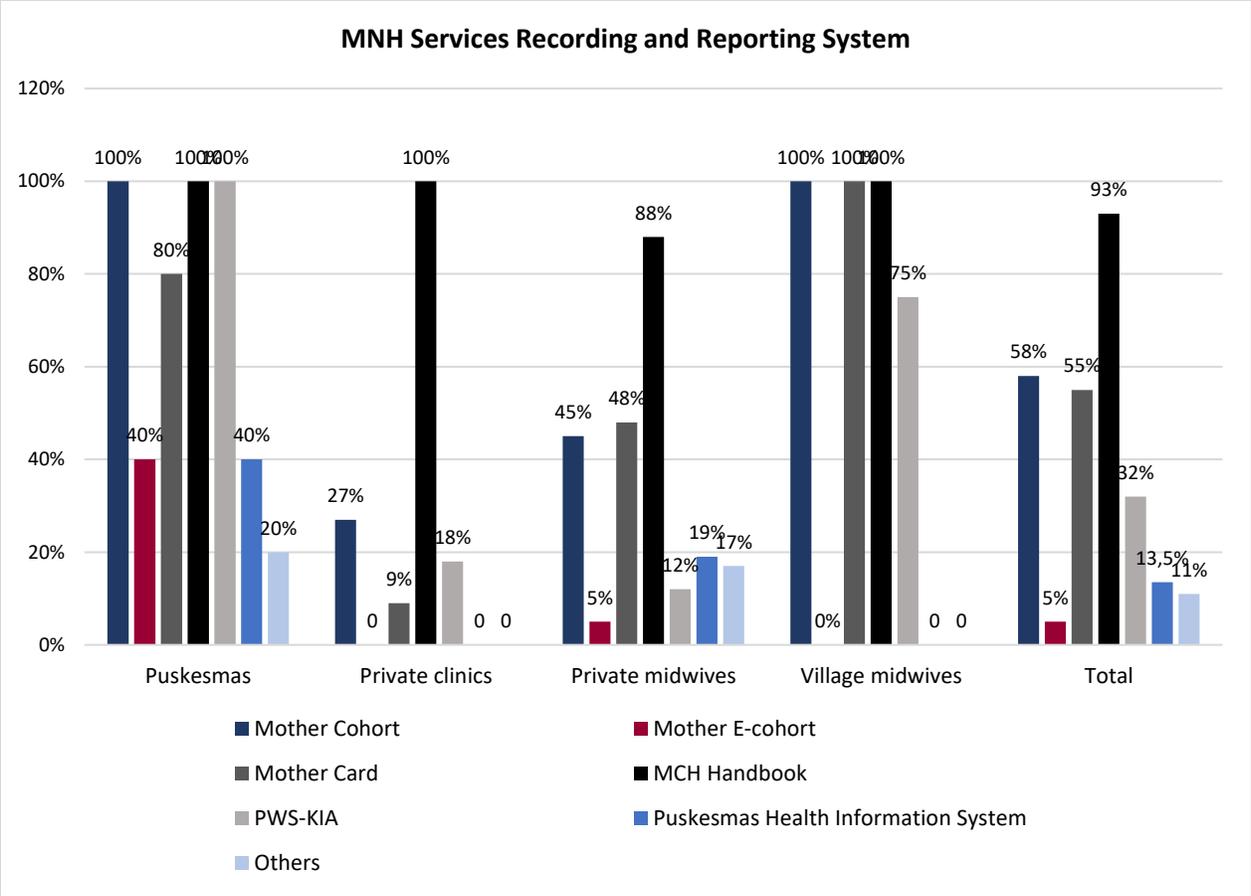
MCH recording system that is kept by mothers:

1. MCH Handbook: MNH service document held by a pregnant woman and records all services provided by health facilities during pregnancy, childbirth, and the postpartum period, as well as risks of pregnancy and delivery planning.

MCH recording system in the health facilities:

2. Mother Card: The information in the mother’s MCH Handbook is kept at health facilities in the form of a Mother Card and includes ANC 10T (heart rate, weight, height, etc. at each visit).
3. Mother Cohort: The data source of MCH services that are received by mothers; includes ANC 6x, birth delivery status and places, PNC 4x, counseling, and case management.
4. Mother Register: The general information of mother’s visit, not a cohort type data.

Based on the survey, 69 (93%) health providers record MNH services in patients’ MCH Handbook; however, only 58% of them recorded maternal health services through the mother e-cohort, and 55% used Mother Cards (Figure 24).



**Figure 24.** MNH services recording and reporting system

To ensure maternal health services are appropriately recorded, every service written in the MCH Handbook should be copied by the midwife in the maternal cohort and a mother card; therefore, the recording of the mother cohort and the mother's card should be higher than the current percentage of 58% and 55%, respectively. As an alternative to the manual mother cohort book, the Ministry of Health has developed an e-cohort application, in the form of digital mother cohort; however, only four (5%) providers are using e-cohorts, including puskesmas Kragilan, puskesmas Kramatwatu, one private midwife in Cikande, and one private midwife in Kragilan (Figure 24).

Reporting MNH data through PWS-KIA and LB-3 is mandatory for village midwives to puskesmas. Village midwives in each village will manually collect the data of the birth delivery places and assistance, as well as other indicators, from mothers who reside in their village. Then, all puskesmas will report PWS-KIA and monthly report (LB-3) to DHO. Based on the survey results, only 24 (32%) providers stated that they reported through PWS-KIA. One of the findings from the survey is that there is no obligation for private midwives and private clinics to use similar or standard reporting formats to puskesmas for MNH services provided.

### 4.3. Maternal Health Provider Survey (Additional)

#### 4.3.1 Basic Information

This section will describe the findings of the maternal health provider survey that was conducted in the additional control areas, Kibin and Ciruas, in April 2022. There was a total of 11 health providers included in the baseline survey in 2022. All 11 health providers have already empaneled with BPJSK.

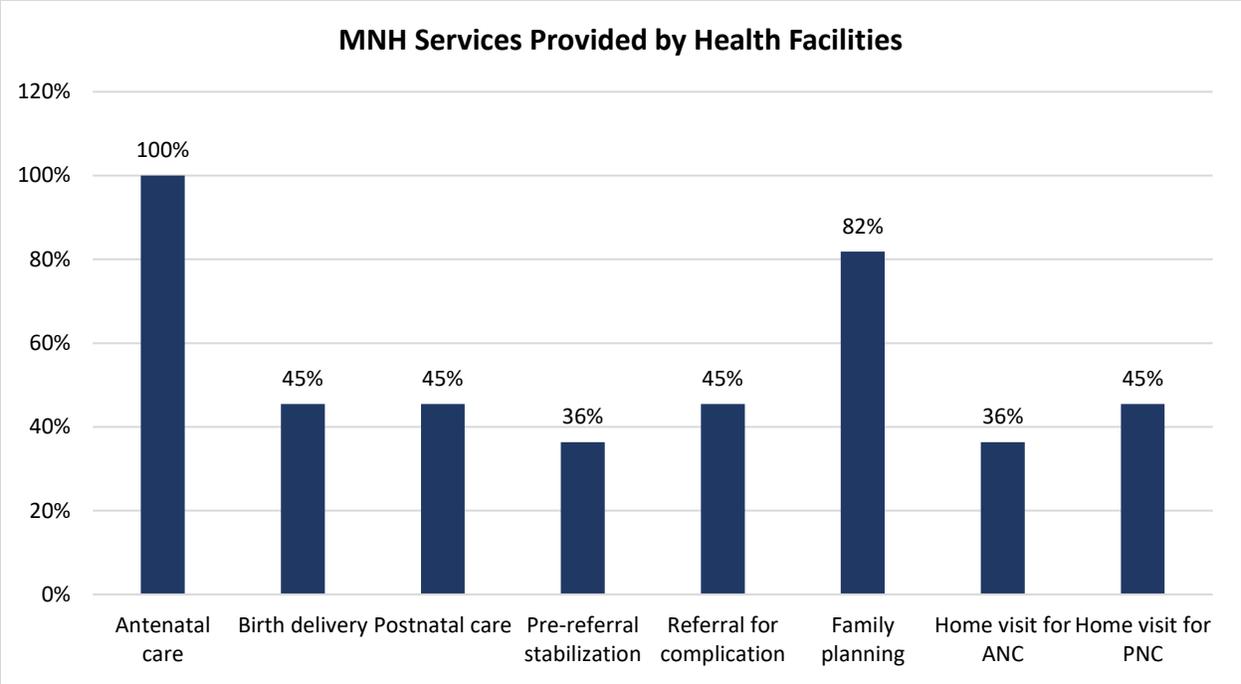
The health providers in the survey are categorized into public and private facilities as shown in the table below. Public health providers included puskesmas and their affiliated village midwives, while private clinics and private midwives are categorized as private providers.

*Table 15. Types of Health Providers Included in the Provider Survey in Kibin and Ciruas*

Sub-district	Health Providers		Total
	Public	Private	
	Puskesmas	Private Clinic	
Kibin	1	6	7
Ciruas	1	3	4
<b>Total</b>	<b>2</b>	<b>9</b>	<b>11</b>

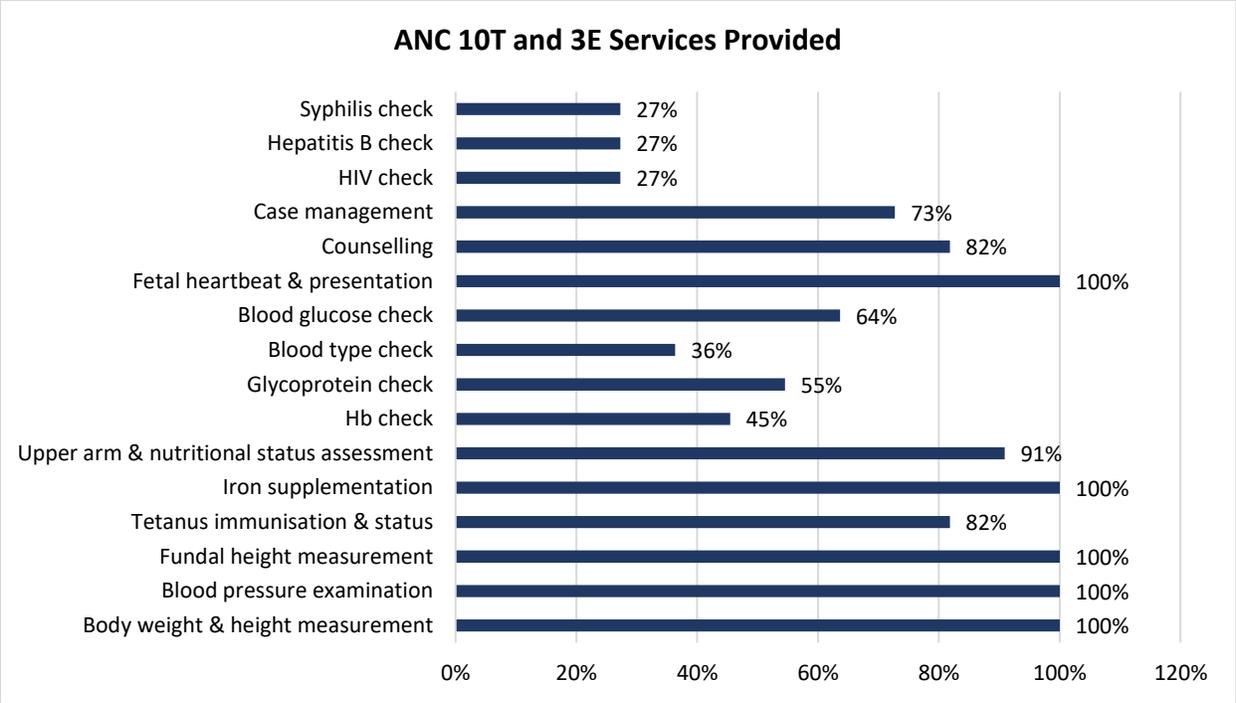
#### 4.3.2 Quality of Antenatal Care Services

In this additional baseline provider survey in Kibin and Ciruas, we updated the questionnaire survey. Figure 25 shows that all providers provide ANC services; however, not all providers provide birth delivery and postnatal care services. Two puskesmas, Kibin and Ciruas, stated that they provide all services including ANC, birth delivery, PNC, pre-referral stabilization, and even home visits. Meanwhile, a small number of private clinics (three of nine clinics) provide birth delivery and PNC services.



**Figure 25.** MNH services provided by health facilities in Kibin and Ciruas

In terms of quality of ANC services provided, all providers provide a minimum of 5T (body weight and height measurement, blood pressure examination, fundal height measurement, iron supplementation, and fundal heart beat and presentation). Only three providers (27%) (two puskesmas and one clinic) have capacity to provide ANC 10T service and 3E checks (Figure 26).



**Figure 26.** Distribution of ANC 10T and 3E services in health facilities in Kibin and Ciruas

**4.3.3 Maternal Health Services Recording and Reporting System**

Maternal and Child Health Recording and Reporting System includes MCH handbook, mother cohort, high-risk mother cohort, mother card, mother register, P-Care BPJS-K and puskesmas information system. Definition of the MCH handbook, mother cohort, mother card and mother register is described in the Box 3. Like other sub-districts, it is not mandatory for private facilities in Kibin and Ciruas sub-districts to report their services to puskesmas.

Figure 27 indicates that all providers use the MCH Handbook. All providers contracted with BPJSK also record their claims in the P-Care system. As shown in Figure 27, only puskesmas Ciruas has all types of document or system to record MCH services. A small number of private clinics also use the mother cohort and register mother.

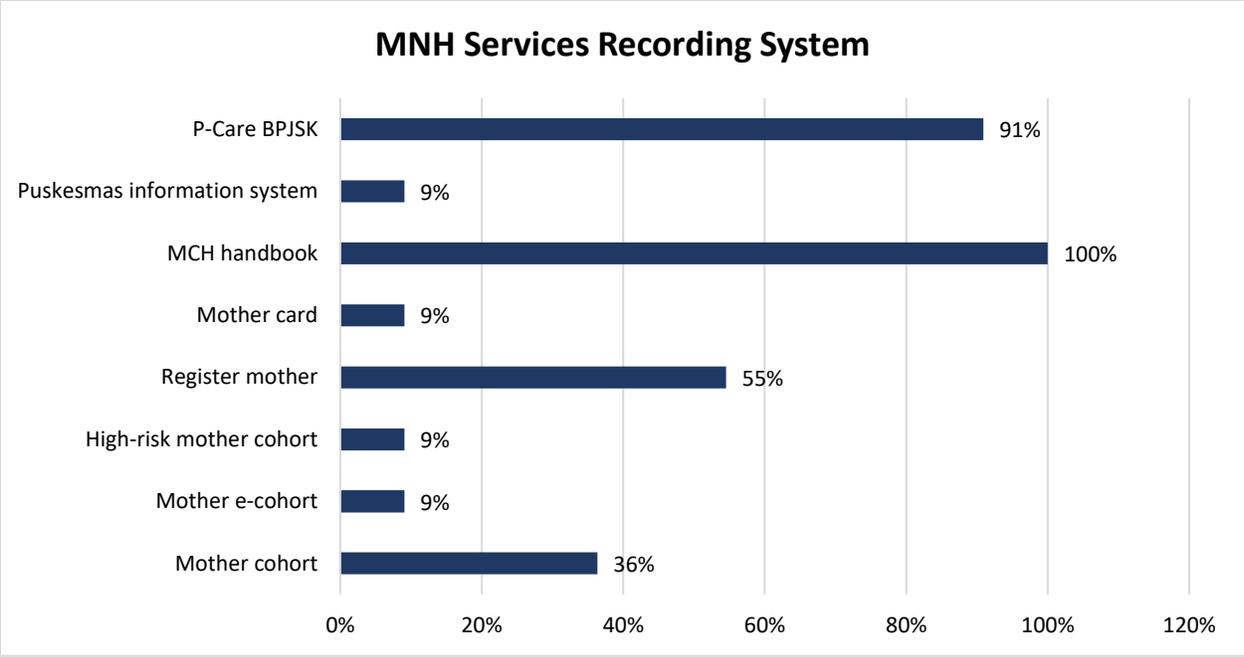


Figure 27. MNH services recording system in Kibin and Ciruas

4.4 Mother Survey

4.4.1 Basic Information

A total of 557 mothers participated in the mother survey conducted between May and June 2021. Most mothers (80%) were in the antenatal period, while 13% were in the postpartum period, 4% had completed maternal health services, and 3% had delivered (Table 16).

**Table 16. Sample Respondents Based on Maternal Period**

Maternal Period	Total
ANC	446 (80%)
Delivery	16 (3%)
PNC	75 (13%)
Complete ANC-PNC	20 (4%)
<b>Total</b>	<b>557</b>

All respondents obtained services from health providers who participated in the health provider’s survey in the intervention and control areas of the SHP pilot (Table 17).

**Table 17.** Sample Respondents Based on Type of Health Providers

Type of Health Provider Where Mother Received Service	Total
Puskesmas	118 (21%)
Private clinics	108 (19%)
Private midwives	321 (58%)
Village midwives	10 (2%)
<b>Total</b>	<b>557</b>

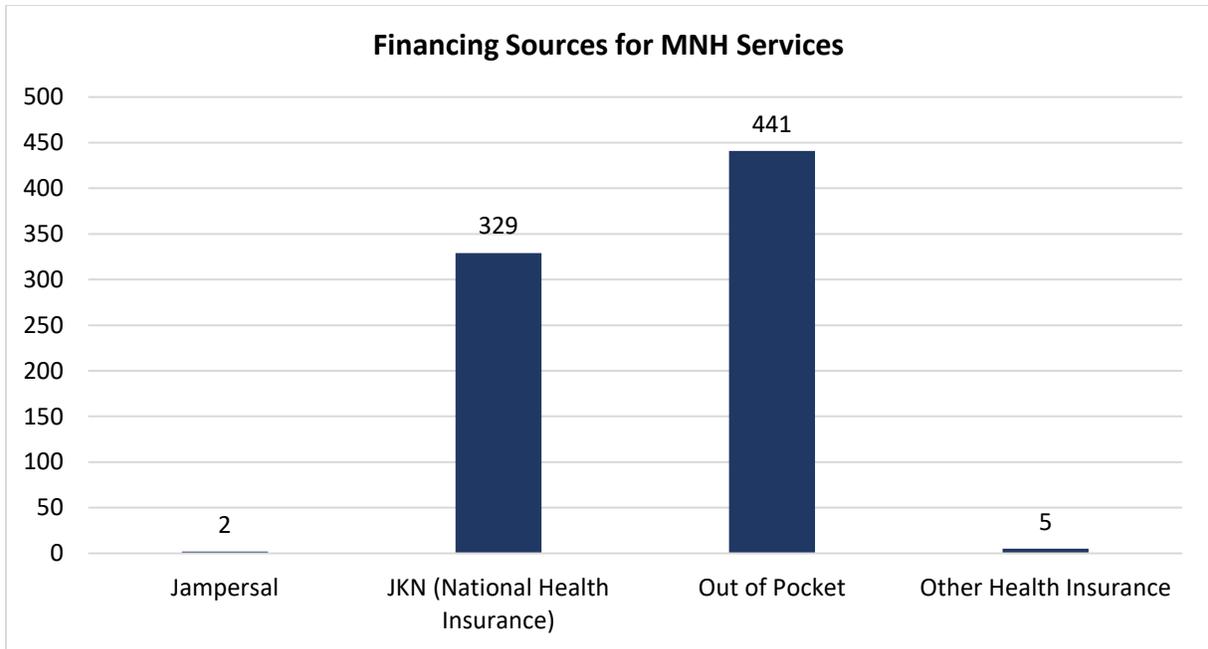
The majority of respondents (487) resided in the intervention and control areas of the SHP pilots, and the remaining respondents (12.5%) reported residence outside these four sub-districts.

**Table 18.** Sample Respondents Based on Residence

Residence by Sub-District	Total
Kragilan	126 (23%)
Kramatwatu	135 (24%)
Cikande	181 (32.5%)
Tirtayasa	45 (8%)
Others	70 (12.5%)
<b>Total</b>	<b>557</b>

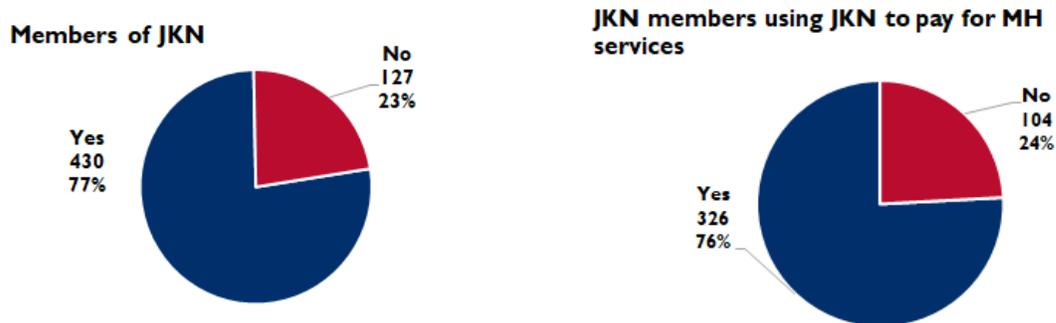
#### 4.4.2 How Mothers Paid for Maternal Health Services

As presented in section 4.2.6 of the provider’s survey, OOP was reported as one of the financing sources for all types of health facilities—public and private—except for village midwives. For private midwives, OOP was their primary source of funds. Since the majority of mothers in the survey received MNH services from private midwives, most of whom were not empaneled with BPJSK, the mother survey found that OOP was the most frequently reported way that mothers paid for maternal health services. This was followed by National Health Insurance (JKN) coverage as shown in Figure 28. A small number of mothers have other health insurance and were covered by Jaminan Persalinan (Jampersal or Birth Delivery Insurance). More than 200 respondents reported more than one source of financing to cover the cost of their MNH services.



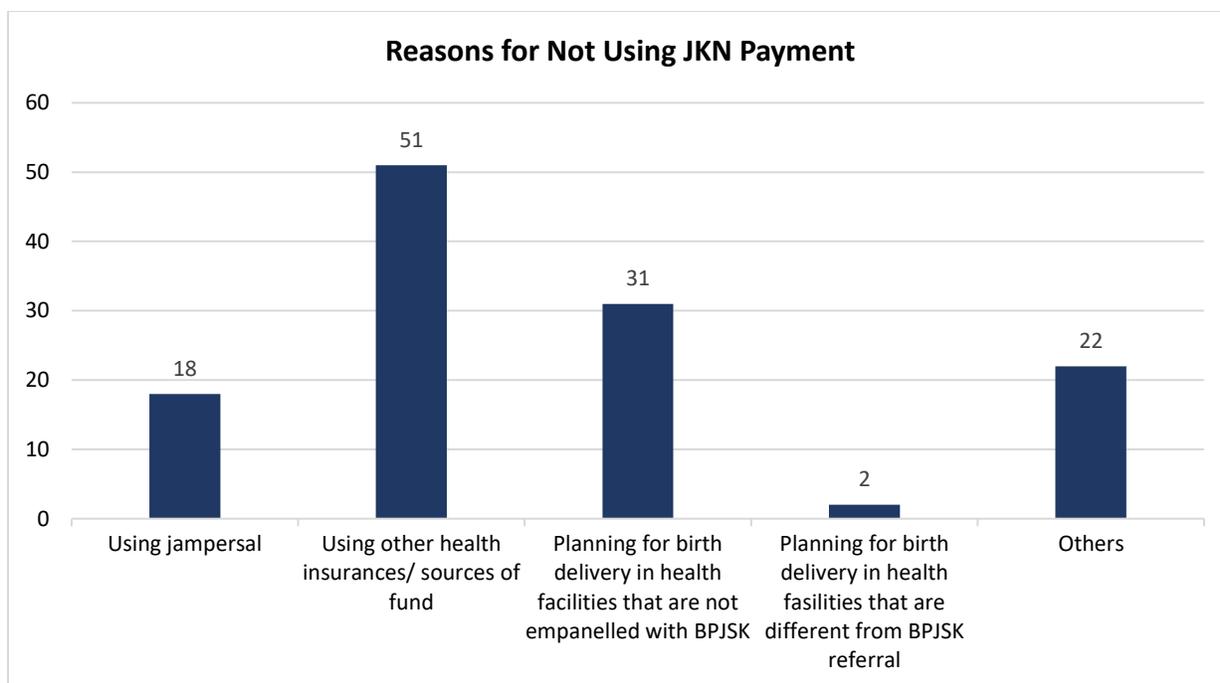
**Figure 28.** Mothers' financing sources for maternal health services

The majority of mothers (77%) were members of JKN; however, only 76% of them used or planned to use JKN payments for maternal health services (Figure 29).



**Figure 29.** JKN Members and the utilization of JKN for maternal health services

Among the 104 mothers not using JKN, the main reasons cited for not doing so were the use of another health insurance, such as Jaminan Persalinan (Jampersal), and plans to deliver in health facilities that were not empaneled with BPJSK (Figure 30). Other reasons included choosing health facilities empaneled with BPJSK but different from the facility that BPJSK referred them to. Another reason was inactive JKN membership.



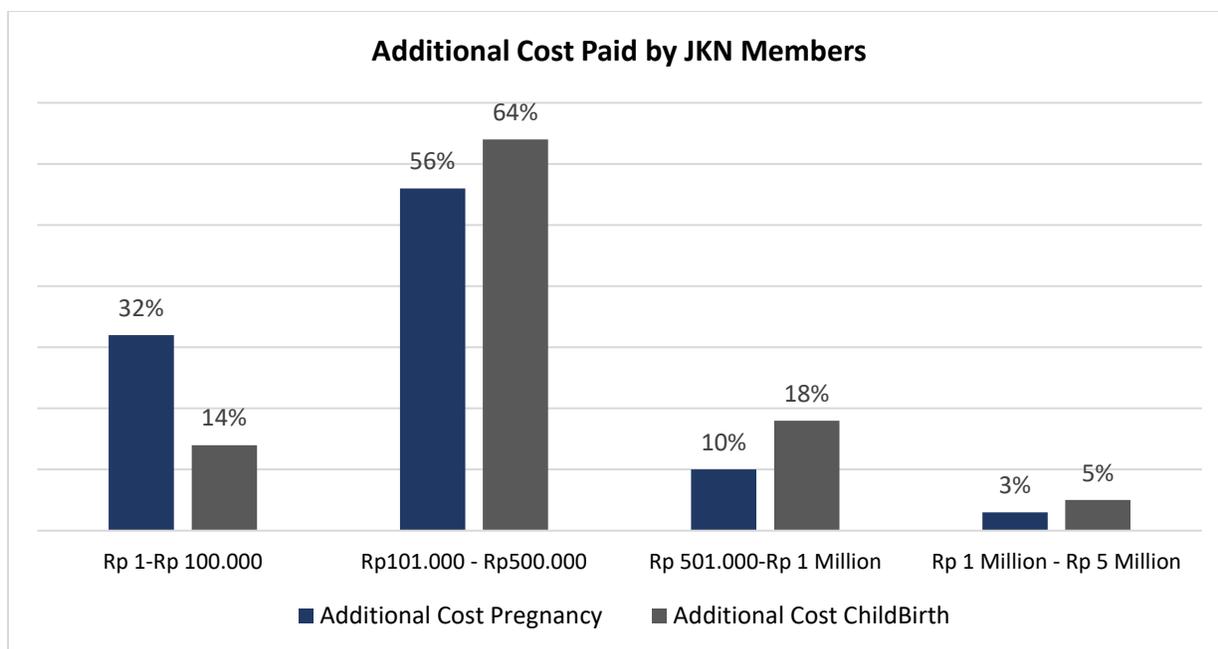
**Figure 30.** Reasons for not using JKN payment

Despite having JKN membership, the study found that 124 (29%) of mothers covered by JKN reported still paying additional cost for maternal health services, which included ANC, delivery, and PNC services (Table 19).

**Table 19.** Types of Maternity Care Services Incurring Additional Cost

Maternity Care	Description of Services
Antenatal	USG, laboratory, treatment cost, supplement, MCH Handbook, medicines, rapid antigen test for COVID-19
Delivery	Rapid antigen test for COVID-19, medicines, delivery services cost, cleaning fee
Postnatal	Medicines

The majority of mothers who paid additional costs during pregnancy or childbirth spent between IDR 101,000 and IDR 500,000 (Figure 31). Some of them even paid more than IDR 1 million for the services. The additional cost for maternal health services was also related to the COVID-19 pandemic, which requires pregnant women to take rapid antigen tests before receiving care services.



**Figure 31.** Total additional cost paid by JKN members

#### 4.4.3 Quality of Maternal Health Services Received by Mothers (ANC, USG, Birth Delivery)

The quality of MNH services received by mothers is one of the indicators assessed in the survey. Related to the timeliness in getting antenatal services, the coverage of the first antenatal care visit by mothers under twelve weeks of pregnancy (K1 murni) is considered high. The majority of mothers (91%) had their first ANC visits in the first 12 weeks (Table 20); however, 49 mothers had their first ANC visit after 12 weeks, and seven of them at 24 weeks or more.

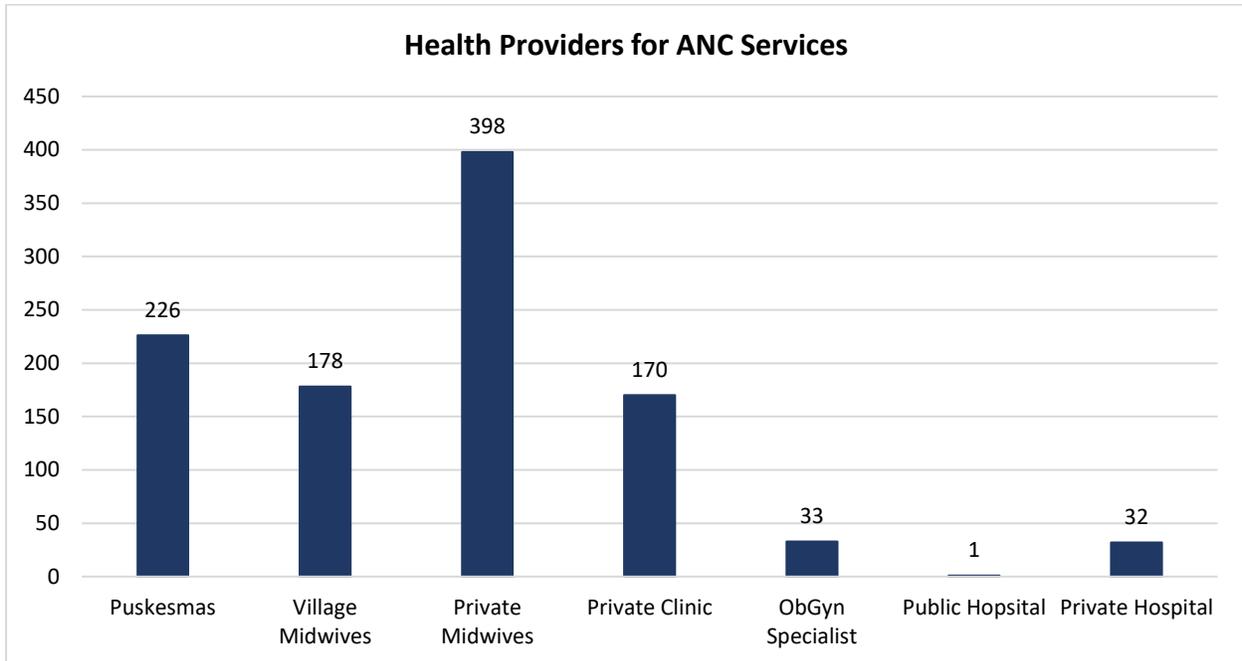
**Table 20.** First ANC Visit

1 <sup>st</sup> ANC <= 12 Weeks	Total
Yes	508 (91%)
No	49 (9%)
<b>Total</b>	557

As discussed in Section 4.2.2, Minister of Health Regulation No. 21 of 2021 defines quality standards for MCH services, called ANC 10T. The standards include a minimum of six antenatal visits, with a minimum of two visits with a doctor or specialist. The examinations by a doctor at the first visit (during the first trimester) and fifth visit (during the third trimester) were to determine the risk of the mother’s pregnancy (normal or complicated).

The mother survey found that the main MCH service providers for pregnant women were private midwives, followed by puskesmas and village midwives. Many of the mothers visited more than one

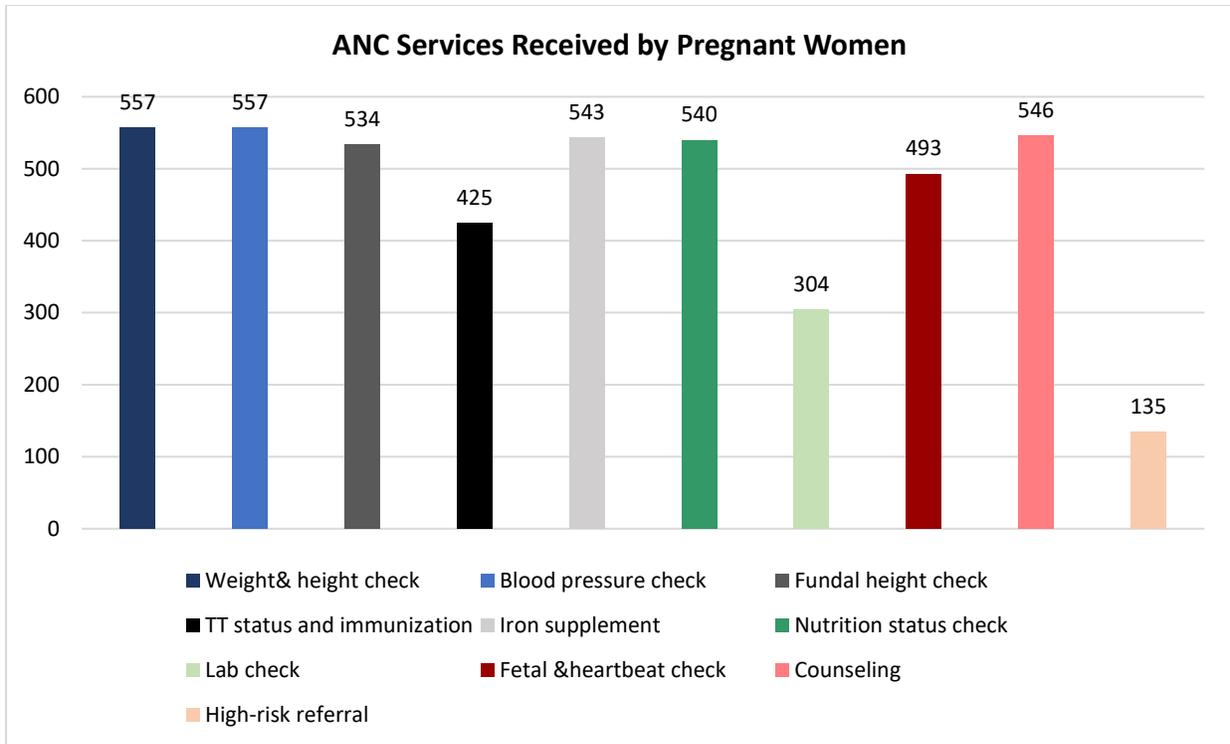
health provider during the ANC period (Figure 32). Mothers relying exclusively on private midwives would not be able to meet the ANC 10T quality standard to have two visits with a doctor.



**Figure 32.** Where pregnant women seek ANC services by type of health provider<sup>6</sup>

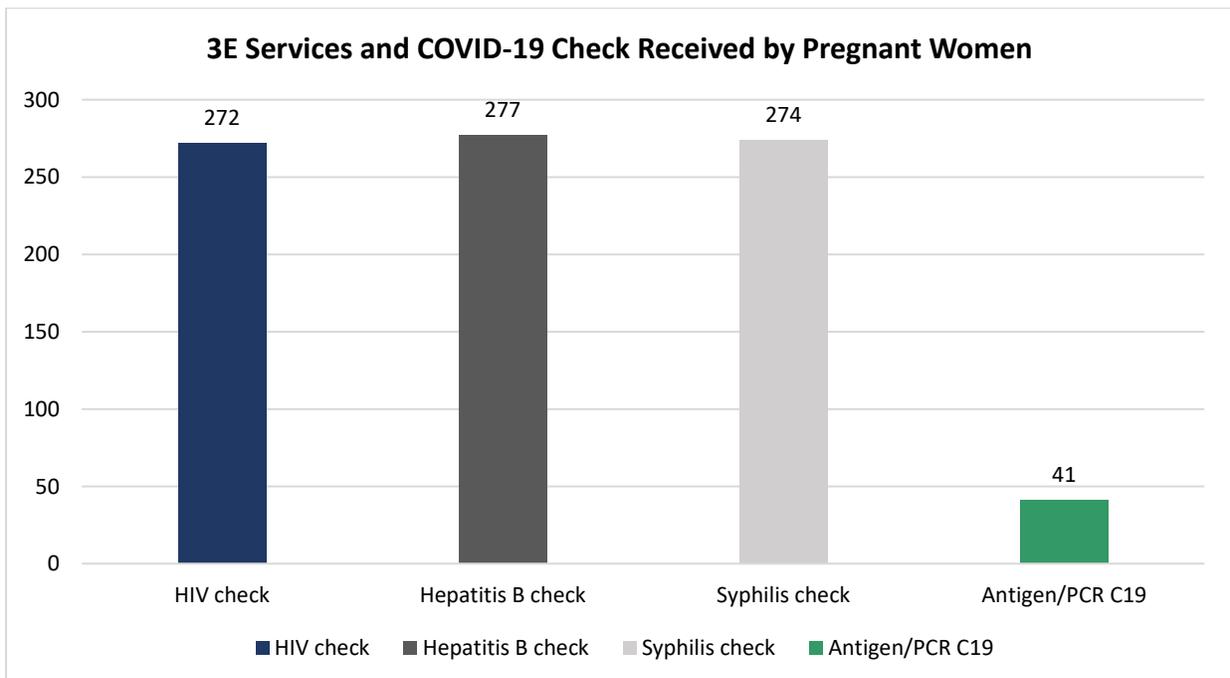
Figure 33 shows the services received by pregnant women during antenatal care. All mothers (557) received weight and height measurements as well as blood pressure checks; however, the ANC laboratory tests such as for pregnancy, blood hemoglobin, type, and glucose were received by 304 (54.6%) mothers.

<sup>6</sup> Respondents may choose more than one health provider.



**Figure 33.** ANC services received by pregnant women

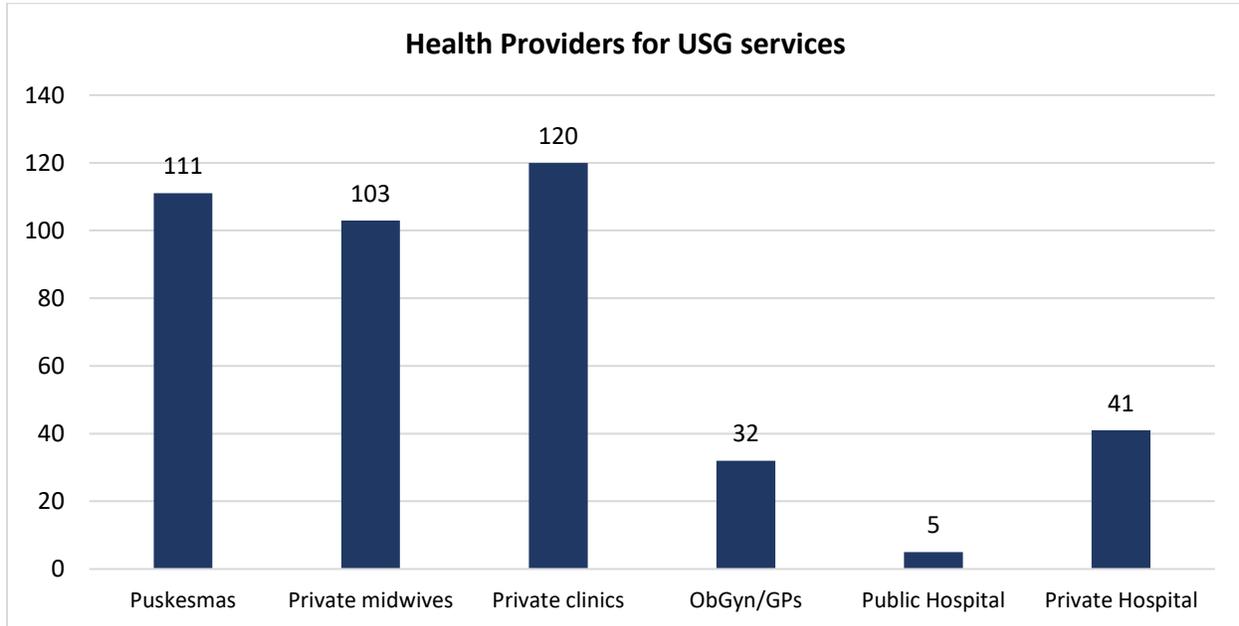
Similar to the ANC lab check above, laboratory tests for HIV, hepatitis B, and syphilis to meet 3E service standards, were obtained by 50-55% of mothers (Figure 34).



**Figure 34.** 3E services and COVID-19 check received by pregnant women

These findings are consistent with the results of providers' survey that found less than 50% of health providers performed laboratory examinations for ANC and 3E (HIV, hepatitis B, and syphilis).

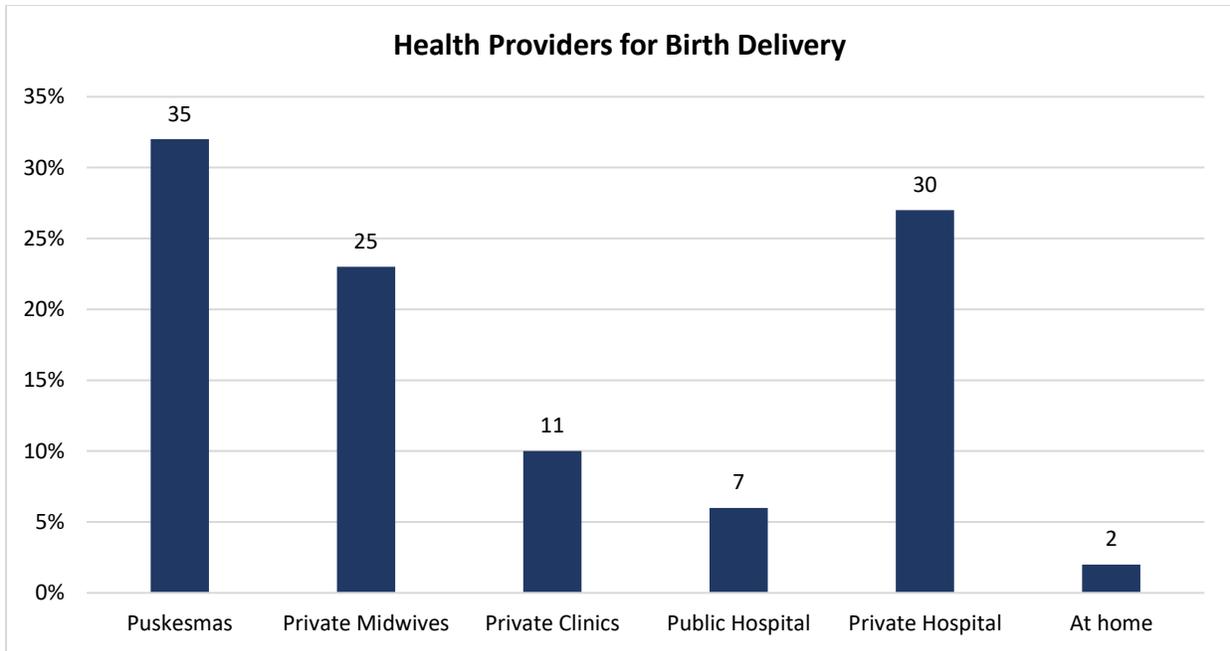
Figure 35 shows that most mothers (74%) had ultrasound examinations during pregnancy. Puskesmas, private midwives, and private clinics are the primary providers of USG services.



**Figure 35.** Where pregnant women receive USG services by type of health provider

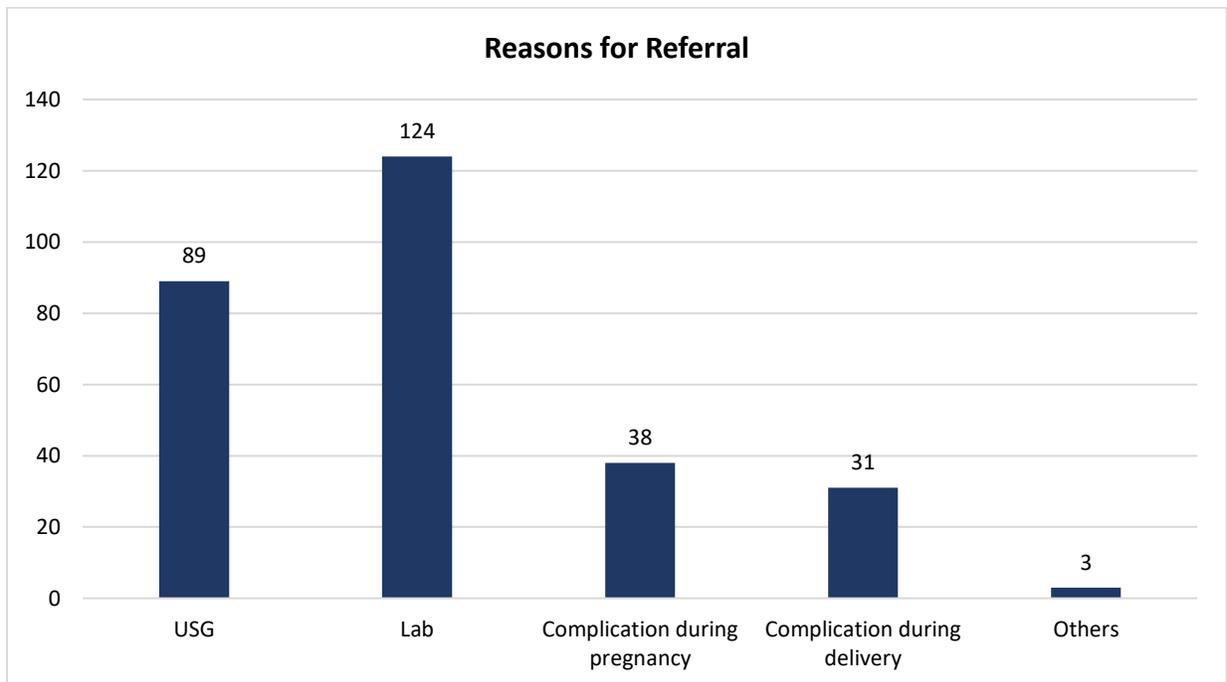
The USG examination is important in determining the condition and growth of the fetus. The Ministry of Health facilitated the provision of ultrasound equipment and conducted trainings for doctors at the selected puskesmas in Kabupaten Serang in September 2020; however, as presented in Section 4.2.2, the provider's survey found a small number of private providers have an ultrasound device: private clinics (36%) and private midwives (2%).

As mentioned above (Figure 32), private midwives were the most frequently cited provider of antenatal care. In contrast, the main facilities for birth delivery services are puskesmas and private hospitals (Figure 36). Among the 110 mothers in the sample who had given birth, 65 said they gave birth in puskesmas or a private hospital. Private midwives delivered for 25 women. Two mothers delivered at home with the help of a midwife and traditional birth attendant.



**Figure 36.** Where women receive birth delivery services by type of health provider

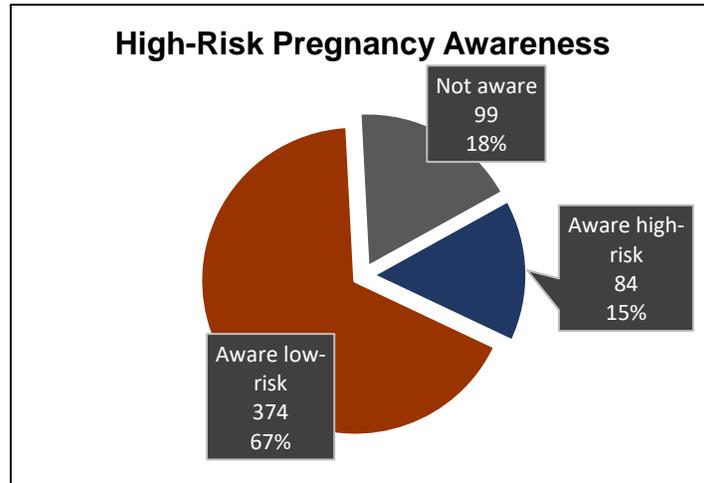
The mother survey also asked women about referrals experienced during pregnancy, after delivery, and postnatal care. 197 (35%) mothers reported being referred. Referral for laboratory examination and USG examination were the main reasons for referral (Figure 37).



**Figure 37.** Reasons for referral

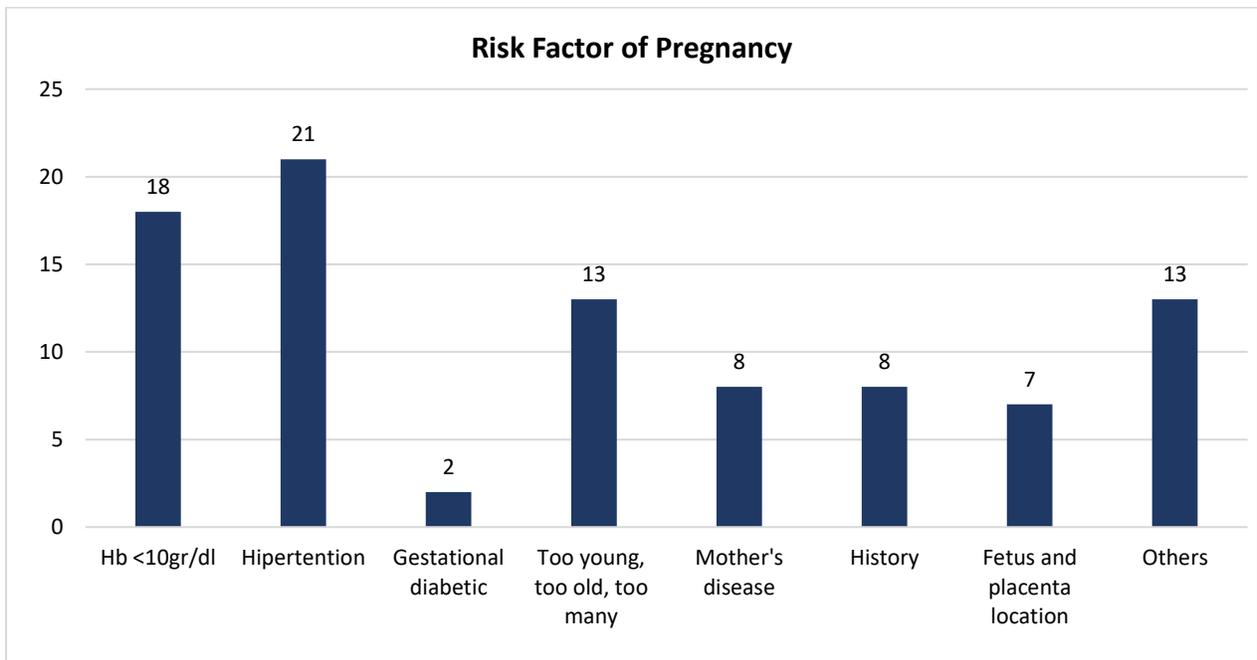
#### 4.4.4 High-Risk Pregnancy

Knowing the risk status of pregnancy as early as possible is one of the efforts to prevent complications and plan better management if complications occur. Based on the survey, 82% of mothers were aware of their risk of pregnancy, 15% of them knew their pregnancy was high-risk and the others (67%) knew they were not high-risk (Figure 38); however, the remaining 18% said they did not know their risk status.



**Figure 38.** Women’s awareness of the risk status of their pregnancy

From the 84 mothers who had a high-risk pregnancy, hypertension was the leading risk factor, followed by low hemoglobin, and one of the 3T’s (too young, too old, or too many) as shown in Figure 39.



**Figure 39.** Risk factor of pregnancy

#### 4.4.5 Maternal Health Services Satisfaction

The survey explored the degree of mothers' satisfaction with antenatal and delivery services using a five-point scale. The survey found that the majority of pregnant mothers in the ANC period (446) were satisfied with ANC services; and the majority of women in the delivery (16) and post-partum (75) periods were satisfied with the delivery services provided (Figure 40). It also shows that more mothers were satisfied with the delivery services than with the antenatal care services they had received.

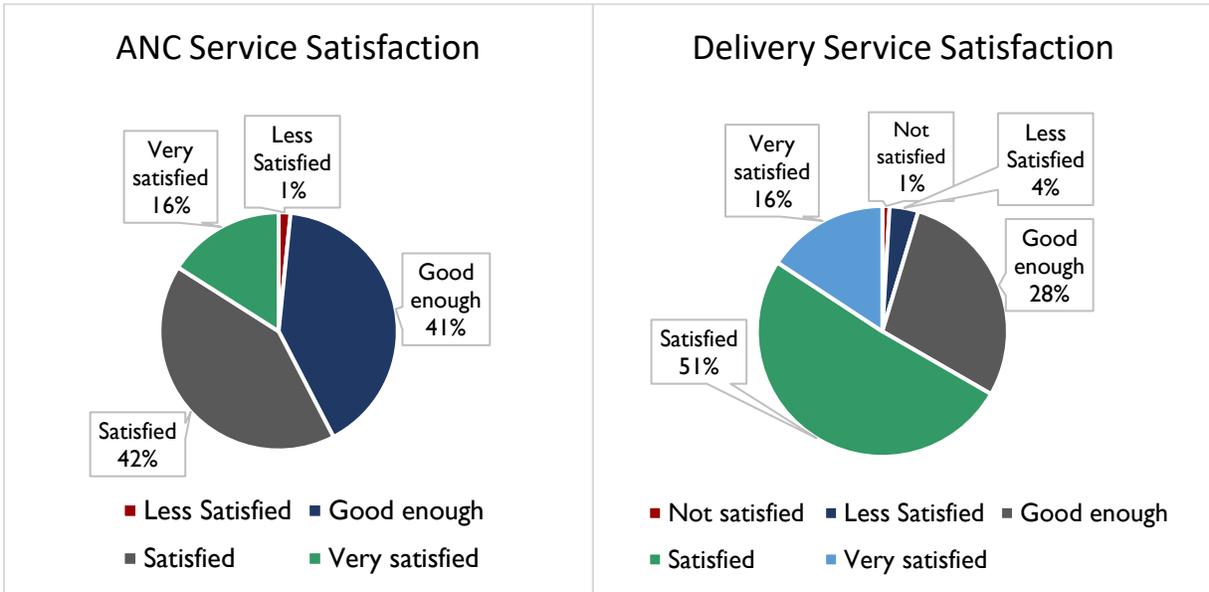


Figure 40. ANC and delivery services satisfaction

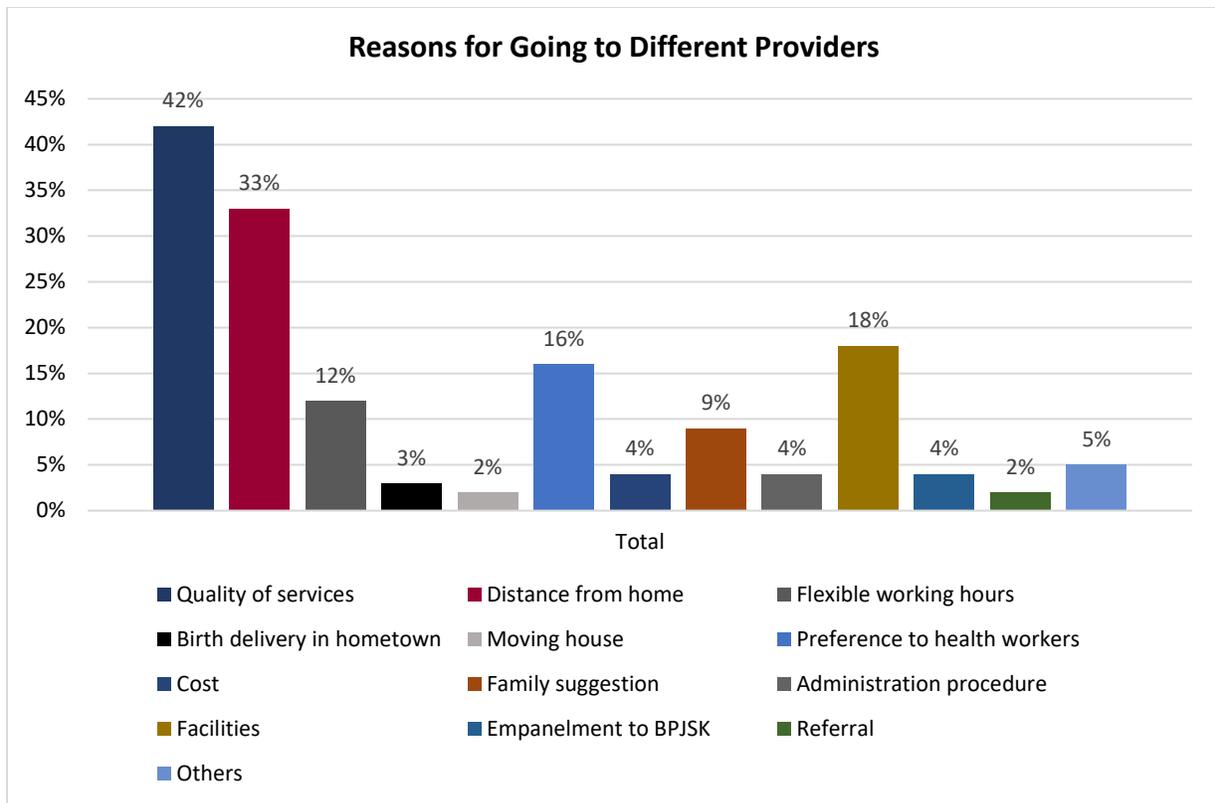
Figure 41 shows women's degree of satisfaction by type of service provider. The majority of mothers who have given birth with private midwives were very satisfied with their services. While services provided by puskesmas and hospitals, public and private, were regarded as satisfactory by most of the respondents.



**Figure 41.** Satisfaction with delivery service by type of provider

#### 4.4.6 Continuity of Care and Mother’s Health Seeking Behavior in Health Providers

In maternal and child health services, continuity of care can be disrupted when patients change providers. The survey showed that the majority of 322 (58%) mothers changed health care providers of their own accord, in other words not via a referral. The majority (310) changed providers during the ANC service period, 22 changed during the delivery period, and two mothers changed during the PNC period. The data show that there are some mothers who changed provider more than once during their pregnancy. Mothers cited many different reasons for changing provider (Figure 42). Service quality and distance from home were the main reasons for mothers to go to a different health provider. This was followed by the range of services offered by facilities (18%), preference for a type of health worker (16%), and flexible working hours (12%).



**Figure 42.** Reasons for going to different providers

Puskesmas have rigid working hours from morning to evening, which can be inconvenient for pregnant women who are employed, which was the case for 163 (29%) of the women in the survey. Pregnant women who work tend to choose antenatal services at private providers who have more flexible working hours. Pregnant women moving to a different home during antenatal care, especially before delivery, was cited by 2% of the 112 mothers in the delivery and postnatal phase. Another 3% said they planned to give birth in their hometown and changed their domicile to their hometown before the day of delivery.

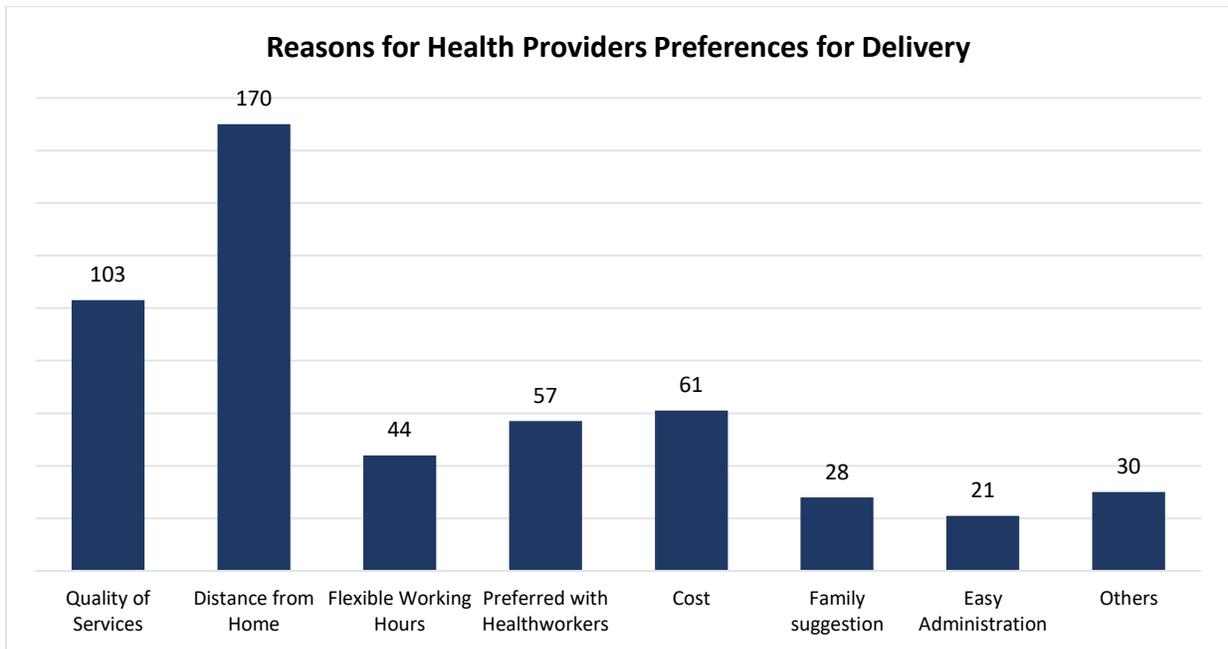
**Table 20.** Level of ANC Service Satisfaction by When the Woman Changed Provider

ANC Service Satisfaction	Period of Providers Changes		
	ANC	Delivery	PNC
Not satisfied	NA	NA	NA
Less satisfied	7 (2%)	NA	NA
Good enough	111 (36%)	6 (27%)	1(50%)
Satisfied	134 (43%)	12 (55%)	1 (50%)
Very Satisfacted	58 (19%)	4 (18%)	NA
<b>Total</b>	<b>310</b>	<b>22</b>	<b>2</b>

**Table 21.** Delivery Service Satisfaction vs. Period of Provider Changes

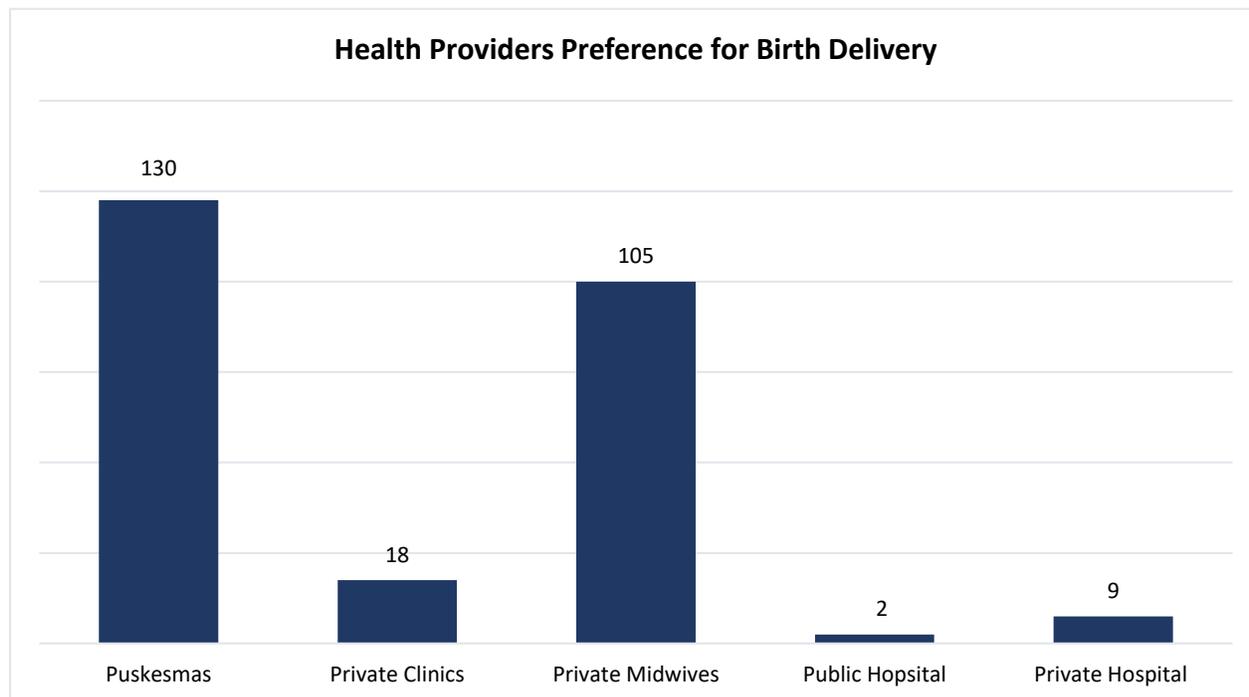
Delivery Service Satisfaction	Period of Providers Changes		
	ANC	Delivery	PNC
Not satisfied	1 (2%)	NA	NA
Less satisfied	2 (4%)	2 (9%)	NA
Good enough	13 (23%)	3 (18%)	NA
Satisfied	30 (54%)	15(68%)	2 (100%)
Very Satisfied	10 (18%)	1 (5%)	NA
<b>Total</b>	<b>56</b>	<b>22</b>	<b>2</b>

The mother survey found that 196 (35.2%) pregnant women stated a preference for a type of health facility during pregnancy visits and 264 mothers (47.4%) reported having a preference for a type of health facility for childbirth. Distance from home was the dominant reason for this preference, followed by quality of service and affordable costs (Figure 43).



**Figure 43.** Reasons for mothers' preference for a health provider for delivery

Among the 264 mothers with a preference for a type of birth delivery facility, puskesmas were the most preferred, followed by private midwives (Figure 44).



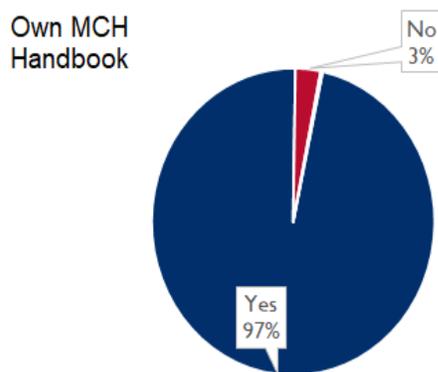
**Figure 44.** Health providers preferred by mothers for birth delivery

Retention of pregnant women at the same health providers for maternal health service is essential to ensure the continuity of care and avoid lost-to-follow-up cases during the pregnancy. As shown in Figure 43 above, the quality and cost of services influence mothers' preference for a health provider, and therefore their likelihood to stay with the same health provider. In conclusion, increasing the quality of services and financial protection (membership of mothers to JKN and empanelment of providers to BPJSK) is recommended to increase the retention of pregnant women to the same health providers.

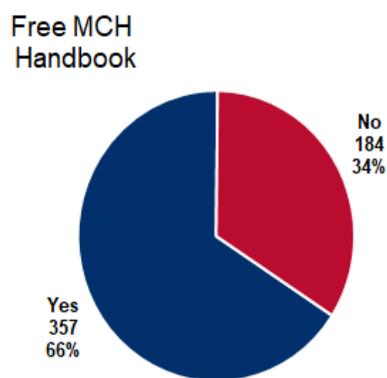
#### 4.4.7 MCH Handbook Recording System

The MCH Handbook is the only maternal health recording system that records all services provided by health facilities during pregnancy, childbirth, and the postpartum period, as well as the risks of pregnancy and delivery planning. The MCH Handbook must be owned and held by the pregnant woman. Nearly all mothers surveyed (97%) had the MCH Handbook (Figure 45). An advantage of the handbook is that if a pregnant woman moves to another health facility, the MCH Handbook is a source of information regarding the status of her maternal services and pregnancy that travels with her. One limitation of the MCH Handbook is that there is no digital version such as an application on a patient's phone. The information in the mothers' MCH Handbook is kept at health facilities in the form of mother cards and mother cohorts.; however, as shown in the previous section on the provider survey, not all providers have mother cards or mother cohorts. In addition, limitation of the facility recording system is that there is no integration of information systems between health facilities; therefore, when pregnant women change health providers, the condition and status of the mother cannot be monitored by the previous health provider.

Most mothers (97%) have the MCH Handbook (Figure 45). The majority of mothers (67%) obtain MCH Handbooks from private midwives; however, not all mothers receive the MCH Handbook for free (Figure 46).



**Figure 45.** Pregnant women who own an MCH Handbook



**Figure 46.** Pregnant women who have received a free MCH Handbook

The MCH Handbook is provided by the Ministry of Health based on the estimated number of pregnant women in the districts, and distributed to the health facilities; therefore, an MCH Handbook should be given for free to every expecting mother.

Completeness of data in the MCH Handbook is very important because the MCH Handbook is the record that pregnant women carry. The MCH Handbook is the main source of information when women change health providers. During the data collection for the survey, the enumerators conducted sampling by looking at the MCH Handbooks of the respondents and assessing the completeness of the MCH Handbook (Table 22).

**Table 22.** The Complete Filling of ANC, Delivery, and PNC Records in MCH Handbook

Completeness of Filling Record	Period of Mothers			Total MCH handbook observed
	ANC	Delivery	PNC	
Yes, completely filled (100%)	272 (62.96%)	7 (43.75%)	73 (78.49%)	352 (65.06%)
Partially filled (50% < x < 100%)	124 (28.7%)	8 (50%)	19 (20.43%)	151 (27.91%)
Partially filled (0% < x <= 50%)	36 (8.33%)	1 (6.25%)	1 (1.08%)	38 (7.02%)
Total mothers	432 (100%)	16 (100%)	93 (100%)	541 (100%)
*percentage by column				

The assessment found that among the MCH Handbooks, according to period of mothers, from a total of 541 observed, 65% are completely filled, 27.91% are partially filled ( $50\% < x < 100\%$ ), and 7% less than partially filled ( $0\% < x \leq 50\%$ ); however, the assessment did not assess the accuracy of the information written in the handbooks because the information was not compared to facility records.

## 5. CONCLUSIONS AND RECOMMENDATION

The overall conclusion is that the Kabupaten Serang District is emblematic of the challenges and opportunities in the Indonesian health system to improve MNH services and outcomes. The secondary data and both surveys point to issues of provider capacity and performance to comply with ANC 10T standards, cost barriers, and gaps in patient data that affect the quality and continuity of care. Membership of mothers in JKN and empanelment of providers with BPJSK represent significant progress, but alone they have not fully addressed these issues. The MNH strategic health purchasing pilot is designed to address several of the problems analyzed in this baseline study.

### **Laboratory capacity improvement for private health providers**

The results of the baseline survey show that only a small number of service providers have the capacity to provide complete ANC 10T and 3E services. For example, important lab tests are not done to determine the risk of pregnancy complications such as pre-eclampsia and anemia so they can be managed early. The main obstacles are the lack of laboratory infrastructure and reagents, and staff trained to perform the lab tests. The provision of all services included in ANC 10T and 3E supports continuity of care and retention of pregnant women with a health provider. The SHP pilot might not be designed to increase the laboratory capacity; however, the SHP interventions are encouraging health providers, especially private clinics and private midwives, to join providers network. In addition, training staff of MCH service providers and ensure the availability of reagents for ANC and 3E laboratory examinations, especially for private providers, are recommended to be conducted.

### **Health provider networks to ensure continuity of care and management of high-risk patients**

The results of the study indicate that there is a need to ensure that pregnant women, particularly high-risk pregnant women, receive quality services and that pregnancy risks can be detected early and treated properly. The mother survey found that mothers change health providers for MNH services due to distance from home, quality of services, and cost. The mother survey also found that the main MCH service providers for pregnant women were private midwives. But mothers relying exclusively on private midwives would not be able to meet the ANC 10T quality standard to have two visits with a doctor to identify high-risk pregnancy. To address these and other issues, the SHP design calls for a network of providers for maternal health services that includes private midwives, private clinics, and puskesmas. Private midwives inclusion in a network would ensure access to examination by a doctor in the first trimester according to ANC 10T standards to identify pregnancy risk earlier. An MNH provider network is expected to improve the quality and continuity of MNH services over the nine months of pregnancy. A network might also increase the retention of pregnant women to the same health provider or within the

same network. A network of maternal health providers i.e. KIBBLA has been established in Kabupaten Serang. However, not all private providers have joined it. It is expected that more MNH providers joining the KIBBLA network during the SHP implementation and the network performance can be monitored to ensure the necessary and appropriate referrals are made, especially for high-risk pregnancies.

### **Encouraging private providers to empanel with BPJSK**

Provider empanelment to BPJSK is still considered low, especially among private midwives. SHP interventions like benefit specification and payment mechanisms attempt to incentivize private midwives to empanel with BPJSK. The mother's survey showed that while most mothers are JKN members, most of them prefer paying private midwives. Empanelment is expected to increase mothers' access to MNH services by eliminating the need for them to pay for midwifery services (i.e., financial protection). Empanelment is also expected to improve retention of mothers with the same health provider or network of providers.

The SHP pilot design includes additions to the MNH benefit specifications such as increased tariffs for ANC, delivery, and PNC services as well as provides incentives for quality of services provided. It is expected that the strategic payment system and benefit specifications will encourage private clinics to empanel with BPJSK because of an increase in income. This will in turn expand access for women covered by JKN.

### **Improving recording and reporting mechanisms**

Current MNH information systems have serious gaps that affect the quality of MNH data needed by public health officials, providers, and the monitoring and evaluation of the SHP pilot. The baseline study found a variety of mechanisms for recording and reporting maternal health information among public and private health facilities. This study found that private providers are not required to report their services to puskesmas. Only village midwives will report to puskesmas, then, all puskesmas will report to District Health Offices using Pemantauan Wilayah Setempat (PWS-KIA) and the monthly report (LB-3). In addition, most service providers record data and rely on the patient's MCH Handbook as their primary source of information. Only a small number of private providers have recorded using Mother's Cohort and Mother Card. Each patient has an MCH Handbook so this data cannot be easily accessed for aggregate reporting and analysis by health officials.

Thus, improvements to the recording and reporting system are urgently needed to increase data reporting and sharing by private providers and to improve the continuity of care and prevent lost-to-follow-up cases. Such improvements will support faster claim payments and more accurate monitoring of the quality of MNH services during the SHP implementation. One recommendation is for all health providers to use similar recording and reporting formatting in documents and systems. This will enhance providers' ability to monitor the condition of a mother and the quality of services received including referrals made throughout her maternity period.

Considering the importance of the MCH Handbook as the main information source for pregnant women, the MCH Handbook is urgently required to be completed. This includes the Mother Cohort and Mother Card for the health providers.

In conclusion, this baseline study recommends increasing access of pregnant women to MNH services through the involvement of private service providers to BPJSK, increasing the quality of services provided by optimizing the network of MNH service providers and capacity improvement, and using data effectively as a source of information for monitoring and evaluating the implementation of quality, effective, and efficient MNH services.

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