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Original Article

Implementation of Minimum Health Service Standards for Maternal and Child Health (MCH) and Family Planning in Bengkayang District, Indonesia

[1]Ferry Santoso, [2] Perigius Hermin Sebong, [3] Maria Estela Karolina, [1] Maria Ulfa Nur Hidayanti

[1] Department of Obstetrics and Gynecology, Faculty of Medicine, Universitas Negeri Semarang, Indonesia
[,2] Departement of Public Health, Faculty of Medicine, Soegijapranata Catholic University, Semarang, Indonesia
[3] Department of Clinical Microbiology, Faculty of Medicine, Universitas Negeri Semarang, Indonesia

E-mail Corresponding: ferry@mail.unnes.ac.id

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ABSTRACT

Background: Primary Healthcare Centers (PHC) are vital in delivering the Minimum Health Service Standard (MHSS) for maternal and child health. This study aims to analyze the performance outcomes of maternal and child health services based on MHSS and to identify the health worker and socio-demographic factors that influence MHSS achievement in Bengkayang District.

Method: This study utilized two approaches: cross-sectional exploration and situational analysis based on reviews at the health management level and health service units in the district. It was conducted from August to October 2020 at three Primary Healthcare Centers in Bengkayang District, utilizing purposive sampling and involving 20 key informants.

Results: The MHSS's achievements in maternal and child health services and family planning programs varied. The K4 coverage at Puskesmas Ledo fell short of its target. Additionally, the percentage of childbirths assisted by health workers in the health facilities at Puskesmas Bengkayang, Ledo, and Jagoi Babang did not meet the national MHSS target. Coverage for the initial antenatal care visit and essential immunization targets at Puskesmas Ledo and Jagoi Babang also did not reach the national benchmarks. Furthermore, family planning service coverage at Puskesmas Jagoi Babang did not meet the established target, and the family planning data at Puskesmas Ledo was incomplete.

Conclusion: The performance of MHSS in the Bengkayang District requires improvement. Additional efforts should encourage community engagement and partnerships to guarantee that trained health workers assist with all birth deliveries in health service facilities. The Puskesmas should also revise its recording and reporting processes related to family planning service indicators improvement. Additional efforts should encourage community engagement and partnerships to guarantee that trained health workers assist with all birth deliveries in health service facilities

INTRODUCTION

Maternal mortality rate (MMR) and infant mortality rate (IMR) reflect the quality of healthcare systems. In Indonesia, MMR is relatively high at 305 per 100.000 live births, as well as the IMR of 24 per 1000 live births (SDKI in 2017). [1] National strategies to increase the quality of maternal and child health and family planning coverage through ensuring that every pregnant woman can access quality health services, including complete maternal health services at health facilities, newborn health services, and care services for children under five.

These efforts can be assessed by analyzing coverage of four or more antenatal care visits or K4. Maternal healthcare services were evaluated by the percentage of births assisted by health workers at health service facilities. Newborn health services can be assessed by covering the first neonatal visit or *kunjungan neonatal pertama* (KN1). In 2019, the national coverage of K4 was 88.5%, childbirth assisted by health workers in health facilities was 88.75%, and neonatal visits were 94.9%. In addition, basic and continued immunization can assess health services for children under five. Basic and advanced immunization coverage in 2019 was 93.7% and 75.95%, respectively. [1]

Reducing MMR and IMR is one of the priorities in the work program of the West Kalimantan Province government and the Bengkayang District government. The MMR in West Kalimantan Province 2019 was 130 per 100,000 live births, while the MMR in Bengkayang District was 44 per 100,000 live births. The IMR in this province in 2019 was 6 per 1000 live births, while the IMR in Bengkayang District was 12.2 per 1000 live births. Bengkayang district has the highest IMR compared to other districts in West Kalimantan Province. [1]

The quality of maternal health services can be monitored from the coverage of K4 and the coverage of delivery assistance in healthcare facilities. Maternal visits, known as K4 coverage in West Kalimantan Province, was 84.5%, while in Bengkayang District it was 81.2%. The coverage of delivery assistance by healthcare workers in healthcare facilities in West Kalimantan Province was 82.5% (target 100%), while in Bengkayang District, it was 73.3% (target 100%). The child's healthcare quality can be monitored from the coverage of KN1 (first neonatal visit) and basic and advanced immunization coverage. KN1 coverage in West Kalimantan Province and Bengkayang District in 2019 was 88.12% and 80.35%. Meanwhile, basic and advanced immunization coverage in West Kalimantan Province in 2019 was 82.5% and 70.7% (100% target), and in Bengkayang District was 73.1% and 64.5%. [1]

One of the efforts in reducing MMR in Indonesia is to reduce four risk factors. These risk factors are too young (giving birth under the age of 20), too old (giving birth over 35), too close (less than 2 years), and too many (more than two children). The number of women dying from too-young and too-old births is about 33% of the total MMR. If the family planning program is well implemented, 33% of maternal deaths can be prevented. The percentage of active family planning among couples of childbearing age in 2019 in Indonesia was 62.5%, lower than the target of 66%. The percentage of active family planning in West Kalimantan province was 59.5%, still lower than the national average. The percentage of active family planning in Bengkayang district is 81% of total couples of reproductive age, which is high compared to other districts in West Kalimantan province. [1]
Baseline studies are essential for mapping the population's initial condition or health status, including maternal and child health. [1] High-quality maternal and child health services are the right of every Indonesian citizen. The government is responsible for ensuring that every citizen receives quality health services following the minimum health service standards (MHSS). [1] Primary healthcare centers, as primary healthcare facilities, will be at the forefront of efforts to achieve MHS targets. Achieving MHS targets will

significantly improve maternal and child health outcomes and help to reduce MMR and IMR.[1] The quality of maternal and child health services and newborn care depends on several assessments, such as prompt and appropriate care, by health professionals and on considering the preferences and aspirations of patients and their families.[1]

Two main dimensions to measure the quality of MCH services are the quality of care provision and the quality of care according to the patient experience (mother, child, newborn). The framework takes a systems approach by identifying domains that should be targeted to assess, improve, and monitor care in healthcare facilities within the health system context. [1] While the framework focuses on care provided in facilities, it also considers the critical role of communities and health service users in identifying their needs and preferences in managing their health. The perspectives of women, their families, and communities on the quality of maternal health care services influence their decisions to seek care. They are an essential component of getting high-quality maternal and newborn services. [1]

The existing study focused on coverage of Minimum Health Service Standards indicators at primary healthcare center levels. Therefore, this study was designed to analyze maternal and child health service performance outcomes based on MHSS indicators and to analyze health worker service and socio-demographic factors influencing MHSS achievement at three primary health care centers in Bengkayang district.

METHOD

Study Design

This study used two approaches, we employed descriptive research: document review for situation analysis and cross-sectional exploration. Specifically, this study used health systems frameworks to assess the primary healthcare system, emphasizing service delivery rapidly. [1] It was conducted from August to October 2020 at three Primary Healthcare Centers, or Puskesmas, in Bengkayang District, West Kalimantan Province. The study recruited maternal and child health (MCH) program supervisors, program managers and staff at the district level, general practitioners (GP), and healthcare workers at the Primary Healthcare Centers (PHC) or Puskesmas. To gain information regarding policy and planning for MCH, we also recruited representatives from the Bureau of Planning and Development Agency or Bappeda. Researchers also conducted secondary data comparisons based on official data from the District Health Office.

Sampling and Informant Selection

The sampling technique used purpose sampling, and there were 20 informants in total. Table 1 presents the criteria for recruiting informants, participants, and institutions

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Table 1. Number and Justification of Informant Selection

Informant	Justification of Selection	Number of Informants
Executive (Planning and budgeting institution)	These institutions include: ● Bureau of Planning and Development of Bengkayang District; ● Vice Regent Justification: responsible and has the main tasks and functions for health development in Bengkayang District	5

District Health Office	● Head of District Health Office; ● Representative staff from the health service division, DHO; ● Representative staff from the prevention and disease control division, DHO; ● Representative staff from the public health division, DHO	4
Hospital	Public Hospital: representative staff from the health service division	1
Primary Healthcare Centers, or Puskesmas	Puskesmas Bengkayang Puskesmas Ledo Puskesmas Jagoi Babang	10

DATA COLLECTION AND ANALYSIS

This study employed semi-structured and group interviews to confirm findings from document reviews. Data analysis included a process of reductive identification and categorization of themes across MHSS indicators extracted from the 2019 MHSS report. Each theme was then analyzed as previously identified by the data collection guidelines. A Deductive quantitative data technique was used to corroborate the findings obtained from the qualitative data and establish the veracity of the data received.

RESULT AND DISCUSSION

Geographical Conditions and Access

Puskesmas Bengkayang, Ledo, and Jagoi Babang Primary Health Centers are located in Bengkayang District, West Kalimantan Province. Table 2 presents the area's characteristics and geographics.

Table 2. Characteristics of geographic areas of the Puskesmas Bengkayang, Ledo, Jagoi Babang

No	Items	Bengkayang	Ledo	Jagoi Babang
1	Area	167.04 km^2	481.75 km^2	655.00 km^2
2	Distance from the district capital	1.1 km	32.3 km	115 km
3	Total population	30.527	13.040	10.280
4	Transporta-tion	By car; some areas can only accessed by motorcycle or walking.	70% of the area can accessed by car or motorcycle, 30% of the area by river route (motorboat)	By car, some areas can only accessed by motorcycle or walking.
5	Located at the border area	Not at the border area	Not at the border area	At the border area

Puskesmas Bengkayang is located in the Bengkayang Sub-district in the center of Bengkayang City, approximately 65 meters above sea level. Its service area covers 167.04 km² and includes two sub-districts (Bumi Emas and Sebalo), four villages (Bakti Mulya, Setia Budi, Bani Amas, and Tirta Kencana), nine hamlets, 40 community associations (RW), and 64 neighborhood associations (RT). The majority of the area consists of highlands that are accessible primarily by motorcycle and on foot.

Puskemas Ledo has administrative service areas covering 481.75 km², including 12 villages and 32 hamlets. Most of the area is highland and river, with 70% of the terrain easily accessible via the Silk Route, which can be reached by car and motorcycle on paved

and hardened roads. The remaining 30% consists of challenging areas (inland regions and river paths) that can only be accessed by motorcycle, on foot, or motorboat. The land transportation distance from Bengkayang City to the Ledo subdistrict is 32.3 km. The administrative service area of Puskesmas Jagoi Babang covers 655.00 km^2, serving the community across six villages (Jagoi Village, Sekida Village, Gersik Village, Kumba Village, Semunying Jaya Village, Sinar Baru Village) and 14 hamlets. Puskesmas Jagoi Babang is located on the border with Sarawak (East Malaysia), and the area's topography is characterized by hills and mountains.

Table 3. Situation of Healthcare Service at Puskesmas Bengkayang, Ledo, and Jagoi Babang

No	Items	Bengkayang	Ledo	Jagoi Babang
1	The number of health workers in PHC	● GP: 3 ● Midwife: 36	● GP: 1 ● Midwife: 14	● GP: 2 ● Midwife: 15
2	Distance from PHC to hospital	7,5 km	32,7 km	90,6 km
3	Type of PHC service	Outpatient	Outpatient	Inpatient

Table 3 indicates that the three PHCs have varying circumstances concerning health efforts. Puskesmas Bengkayang has more targets to meet than the others. The number of GPs and midwives available to assist and support MCH services and programs in Bengkayang is more significant than in Puskesmas Ledo and Jagoi Babang. Despite being distant from the public hospital, Puskesmas Jagoi Babang offers inpatient services.

Maternal and Child Health Service

The latest MHSS performance report indicated that nearly all Puskesmas in Bengkayang, Ledo, and Jagoi Babang are experiencing fluctuations in their indicators. In 2019, the K4 coverage was as follows: Bengkayang at 99%, Ledo at 40.4%, and Jagoi Babang at 76.5%. Only Puskesmas Bengkayang and Jagoi Babang met the national target of exceeding 85%. Regarding childbirth assistance by trained healthcare workers in health facilities, the coverage was 75% at Puskesmas Bengkayang, 40.4% at Puskesmas Ledo, and 67.8% at Jagoi Babang. None of the primary health centers achieved this indicator's national target of 85%.

Table 4. Comparison of Key Performance Indicators of the MCH Program in 2019

No.	Main Performance Indicators	Bengkayang		Ledo		Jagoi Babang	
		Target 2019	Achieve-ment	Target 2019	Achieve-ment	Target 2019	Achieve-ment
1.	Maternal health services for pregnant women	85%	99%	85%	40,4%	85%	76,5%
2.	Health services for laboring mothers	85%	75%	85%	40,4%	85%	67,8%
3.	Newborn health services	85%	95%	85%	68,9%	85%	73,7%
4.	Health services for children under five years old	85%	93%	85%	53,8%	85%	59,9%

Newborn health services and health services for children under five aim to reduce infant mortality rates for children under five. Newborn health services focus on neonates (babies aged 0-28 days), who are at the highest risk of health issues. The coverage of the first neonatal visit (KN1) can be assessed, while the coverage of complete basic immunization can be evaluated for health services involving children under five.

The KN1 coverage at Puskesmas Bengkayang was 95%; Puskesmas Ledo was 68.9%; and Jagoi Babang was 73.7%. Basic immunization coverage at Puskesmas Bengkayang was 93%; Puskesmas Ledo was 53.8%; and Puskesmas Jagoi Babang was 59.9%. Only Puskesmas Bengkayang exceeded the national target of KN1 and basic immunization (more than 85%)

Table 5. Comparison of Key Performance Indicators of Family Planning at Puskesmas Bengkayang, Ledo, and Jagoi Babang in 2019

No	Key Performance Indicators	Bengkayang		Ledo		Jagoi Babang	
		Target 2019	Achieve-ment	Target 2019	Achieve-ment	Target 2019	Achieve-ment
1.	Coverage of the provision of contraceptive devices and drugs to meet community demand	30%	75%	30%	0	30%	76,1%
2.	Coverage of couples of reproductive age with unmet need	5%	2%	5%	0	5%	60%
3.	Targeted coverage of couples of reproductive age who are active family planning participants	80%	83%	80%	0	80%	75%

Furthermore, another indicator to evaluate a primary health care center's performance is the coverage of family planning (KB) services (Table 5). Family planning services can be assessed by examining the extent of contraceptive provision to meet community demand, the coverage of couples with unmet needs, and the proportion of target couples of reproductive age who are active participants in family planning.

The contraceptive provision coverage at Puskesmas Bengkayang and Jagoi Babang was 75% and 76.1%, respectively, exceeding the national target of over 30%. Puskesmas Jagoi Babang achieved the highest coverage of unmet needs at 60%, significantly surpassing the target of 2%. Puskesmas Bengkayang reached the highest active family planning coverage at 83%, exceeding the target of 80%. However, the centers at Jagoi Babang did not meet the established target.

Minister of Health Regulation No. 4/2019 establishes the minimum service standards in the health sector. [13] The primary focus of health services is on pregnant women, women in labor, newborns, and children under five years old, aimed at reducing maternal and infant mortality in Indonesia. Minimum Health Service Standards (MHSS) are implemented to ensure that every pregnant woman, newborn, and child under five receives quality health services that meet established standards and promote equality across all regions of Indonesia, including Bengkayang District, which is the outermost region of Indonesia, bordering Malaysia. Maternal and child health services in Bengkayang District reflect the efforts of the central government, local

government, and all stakeholders involved in enhancing the health status of the community. As the spearhead of the first maternal and child health service, primary health care centers are key in implementing minimum service standards in the health sector. Researchers selected Bengkayang primary health care center as the face of urban primary health care center, Ledo primary health care center as the face of rural primary health care center, and Jagoi Babang primary health care center as a border primary health care center. These three primary healthcare centers have different characteristics that can serve as indicators for assessing the implementation of health MHSS in Bengkayang District. [1]

Puskesmas Bengkayang Primary Health, the only one in the center of the district government, has achieved high achievements in maternal and child health services, almost all exceeding the specified targets. Adequate human resource support in MCH, easy access to the center of government and referral hospitals, and adequate geographical conditions (road access) are key to this achievement. [1]

In contrast to the Puskesmas Ledo, none of the maternal and child health services indicators were achieved. All were far below the set targets. In addition to limited human resource support, geographical conditions and access to the primary health care center are the main obstacles. There are 4 villages assisted by the Puskesmas Ledo that are very isolated with only access through the river, namely Rodaya village (712 people), Seles village (777 people), Sidai village (496 people), and Lomba Karya village (1260 people). River access severely hampers community mobilization to health facilities due to the unavailability of water ambulance services and the limited number of boats transporting goods and people. Consideration can be given to constructing an additional primary health care center in the Puskesmas Ledo working area. [1]

Puskesmas Jagoi Babang, a health care center located on the Indonesia-Malaysia border, has also not been able to achieve the target of key indicators in maternal and child health services. Although the geographical access of the primary health care center target area can be reached by two-wheeled transportation, the population spread over a very large target area (655 km2) can make health services less than optimal. In addition, limited human resource support and long distances to government centers have contributed to the failure to achieve the target coverage of maternal and child health services. Nevertheless, the performance achievement of the leading maternal and child health services indicators at the Puskesmas Jagoi Babang remains higher than the Puskesmas Ledo. [1]

Family planning services also play a role in assessing the quality of health services in a region. The service indicators assessed are the coverage of the provision of contraceptive devices and drugs to meet community demand (30% target), the coverage of couples of reproductive age with unmet needs (5% target), and the target coverage of couples of reproductive age who are active family planning participants (80%). The results of achieving the leading performance indicators of family planning services at the three primary health care centers appear to vary. Unfortunately, there is no data on family planning services at the Puskesmas Ledo. [1]

The Puskesmas Bengkayang achieved its target in the provision of contraceptives and contraceptive drugs as well as the coverage of couples of reproductive age with active family planning. For the coverage of couples of childbearing age with unmet needs, the target was only 2% of the 5% target. The concept of unmet need for family planning is also called unmet need. This concept refers to women of childbearing age 15-49 years of married status who want to delay pregnancy or want to limit births (do not want to have more children) but do not use contraceptives/methods. If the coverage of unmet needs in a primary health care center is low, it can be assessed that family planning

services are not optimal because many couples of childbearing age do not want to get pregnant but are forced to get pregnant because they do not get contraceptives. Socialization and introduction of contraceptive methods actively "pick up the ball" undoubtedly needed to increase the coverage of contraceptive services to the unmet need group in the Bengkayang primary health care center working area. [1]

The coverage of contraceptive services at the Jagoi Babang primary health care center is also quite good. The provision of contraceptives and coverage of couples of reproductive age with unmet needs can reach the target. The target coverage of couples of reproductive age who are active family planning participants almost reached 75%, from the target of 80%. This could be due to geographical conditions, population distribution, and the size of the primary healthcare center coverage area. This coverage can be increased by further activating the role of the community integrated post or Posyandu, Posyandu Pembantu, and primary health care center cadres in the community. [1]

CONCLUSION

Almost all MCH and family planning minimum health service standards activities in 2019 among three Puskesmas at Bengkayang District face fluctuations. The K4 coverage at the Puskesman Ledo did not reach the target. In all primary health care centers studied, the coverage of childbirth assisted by health professionals in health facilities has not reached the national target. Only Puskesmas Bengkayang has exceeded the targets for KN1 coverage and basic immunization coverage that had been set. The coverage of family planning services at the Puskesmas Jagoi Babang has not reached the set target, and incomplete family planning data at Puskesmas Ledo. To improve MHSS performance, primary healthcare centers must promote and partner with the community, so that health workers can do all deliveries in health facilities. Primary health care centers must also update their recording and reporting processes related to family planning service indicators

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