



# Analysis of Maternal and Child Health Services at the Kampili Community Health Center

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**Abstract.** Maternal and child health issues remain a significant concern in Indonesia, marked by high maternal and infant mortality rates. There is a pressing need to improve the quality of maternal and child health services at the primary healthcare facility level to achieve both national and global health objectives. This study aims to analyze the maternal and child health services provided in the working area of the Kampili Community Health Centre (Puskesmas) in Gowa District. It employs a descriptive qualitative approach and a case study design. The informants included individuals responsible for maternal and child health, midwives, and community members receiving services, all selected purposively. Data were collected through field observations, in-depth interviews, and documentation analysis, with validity tested using triangulation techniques. The study's results indicate that maternal and child health services are operating in accordance with national standard procedures. Skilled midwives, adequate facilities, and funding from the Indonesian Health Insurance (Badan Penyelenggara Jaminan Sosial-Kesehatan, BPJS Kesehatan) support these services. However, challenges persist, including a limited number of doctors, insufficient auxiliary health center facilities, long waiting times, and an unequal distribution of training opportunities between civil servants and non-civil servants. These findings support Donabedian's theory, which emphasizes the significance of structure and process in the quality of health services. Additionally, they align with previous studies that point to human resource competence and facility adequacy as critical factors in determining service quality. This study aims to provide a foundation for policy-making to enhance maternal and child health services at the primary health facility level.

**Keywords:** Maternal and child health, human resources, service quality, quality of service, community health centers

## 1. Introduction

Maternal and child health (MCH) services remain a major challenge in developing countries, including Indonesia, due to high maternal and infant mortality rates that have yet to meet the Sustainable Development Goals (SDGs) targets. The WHO (2023) reports 287,000 maternal deaths globally per year, equivalent to almost 800 deaths every day or one death every two minutes. Maternal mortality is a key SDG priority, with the goal to reduce the maternal mortality rate to 70 per 100,000 live births. Recent global data also show an infant mortality rate of 16.85 per 1,000 live births, and the prevalence of child stunting has decreased by 15.2% since 2007 (WHO, 2023).

In Indonesia, maternal and child health remains a significant issue. According to the Indonesian Ministry of Health and WHO (2023), the maternal mortality rate is 189 per 100,000 live births and the infant mortality rate is 16.85 per 1,000 live births. Additionally, 90.3% of Indonesia's population is covered by the National Health Insurance program, which has improved access to MCH services. National policies, such as increasing antenatal care (ANC) visits for pregnant women to six times, aim to reduce maternal mortality rates. While some

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provincial achievements meet national targets, regional disparities persist due to limited facilities, infrastructure, and local government support (Ministry of Health, 2023).

In South Sulawesi, MCH services have shown progress but still face several challenges. In 2022, there were 143,485 live births, ANC (K4) coverage reached 90.7%, deliveries at health facilities 75.7%, complete infant immunization 96.2%, and vitamin A supplementation for postpartum mothers at 94.5%. However, maternal deaths remained relatively high at 175 cases, mainly due to hemorrhage, pregnancy-induced hypertension, and infection. The coverage of HIV testing for pregnant women was 82.18%, with 2.2% of tested pregnant women found HIV positive. Early screening for hepatitis B and syphilis is also being expanded (Ministry of Health RI, 2023).

The largest challenges remain in postnatal services and breastfeeding support. Digital innovations have started to be introduced, such as lactation support applications to assist mothers in providing exclusive breastfeeding (Azniah, 2025). Strengthening health worker education and training as well as utilizing information technology are the main focuses to improve MCH services in South Sulawesi.

According to the 2024 PWS KIA Kampili Health Center data (January–December), most service indicators achieved high targets—first ANC visit coverage (K1) was 99.22%, K4 94.23%, deliveries by health professionals 92.22%, complete infant visits 97.88%, complete toddler visits 91.46%, and active family planning participation 94.16%. However, obstetric complication management only reached 83.46% of the target, neonatal management 42.61%, and the number of general practitioners was still below the standard of Regulation of the Minister of Health No. 19/2024, which requires 3–4 physicians for non-inpatient health centers in non-remote regions.

The urgency of this research lies in the inequality of health human resources, unequal training opportunities, and limited primary care facilities, which impact MCH service quality at the village and district levels. The research gap identified is the scarcity of studies examining the effect of training disparities between civil servant and non-civil servant health workers on MCH service outcomes, and the lack of integrative analysis of structure, process, and results based on Donabedian's framework at the local health facility level using recent data.

This study integrates empirical analysis of local data, evaluation using the Donabedian model, and focuses on the dynamics of training and human resource distribution in primary health facilities. The expected contribution is to not only strengthen the empirical evidence of MCH services in the study area, but also to provide specific and practical policy recommendations suited to the current local needs.

Based on the aforementioned background, this study aims to assess the implementation of Maternal and Child Health (MCH) Services, particularly human resources, in the working area of Kampili Community Health Center.

## 2. Methods

The research method employed is a descriptive qualitative approach with a case study design, aiming to provide a detailed and in-depth depiction of the social situation. The case study was chosen to analyze maternal and child health (MCH) services in the Kampili Community Health Center working area, Gowa District, allowing the researcher to comprehensively examine the unique characteristics of the MCH service situation. The study was conducted in September 2025, with informants selected purposively based on criteria

including a minimum of one year of direct involvement in MCH services, understanding of service flow or health center policies, and willingness to provide in-depth information. Informants consisted of the person in charge of MCH, village midwives, ANC clinic midwives, delivery midwives, as well as community members utilizing the services. General practitioners were not interviewed due to limited numbers and practice schedules, constituting one of the study's limitations.

The research instruments included interview guidelines, a facility checklist, writing tools, and a mobile phone for field documentation. The purposive sampling technique was implemented with well-defined informant criteria to ensure that informants accurately represented parties relevant to the research topic.

Data validity was ensured through source triangulation, method triangulation, and time triangulation. Information was compared across informants (MCH person in charge, midwives, community), interview results were correlated with facility observations and PWS KIA documents, and data were collected at different times to avoid situational bias. Any inconsistencies were re-verified with the relevant informants to maintain data credibility.

The analysis focused on two main aspects according to Donabedian's theory: structure (human resources, infrastructure, costs) and process (MCH service procedures), in order to produce a comprehensive overview and new findings regarding the effectiveness of MCH services at Kampili Community Health Center that are methodologically accountable.

### 3. Results and Discussion

Optimal maternal and child health (MCH) services are highly influenced by the availability of sufficient healthcare personnel, both in terms of quantity and qualifications. Community health centers (Puskesmas), as primary healthcare facilities, play a strategic role in providing direct services to the community; therefore, human resources critically determine service quality. According to Regulation of the Minister of Health No. 19/2024, Kampili Health Center does not fully meet national standards, particularly in the number of general practitioners and dentists. Field findings indicate the health center has only one civil servant (ASN) general practitioner, two contract/intern doctors, and one dentist who is soon to retire. On the other hand, the number of midwives is considered adequate and distributed across several service roles.

Based on the researcher's interviews regarding the availability and qualifications of resources at Kampili Health Center, particularly with respect to midwife personnel, it was found that the number and distribution of midwives are generally sufficient, as expressed by the informants as follows:

*"In my opinion, there is sufficient staff here, particularly midwives. However, some employees are taking on responsibilities outside their designated roles due to staff shortages."*

(M, 53 years of age. Person in charge of MCH/Key Informant)

This condition is further supported by statements from other informants who believe that the distribution of duties and roles among healthcare personnel, particularly midwives, is adequately aligned with service needs.

*"Everything is adequate here. About the health workers? Everything is adequate enough."*

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(N, 32 years of age. Village Midwife/Main Informant)

*"Here, there are doctors, but there are mostly midwives. They are divided into village midwives, ANC midwives, and family planning midwives."*

(HP, 28 years of age. Midwife of ANC/Main Informant)

*"The facilities at the Kampili Community Health Center are satisfactory. When I am in the delivery room, it is sufficient because there are sometimes two or three people per shift, which is appropriate for the number of patients."*

(NH, 36 years of age. Birthing Midwife/Main Informant)

However, there are constraints regarding the number of doctors, including both general practitioners and dentists, as emphasized by the following informant.

*"For the whole thing, I think that's enough. There are more than 30 midwives. As for doctors, yes, there is one dentist here, but he retired in November. Then, for general practitioners, we only have one civil servant and two contracted doctors."*

(RK, 32 years of age. Midwife/Main Informant)

*"Yes..It was good. Good enough."*

(J, 25 years of age. Community Member/ Supporting Informant)

The capacity building of healthcare personnel is carried out through regular training. Several midwives actively participate in seminars and training sessions, both offline and online, to update their knowledge and skills.

*"Yes. Often. Often for seminars and training sessions. I recently participated in the 2024 integrated ANC training. As for seminars, they are held every month if there are any. Usually, most seminars are held on Zoom now, but they have the Ministry of Health's SKP."*

(M, 53 years of age. Person in charge of MCH/Key Informant)

*"..Normal Childbirth Care (Asuhan Persalinan Normal, APN) training. 2021. Seminars as well, yes we did those via Zoom. Because if you want to earn SKP credits, you have to attend seminars, you have to earn SKP credits, but those were all via Zoom. After COVID, most of those were via Zoom."*

(N, 32 years of age. Village Midwife/Main Informant)

*"Yes, last year was training included training in Acetic Acid Visual Inspection (Inspeksi Visual Asam Asetat, IVA), as well as breast and cervical cancer screening. As for seminars, we attended them ourselves. Yes, we registered at Satu Sehat. Yes, sometimes there are programs, but sometimes we look for them ourselves."*

(NH, 36 years of age. Birthing Midwife/Main Informant)

*"Yes, there is something called Midwifery Update, there is APN. For now, I think it's only if I personally do Pressure training, if it's MU (Midwifery Update), it was 2 years ago, because usually we update MU every year."*

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(RK, 32 years of age. Midwife/Main Informant)

*"For now, not all civil servants are leaving. That is, senior civil servants and civil servants are joining to attend seminars or training. On average, mostly civil servants, who are honorary employees are not included."*

(HP, 28 years of age. Midwife of ANC/Main Informant)

The gap in training access between civil servant (PNS) and non-civil servant (non-PNS) health workers has a tangible impact on service quality, as non-PNS staff tend to fall behind in terms of competency updates, resulting in variations in service practices. Service facilities at village health posts (Pustu) remain very limited in terms of medical equipment, examination rooms, waiting areas, and basic laboratories. This situation hinders maternal and child health service access at the village level and simultaneously increases the burden on the main health center.

*"The examination equipment at the village health post (Pustu) is limited, the space is small, and we often have to refer patients to the main health center."*

(N, 32 years of age. Village Midwife/Main Informant)

*"The equipment at the Pustu is incomplete, and the waiting area is cramped."*

(J, 25 years of age. Community Member/Main Informant)

The MCH service process has followed established standards; however, prolonged waiting times and obstacles with the Sisrute (electronic referral) system are still encountered, primarily due to limited staffing, unintegrated administration, and suboptimal communication infrastructure. As a result, patient satisfaction decreases, there is a potential for delays in managing high-risk cases, and the overall image of the service suffers. These findings highlight the urgent need to improve infrastructure and redistribute administrative staff to streamline the referral service flow.

The 2024 PWS KIA data clarify the achievements and empirical challenges in structural, process, and outcome domains. While nearly all MCH indicators were achieved, the management of obstetric complications, neonates, and the availability of doctors remain suboptimal. This is consistent with the Donabedian framework – structural limitations restrict processes, while outcomes such as indicator coverage, satisfaction, and service quality are directly affected by these structure-process dynamics.

These findings are consistent with previous studies (Rahmawati et al. 2022, Andini et al. 2021, Sari & Wulandari 2023), which have shown that training, completeness of facilities, and human resource management are key determinants of the quality of health center services.

It is necessary to increase the number of general practitioners at Kampili Health Center in accordance with the standard set out in Regulation of the Minister of Health No. 19/2024, as well as to ensure equitable access to training for all healthcare personnel, both civil servant and non-civil servant. The government is also advised to allocate a dedicated budget for training and supporting MCH medical equipment, monitor training outcomes, and strengthen facilities at village health posts (Pustu) to equalize and enhance the quality of MCH services at the village level.



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## Conclusions

Maternal and child health services at the Kampili Community Health Center in Gowa Regency are operating according to established standards. These services are supported by skilled human resources, specifically midwives, and facilities that are relatively adequate. Additionally, the center has introduced an innovative online registration system through Mobile JKN. However, challenges persist, including the uneven distribution of training for non-civil servant personnel, a shortage of doctors, and lengthy waiting times for services. These findings align with Donabedian's theory and correspond with previous studies that highlight the significance of human resource competence and infrastructure in enhancing service quality. However, they differ regarding the equitable development of capacity and the effective use of information systems.

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## Conflicts of Interest

The author declares that there is no conflict of interest in the implementation and reporting of the results of this study. All analysis, data interpretation, and publication decisions were made independently without the influence of external parties or personal interests that could affect the objectivity of the research results.

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