

## Research Article

## Qualitative Study on Maternal and Perinatal Health Services in Primary Health Care Facility in Banten Province

### *Kajian Mutu Pelayanan Kesehatan Maternal Perinatal Fasilitas Kesehatan Tingkat Primer di Provinsi Banten*

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#### Abstract

**Objective:** To determine the effect of clinical governance in PHCs on maternal and perinatal health in Banten Province, Indonesia.

**Methods:** This was an observational analytic study with cross sectional method performed on the PHCs on Banten Province, Indonesia. All PHCs in Banten Province having maternal and perinatal health services were included in the study. Clinical governance and services were measured using a self-made questionnaire filled by the representative of the PHC. Characteristics analyzed in this study were age, education level, completed training, and occupation. Clinical governance aspects analyzed in this study were leadership, culture, competence, governance, and readiness. The services analyzed in this study were antenatal, pathology, and emergency service.

**Results:** There were 117 PHC representatives who were recruited to the study. The PHC which were categorized as "outstanding" for leadership, culture, competence, governance, and readiness were 23.1%, 41%, 98%, 81.2%, and 83.8%, respectively. The PHC which were categorized as having "good" antenatal, pathology, and emergency services were 92.3%, 51.3%, and 90.6%, respectively. The PHCs with better clinical governance aspects delivered better antenatal, pathology, and emergency services for maternal and perinatal care.

**Conclusions:** Primary health cares with better clinical governance aspects delivered better antenatal, pathology, and emergency services for maternal and perinatal care. Therefore, improving clinical governance is essential to improve maternal and perinatal health services quality in Banten Province, Indonesia

**Keywords:** clinical governance, health service, maternal health, quality assurance.

#### Abstrak

**Tujuan:** Untuk mengetahui pengaruh tata kelola klinik di Puskesmas terhadap kesehatan ibu dan perinatal di Provinsi Banten, Indonesia.

**Metode:** Penelitian observasional analitik dengan metode potong lintang yang dilakukan di Puskesmas di Provinsi Banten, Indonesia. Semua Puskesmas di Provinsi Banten yang memiliki layanan kesehatan ibu dan perinatal diikutsertakan dalam penelitian ini. Tata kelola dan layanan klinis diukur menggunakan kuesioner buatan sendiri yang diisi oleh perwakilan Puskesmas. Karakteristik yang dianalisis dalam penelitian ini adalah usia, tingkat pendidikan, pelatihan yang diselesaikan, dan pekerjaan. Aspek tata kelola klinis yang dianalisis dalam penelitian ini adalah kepemimpinan, budaya, kompetensi, tata kelola, dan kesiapan. Pelayanan yang dianalisis dalam penelitian ini adalah pelayanan antenatal, patologi, dan gawat darurat.

**Hasil:** Terdapat 117 perwakilan Puskesmas yang direkrut untuk penelitian. Puskesmas yang dikategorikan "sangat baik" untuk kepemimpinan, budaya, kompetensi, tata kelola, dan kesiapan masing-masing adalah 23,1%, 41%, 98%, 81,2%, dan 83,8%. Puskesmas yang memiliki pelayanan antenatal, patologi, dan gawat darurat yang tergolong "baik" berturut-turut adalah 92,3%, 51,3%, dan 90,6%. Puskesmas dengan aspek tata kelola klinis yang lebih baik memberikan layanan antenatal, patologi, dan darurat yang lebih baik untuk perawatan ibu dan perinatal.

**Kesimpulan:** Pelayanan kesehatan primer dengan aspek tata kelola klinis yang lebih baik menghasilkan pelayanan antenatal, patologi, dan kegawatdaruratan yang lebih baik untuk pelayanan ibu dan perinatal. Oleh karena itu, peningkatan tata kelola klinis sangat penting untuk meningkatkan kualitas pelayanan kesehatan maternal dan perinatal di Provinsi Banten, Indonesia

**Kata kunci:** kesehatan ibu, pelayanan kesehatan, penjaminan mutu, tata kelola klinik.

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## INTRODUCTION

The Millennium Development Goals (MDGs) ended in 2015 with only 7 out of 75 countdown countries, countries with the highest rates of maternal and child mortality, successfully achieving the target for maternal mortality.<sup>1</sup> The maternal mortality rate in Indonesia is estimated at 189 per 100,000 live births according to the last survey published by Long Form Survey in 2020.<sup>2</sup> This figure is still far from the WHO target for the 2030 Sustainable Development Goals (SDGs) which is 70 per 100,000 live births.<sup>3</sup> According to Indonesian Family Health Directory Performance Report in 2021, the scope of antenatal care has reached 88.13% from the target 85% population. The scope of labour in health care facility is 101.44%. Even though the number shows an adequate scope of both antenatal and labour management, the maternal mortality rate is still high compared to other South East Asian countries.<sup>2,4</sup> Maternal deaths can occur due to delays in seeking, reaching, and getting adequate health services at health facilities.<sup>5,6</sup>

Maternal deaths due to poor health systems can be assessed in terms of services and macro health. The study conducted shows that the main factor of maternal death occurs due to the poor quality of health system services.<sup>7</sup> Several factors were found in the form of inadequate risk management, ineffective use and recording of medical records, poor interpersonal communication, poor monitoring of complications, delayed referrals, and ineffective communication between levels of health services.<sup>7</sup>

Several studies showed that countries that prioritize their health systems to primary health facilities have a higher probability of achieving SDGs than countries that focus on hospitals.<sup>8-11</sup> This happens because primary health facilities cover broader health determinants, strengthen communities, promote justice social services, and emphasizing synergistic action.<sup>12</sup> Several roles of primary health facilities in reducing maternal mortality include the effectiveness of antenatal visits, community empowerment, and strengthening determinants of maternal health such as education, sanitation, nutrition, and women's empowerment.<sup>9</sup>

Banten is a province in Indonesia which is directly adjacent to Jakarta, the capital of Indonesia. As one of the provinces with the largest population and directly adjacent to the capital, health services in Banten Province should be

better than other provinces. However, the 2017 Indonesian Demographic and Health Survey data shows that the province of Banten is one of the provinces with the highest neonatal mortality in Indonesia.<sup>4</sup> In addition, Banten is also the province with the highest percentage of deliveries not assisted by skilled medical personnel on the island of Java.<sup>4</sup> These phenomena has raised various questions regarding the readiness of primary level health facilities (FKTP) in Banten Province in dealing with mother and child problems.

This study aims to assess the readiness of primary health facilities' clinical governance in managing and improving the quality of perinatal maternal services in Banten Province.

## METHODS

This was an observational analytic study with cross sectional method performed in the PHCs in Banten Province, Indonesia, during the period of January to November 2022. All PHCs in Banten Province having maternal and perinatal health services were included for the study.

Clinical governance and services were measured using a self-made questionnaire filled by the representative of the PHC. The questionnaire was validated by evaluating the percentage of filled questions by chosen subjects, compiling input-suggestions from subjects, and analyzing the inputs, suggestions, and the questionnaire itself followed by revision accordingly. Construct validity was done by evaluating the analyzing factor from each questions from the three types of outcome with a minimum value of 0.4. The questionnaire was then given to 100 respondents to further follow up whether it was understandable or not, and from the trial, all questions was filled and there was no missing data. That conclude that the questionnaire is ready to be distributed. For reliability test, *Cronbach's alpha* was used for every dimension. Characteristics analyzed in this study were age, education level, completed training, and occupation. Clinical governance aspects analyzed in this study were leadership, culture, competence, governance, and readiness. The services analyzed in this study were maternal care, pathology, and emergency service.

The data was collected by direct interview, to help minimize the understanding bias. Questionnaire was given to primary health care facility in sub-district level which has an active practice in maternal and perinatal health services.

This study used 5% error margin and 95%

confidence interval limit. The variables included in this study were measured using a self-filled questionnaire which had already validated in Indonesia (Appendix 1). The questionnaire was filled by the representative in each of PHC. Clinical governance aspects analyzed in this study were categorized into "outstanding", "fair", and "poor". Meanwhile, the services analyzed in this study were categorized into "good" and "poor".

This study had been approved by the Research Ethics Committee of Faculty of Medicine, Universitas Indonesia. All the PHC representatives who were included in this study had given the informed consent prior to the study. Collected data were then analyzed using SPSS for Macintosh ver. 24. Characteristics of subjects and the clinical governance effects on the health services quality were analyzed using Chi-square test.

## RESULTS

A total of 117 representatives from 128 PHCs in Banten, Indonesia were included in this study. The other PHCs not included was PHCs was the currently inactive one in giving maternal and perinatal health services. It was found that the median age of the subjects was 32 years, with the majority of subjects being female, having undergraduate education or higher, and were doctors. In addition, there was variability in the training such as PONE training, that has been received by the representatives. Baseline characteristics of the representatives can be found in Table 1.

**Table 1.** Characteristics of the Representatives

Variables	Frequency, n (%)
<b>Sex</b>	
Male	36 (30.8)
Female	81 (69.2)
<b>Education</b>	
Primary	0
Secondary	34 (29.1)
Undergraduate	83 (70.9)
<b>Training</b>	
Labor and delivery	59 (50.4)
Antenatal care	52 (44.4)
Basic obstetrics and neonatal services	56 (47.9)
<b>Occupation</b>	
Doctor	83 (70.9)
Nurse	0 (0)
Midwife	12 (10.3)
Apothecary	1 (0.9)
Others (witch doctor)	21 (17.9)

Following the analysis of the baseline characteristics of subjects, the clinical governance aspects of the PHCs were measured and categorized. On the service capability factor of PHC, it was found that the most services had "outstanding" competency (83.8%). Based on the results of the questionnaire, it was found that the dimension that was most often classified as "poor" was leadership and management (6.0%).

**Table 2.** Clinical Governance of the PHCs

Variables	Frequency, n (%)
<b>Leadership</b>	
Outstanding	27 (23.1)
Fair	83 (70.9)
Poor	7 (6)
<b>Culture</b>	
Outstanding	48 (41)
Fair	64 (54.7)
Poor	5 (4.3)
<b>Competence</b>	
Outstanding	98 (83.8)
Fair	13 (11.1)
Poor	6 (5.1)
<b>Governance</b>	
Outstanding	95 (81.2)
Fair	15 (12.8)
Poor	7 (6)
<b>Readiness</b>	
Outstanding	98 (83.8)
Fair	14 (12.0)
Poor	5 (4.3)

Meanwhile, the maternal and perinatal health services were measured and categorized. Based on the results of the questionnaire obtained, it was found that 92.3% of PHCs had good maternal care services, 51.3% of PHCs had good pathology management service, and 90.6% of PHCs had good emergency services. The results of the analysis can be found in Table 3.

**Table 3.** Maternal dan Perinatal Services of the PHCs in Banten Province, Indonesia

Variables	Frequency, n (%)
<b>Maternal care</b>	
Good	108 (92.3)
Poor	9 (7.7)
<b>Pathology management</b>	
Good	60 (51.3)
Poor	57 (48.7)
<b>Emergency service</b>	
Good	106 (90.6)
Poor	11 (9.4)

The effects of respondents' characteristics and PHCs' clinical governance on each maternal and perinatal health service were analysed. the results of the analysis can be found in Table 4.

**Table 4.** The Effects of Characteristics and Clinical Governance on Maternal and Perinatal Services in PHCs

Variables	Maternal care	Pathology management	Emergency Service
<b>Characteristics</b>			
Education	0.718	0.524	0.050
<b>Training</b>			
Labor and delivery	0.490	0.783	0.528
Antenatal care	0.293	0.804	0.944
Basic obstetrics and neonatal services	1.000	0.635	0.209
Occupation	0.495	0.225	0.096
<b>Clinical governance</b>			
Leadership	<0.001	0.015	<0.001
Culture	<0.001	0.008	<0.001
Competence	<0.001	<0.001	<0.001
Governance	<0.001	<0.001	<0.001
Readiness	<0.001	<0.001	<0.001

Based on our analysis, it can be inferred that the individual characteristics did not significantly improve maternal and perinatal health services provided by the PHCs. However, better clinical governance aspects significantly improve the provided health services.

## DISCUSSION

In this study, there were 117 subjects who were PHC staff in Banten who were willing to become PHC representatives as respondents to the questionnaire given. All subjects came from PHCs who provided maternal and child health services and filled out a complete questionnaire.

In assessing the ability to serve PHCs, it was found that most of the PHCs had relatively good leadership. The leadership factor in PHC can have various interpretations. In several studies, the leadership factor was assessed not only from the leader of a service unit, but also related agencies, to the regional leader of the PHC in question. by PHC.<sup>13</sup> Meanwhile, it was found that most of the PHCs has an outstanding culture. The cultural scope of PHC is very broad, starting from the culture of cooperation, communication, to the relationship between staff in a PHC. Culture is a very important factor in the services provided by PHCs. Previous research showed that communication between team members at a PHC was directly related to the implementation of tiered referrals for universal health coverage in Indonesia.<sup>14</sup> In PHCs with poor communication from their human resources, the implementation of tiered referrals was found to be still not optimal, causing service delays and poor outcomes.

In the competency assessment, it was found that most of the PHCs had a satisfactory competence. In previous research, it was found

that increasing the competence of PHC service staff through the provision of training is one of the efforts that can have the greatest impact on the quality of services provided for mothers and children.<sup>13</sup> In a previous study conducted at the Puskesmas in Depok, it was found that the competence of medical service staff who are evenly distributed in maternal and neonatal emergency services is the most important factor in the quality of the maternal and neonatal services provided.<sup>15</sup> increasing the competence of PHC service staff through training is one of the efforts that can have the greatest impact on the quality of services provided for mother and children because it can improve the knowledge, skills, and attitudes of healthcare providers. This, in turn, can lead to improved clinical decision-making, better management of complications, and overall better quality of care for mother and children. Numerous studies have shown that training and education programs can significantly improve the competencies of healthcare providers and positively impact maternal and perinatal outcomes. A study conducted in Ethiopia found that healthcare providers who received training on emergency obstetric and neonatal care showed significant improvements in their knowledge, skills, and attitudes, resulting in a reduction of maternal and neonatal mortality rates.<sup>16</sup> Similarly, a study conducted in Nigeria found that training programs for midwives resulted in improved clinical decision-making and increased use of evidence-based practices during childbirth.<sup>17</sup> Therefore, increasing competency through regular training and evaluation important to do in PHC.

In the PHC governance assessment, it was found that most of the PHCs had a very good culture. It is important to evaluate this further

because previous research has shown that countries in Asia and Africa have the most problems in providing maternal and child health services, namely the management of PHCs, including staff and finances, which is not good enough.<sup>13</sup>

In the assessment of the maternal and perinatal services in PHC, it was found that the pathology management were the service that received the most unfavorable category. Pathology cases in maternal and perinatal care require a multidisciplinary approach and collaboration among healthcare providers, including midwives, obstetricians, neonatologists, and pathologists. Timely and accurate diagnosis and management of pathology cases can significantly improve maternal and perinatal outcomes. In some cases, referral to higher-level facilities may be necessary for specialized care.

Several studies have investigated how healthcare providers in Indonesia manage complication or pathology cases. A study published in the Indonesian Journal of Obstetrics and Gynecology in 2020 found that obstetricians in urban areas faced challenges in managing maternal dan neonatal complications due to high patient volume and inadequate staffing. This study recommended strengthening referral system and providing training to improve obstetricians' clinical skills and knowledge.<sup>18</sup>

Another study published in the Journal of Public Health in Indonesia in 2017 examined midwives experiences in diagnosing and managing complication during pregnancy and childbirth in rural areas. The study found that midwives faced challenges such as inadequate training, limited resources, and difficulty referring patients to higher-level facilities. The study recommended improving midwives' clinical skills and knowledge, strengthening referral systems, and providing additional resources and support.<sup>19</sup>

Similar conditions were also found in studies conducted on PHC in other countries such as Nepal and Nigeria.<sup>13,20</sup> The least sufficient knowledges were the knowledges on prevention of vertical transmission from mother to child (<10%), examination and diagnosis of severe preeclampsia (59%), as well as neonatal sepsis examination (62%).<sup>20</sup> These results tend to be lower compared to existing knowledge on other maternal and neonatal emergencies.<sup>20</sup>

Even if healthcare providers have good competencies, they may face challenges in managing pathology cases due to various factors

such as limited resources, inadequate training, and high workload. The 48.7% of respondents in this study had poor pathology case management may reflect these challenges. It would be helpful to examine the specific reasons why these healthcare providers struggled with pathology cases. Additional training, supervision, and support may be necessary to improve their skills and knowledge in managing pathology cases. Quality improvement initiatives that focus on improving teamwork and communication among healthcare providers can also improve pathology case management.

It was found that most of the PHCs had a relatively good emergency service category. The results obtained in this study were essential, bearing in mind that PHC as the first health care facility that deals directly with patients is expected to be able to provide emergency management needed by maternal and perinatal patients prior to referral to reduce the time between patient arrival and receive treatment thereby improving the patient's prognosis.

Assessing that the individual variables assessed in this study did not have a significant relationship with all maternal and perinatal outcomes, but all PHC variables (leadership, culture, competence, and governance) had a significant relationship with all maternal and perinatal outcomes, it can be concluded that the factors that shared factors (team factors) are more influential on PHC readiness and quality of maternal and perinatal services provided. Therefore, it is not enough to only improve the quality of one individual in the PHC, but it is better to focus on the quality improvement in a team, for example by providing joint training or improving the standard procedure owned by the PHC.

## CONCLUSIONS

Primary health cares with better clinical governance aspects delivered better antenatal, pathology, and emergency services for maternal and perinatal care. Improving the quality of PHC has a significant positive relationship with better maternal and perinatal outcomes. When primary health care services are of higher quality, they can provide better antenatal, delivery, and postnatal care, which can result in improved maternal and perinatal health outcomes. All the PHC variables such as leadership, culture, competence, and governance had a significant relationship with

all maternal and perinatal outcomes because the factors that shared factors (team factors) are more influential on PHC readiness and quality of maternal and perinatal services provided. Therefore, efforts to improve the quality of primary health care services should address these factors and focus on providing team-based rather than to only improve the quality of one individual in the PHC.

### DECLARATIONS

The data used in this study can be requested from corresponding author upon reasonable request.

### CONFLICT OF INTEREST

Authors declare that there is no conflict of interest in this study.

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