Implementation and recommendation of postpartum visit methods during COVID-19 pandemic: a qualitative study from Indonesia

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Abstract

Background. The Maternal Mortality Rate (MMR) in Indonesia is still a health problem that must be solved. In 2018 and 2019, the postpartum period still dominates maternal mortality in Surabaya. The postpartum visit method is one of the essential things that can affect postpartum services, so it is necessary to evaluate the implementation of the postpartum visit method and recommend visiting methods to improve maternal health.

Objective. The study explores the implementation and recommendation of postpartum visit methods during the COVID-19 Pandemic.

Materials and Methods. It used a qualitative research type by assessing the interview and observation dept. The instruments used are questionnaires and observation sheets. Researchers conducted interviews with 14 mothers who had completed the postpartum period, five midwives, a stakeholder in the health office and two experts in the field of maternal health. The data is processed using organizing, reduction, coding, description, linking between themes, and data interpretation.

Results. Offline visits to health facilities still dominate the implementation of the postpartum visit method. The recommended postpartum visit method combines visits to health facilities, home visits, and telehealth. Besides that, it is necessary to consider maternal postpartum services up to 3 months after delivery, especially for postpartum mothers who have problems.

Conclusion. The postpartum visit method during the COVID-19 pandemic, has not run optimally because there are restrictions on offline visits. However, it has not been supported by online monitoring or home visits.

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Introduction

The postpartum period is a recovery duration for the mother's body to return to its pre-pregnancy condition. The process of hormonal changes during the puerperium drives a mother to be vulnerable to postpartum depression. Therefore, health workers' active and positive attitude when providing services can make the mother feel comfortable and cared for.[1] The COVID-19 pandemic has caused significant changes to maternal healthcare. The quick health assessment survey reported that during the COVID-19 pandemic, 7% of services at the healthcare centers (Puskesmas) were stopped, 75% of integrated healthcare centers (Posyandu) were closed, and more than 41% of home visits were not carried out. The cessation of several maternal healthcare issues is the community's anxiety and health workers' concern about the transmission of COVID-19 due to face-to-face services and restrictions on activities to reduce the spread of COVID-19.[2]

Currently, the quality of postpartum services is still more quantitatively assessed, namely through the scope of postpartum services and postpartum contraceptive acceptors. Surabaya is one of the largest cities in Indonesia that has dominated MMR during the

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postpartum period, whereas maternal mortality during the puerperium was 77.42% (2018), 76% (2019), and 70.83% (2020). These deaths are inversely proportional to the accomplishment of the postpartum services in Surabaya, which is already high. The Health Office of Surabaya reported that the coverage of postpartum services during 2018-2020 were 95.95%, 96.68%, and 96.70%, respectively. A study in East Java in 2020 stated that maternal deaths during the COVID-19 pandemic were still dominated during the postpartum period[3]. The difference in indicators of postpartum service achievement and maternal mortality can be concluded that it is required to evaluate the quality of postpartum services. The quality of postpartum services is crucial to investigate, particularly in finding problems and applicable recommendations in management. This study aims to explore the implementation and recommendation of postpartum visitation methods to improve maternal health during the COVID-19 pandemic based on multiple perspectives.

Materials and Methods

This study uses a qualitative approach with a phenomenological research design where the researcher will examine several informants, namely 14 mothers who had completed the postpartum period, 2 maternal health experts, 5 midwives, and 1 stakeholder of the Maternal and Child Health (MCH) program at the health office. The research will be conducted at the Surabaya city health center, with the lowest postpartum visit coverage in 2019. The research has received an ethical feasibility test from the ethics committee of the Faculty of Public Health, Universitas Airlangga with number 06/EA/KEPK/2021.

The sample in the study was mothers who had completed the postpartum period (more than 42 until 90 days postpartum) and who met the inclusion criteria, namely, living in the target area of the selected Puskesmas. In contrast, the exclusion criteria in the study were postpartum mothers who were not willing to conduct online interviews. In addition, samples from expert maternal health experts, stakeholders of maternal health programs at the Health Service, and midwives were collected through purposive sampling techniques. Data were obtained through in-depth interviews using a structured questionnaire and observation sheets. The data is processed using organizing/structuring data, data reduction, coding, data description, linking between themes and data interpretation. The questionnaire contains questions about postpartum service experience, expectations, and recommendations regarding the postpartum visit method. Meanwhile, the observation sheet contains a checklist of postpartum services according to the postpartum service guidelines issued by the Indonesian Ministry of Health in 2019.

Results

The results of the assessment of the frequency of postpartum visits during the postpartum period, implementation and recommendations for the postpartum visit method are described in Tables 1, 2 and 3. Table 1 explains that all postpartum mothers have not made complete postpartum visits (minimum 4 visits during the postpartum period).

Table 2 explains that the implementation of the postpartum visit method is dominated by offline visits to health facilities because home and online visit are no must implemented for health services. Support regarding of visiting method have been recommendations from the health office but the implementation has not been optimal because the workload of midwives during a pandemic are overload such as vaccination and taking COVID-19 swab specimens. All postpartum mothers interviewed had never a home visit by a midwife, even though they were very happy when they did home visit because they were felt more cared. Midwives have priority home visits to mothers who have problems during the postpartum period. Online visits are a highly recommended visit method during the COVID-19 pandemic, but their implementation has not been optimal. Midwives conduct online visits to a small number of postpartum mothers, especially for mother with problems. During postpartum visits, mothers received education related to postpartum care, baby care and contraception while midwives acknowledged that they had provided education regarding newborn care, family planning, postpartum care, personal hygiene, exclusive breastfeeding, contraception, hyperthyroid congenital screening, nutrition for breastfeeding mothers and immunizations. Postpartum mothers have not fully received emotional support. Midwives will provide emotional support when postpartum women have complaint of psychological problems. Currently postpartum services are still focused on wound examination while emotional and educational support is not optimal.

Table 3 explains about the postpartum visit method recommendations are the combined visit method (home visit, visit to a health facility, online visit). There is no regulation about the standard time was implementation the three visiting methods, but all informants give recommendation that the second postpartum visit (3 to 7 days after completion) is the right time to do a home visit. Postpartum mothers who have risks and problems are recommended to visit the hospital while normal postpartum mothers visit to Puskesmas, Clinic, Private Midwife Practice. In postpartum mothers who have problems, postpartum monitoring is needed for up to 3 months after delivery.

Table 1. Frequency of postpartum visits.

Postpartum service	Frequency (n)	Percentage (%)
1 (Immediate *post-partum* care after birth)	2	14.29
2 (return visit 1)	4	38.56
3 (return visit 2)	8	57.15
4 (return visit 3)	0	0.00
Total	14	100.00

Table 2. Implementation of postpartum visits.

Topic	Results	Informant	Comment
The Current method of postpartum visit	Visits to Health Facilities offline	Mothers and observations	I visited the Puskesmas twice as recommended.
	Postpartum services are carried out inside and outside the health facility, but services outside the building (home visits and telemonitoring) have not been optimally carried out.	1. Midwife 2. Stakeholders 3. Expert	Maternal healthcare in the building: Antenatal care, Postnatal care, Immunization, Family Planning. Child healthcare in the building: Posyandu, BIAS, Posbindu.
The support and challenge of the current postpartum visit method	• The support: there has been a coaching effort from the Health Office to Health Facilities • The challenge: Activities outside the building are not optimal because midwives have an excessive mandatory task force.	Expert	Pros: 100% monitoring has been carried out, but for services outside the building, it has not been 100% implemented because currently, the midwife is over- mandatory task force. Postpartum control has also been carried out in hospitals for pathological or risky cases but not yet comprehensive. Postpartum control has also been carried out in hospitals for pathological or risky cases but not yet comprehensive.
Implementation of Home visits	Never got	Mother	The midwife has never visited the house during the puerperium.
	1. Never done 2. Ever visited a house in a risky case, a mother who did not visit because of certain beliefs that did not allow her to leave the house before 40 days.	Midwife	Never because some mothers do not dare to leave the house 40 days before or after childbirth.
	There is no home visit achievement target as an indicator of postpartum services.	Stakeholders	There are suggestions but no achievement targets
Implementation of online visits (Telehealth)	1. Never 2. Ever because of a problem baby 3. Ever because the mother contacted the midwife first	Mother	The midwife has never contacted me either via phone or WhatsApp. I once communicated online with the midwife because I was the one who called first to ask about breastfeeding problems. The midwife once contacted me via WhatsApp since the midwife asked about the condition of my baby
	1. Ever done it via WhatsApp 2. Never did	Midwife	Once because it has the advantage that it can be done at any time, but if the mother needs the help of the medical team, she has to come to health facilities.
	There are recommendations to be carried out, especially during the COVID-19 pandemic, but not yet optimal.	Stakeholders	There are recommendations, especially during the COVID-19 pandemic, but their implementation is not optimal
Knowledge gained during postpartum visits	Postpartum care, baby care and contraception	Mother	What the midwife explained: was told to eat 4 healthy 5 perfect foods so that the breast milk was smooth and rested. There was no need to abstain from eating anything.
Knowledge imparted	Newborn care, family planning, postpartum care, personal hygiene, exclusive breastfeeding, contraception, hyperthyroid congenital screening, nutrition for breastfeeding mothers and immunizations.	Midwives and observations	1. Personal hygiene, exclusive breastfeeding, newborn care. 2. Exclusive breastfeeding, hyperthyroid congenital screening for hypothyroidism, nutrition for breastfeeding mothers 3. Exclusive breastfeeding, immunization, family planning 4. Family planning, exclusive breastfeeding, immunization
Emotional support obtained during postpartum services	This has not been provided because the mother has not proposed a complaint and health workers are not actively asking questions	Mother	I felt sad, cried alone, and wanted to kill myself; I did not tell the midwife and doctor because they were not asked, and I focused on treating my child, who has a cyst in the brain.
Emotional support provided during postpartum services	It has been given to relieve mother's anxiety	Midwives and observations	Emotional support has been given by explaining the mother's condition so that the mother is not anxious
Services obtained during the postpartum visit	1. Focus on surgical (C-section) wound care only 2. Information related to postpartum care, baby care and contraception has been given	Mother	Only seen stitches, given counselling about the time limit for the postpartum period, the topic of family planning has not been given. Before going home from the hospital, the provider was given a schedule for a repeat visit, but the importance of a repeat visit was not explained, so I did not have a repeat visit.
Services provided during the postpartum visit	The services provided have met the Standard Operating Procedures (SOP).	Midwives and stakeholders	Following the guidelines of the Ministry of Health.
	Not all scope of postpartum services have been carried out yet.	Observation results	Not all were done according to the guidelines of the Ministry of Health.

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Discussion

A physiologic postpartum mother is allowed to go home from a health facility at least 24 hours after giving birth, while in pathological cases, it is adjusted to the condition and readiness of the mother to continue further care at home. One of the essential things that must be conveyed before sending the patient home is explaining the control or visit schedule. Indonesia, since 2019 has issued a Guide to Postpartum Services for Mothers and Newborns, which explains that postpartum mothers receive at least four postpartum services by health facilities so that postnatal visits must be scheduled for after returning from a health facility three visits.[4] The minimum standard for postpartum services refers to the WHO recommendations, namely postpartum services carried out 6-48 hours after delivery, 3-7 days after delivery, 8-28 days after delivery, and 29-42 days after delivery. The quantity of visits is the standard of service, but this must also be supported by good service quality.[5]

Before the COVID-19 pandemic, the recommended method of postpartum visits was direct visits to health facilities and home visits, but during the COVID-19 pandemic, there was a change, namely the implementation of online visits to reduce the risk of mothers and babies being exposed to and contracting the COVID-19 Virus. Data on the frequency of postpartum visits in table 1 explains that all postpartum mothers did not make complete postpartum follow-up visits at health facilities. Factors that can affect the utilization of maternal postpartum services can be from child, mother, demographic and socio-economic factors, household factors, perception that distance to the health facility, the equitable distribution of health facilities and health workers.[6–8] Postpartum visits can be influenced by the mode of delivery, the number of children, the level of education. [9] There are several reasons why mothers do not return visits ultimately, namely in the hospital, the cost of repeat visits is more than twice having to pay independently, it is not explained about the importance of repeat visits, the baby has problems so that the mother focuses on treating the baby, there is no family who can deliver, and there is no monitoring by health workers actively through home visits or online visits.

Currently, postpartum services are more focused on physical management. This is evidenced by the confession of some respondents that the care provided during the visit was an examination of sutures while education was still not optimally provided. The assessment results of the services provided during the postpartum period showed that not all knowledge given to postpartum women was given, and not all postpartum women received emotional support from health workers. It is proven that three postpartum mothers experience postpartum blues symptoms during the postpartum period due to ignorance and problems with the baby. The mother admitted that the symptoms of postpartum blues were reduced because she got support from family and friends. Anxiety in postpartum mothers can be caused by a lack of knowledge, so that health workers have an essential role, especially in communicating so that mothers will feel comfortable conveying the problems they are experiencing. [10] The development of multidimensional early

Table 3. Recommended method of postpartum visit.

Topic	Results
Most preferred method of visit	1. Home visit 2. To health facilities 3. Online
Recommended visiting method	Combination method
Preferred visit method based on schedule	1. KF2 home visits, KF 3 to health facilities, KF4 online 2. KF2 home visits, KF 3 and 4 to health facilities 3. KF2 and KFN3 to health facilities and telehealth, KF 4 home visits 4. KF2 home visits, KF 3 for health facilities, KF4 online.
Visit method based on the schedule according to the guidelines	All visits are made to Health Facilities but are added to telehealth during a pandemic. The following is the schedule for repeat visits: the third day of the postpartum, second week, and sixth week.
Visit method based on suggested schedule	1. Full-risk cases go to Secondary Health Facility (Hospital), while cases that are not at risk or low risk can be controlled to Primer Health Facilities (Puskesmas, Clinic, private midwife practice) with a combination method 2. Pathological cases all visits to Health Facilities while physiological cases The last visit can be by home visits, telehealth or to health facilities (combined method)
Things that need to be fixed	1. Postpartum service standard socialization 2. community empowerment 3. Visit method 4. Differences in references or scientific sources used by health workers 5. Healthcare skills 6. Educational communication between health workers and the community
Postpartum service recommendations	1. Postpartum services can be provided for up to 3 months because some patients require a recovery process of more than 42 days 2. Coordination between Health Offices to solve maternal health problems 3. Cross-sectoral collaboration in solving maternal problems 4. Strengthening educational communication in both basic health facilities and advanced health facilities

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screening and early intervention strategies for women with risk of postpartum depression.[11]

In pathological cases, most postpartum mothers only made two visits to the hospital even though they needed more intense monitoring because they had a greater risk of complications. It is necessary to consider communication between secondary and primary health facilities related to follow-up care, especially monitoring pathological cases. ACOG (American College of Obstetricians and Gynecologists) recommends that preeclamptic mothers should receive blood pressure monitoring for at least 7 to 10 days during the puerperium so that it can be concluded that the schedule for postpartum visits must be adjusted to the needs and problems that accompany postpartum mothers. Recommendations to increase the monitoring time for postpartum mothers who have risks or complications are expected to reduce morbidity and mortality in postpartum mothers. [12]

The results of previous studies in Indonesia explained that the quality of maternal health services was influenced by the lack of competence of midwives, supervision, procurement of drugs and equipment, and the lack of community participation in supporting maternal health. [13,14] The support and community participants is important in improving maternal health.[14–16] This underlies the Surabaya City Health Office's ability to monitor and develop online maternal health services during the COVID-19 pandemic, but implementation has not been maximized because many programs are focused on handling COVID-19. The burden of health workers, especially midwives, also increases during the pandemic because they carry out additional tasks such as vaccinators and swabs to affect the quality of service. This results in services outside the building, such as home visits and online visits, not running optimally. The quality of maternal care can also be influenced by the increasing demand for maternal health care, support for health workers, referral networks, technological innovation, and the integration of health care. [17] Midwives have an autonomous role, especially in decision-making, so midwives need competence, especially confidence and critical thinking. [18] Infrastructure and culture in the workplace can affect the autonomous role of midwives in providing midwifery services so that stakeholders have an essential role in controlling work culture through appropriate division of work and workload.

The Guidelines of Postpartum Services for Mothers and Newborns published by the Indonesian Ministry of Health explains the scope that health workers must carry out in providing maternal postpartum services, namely anamnesis. Check blood pressure, pulse, respiration and temperature, signs of anemia, breasts, uterine fundal height, uterine contractions, bladder, and urinary tract, lochia and bleeding, Birth canal examination, Risk identification, and complications, Maternal mental status examination, Risk management high rates and complications during the puerperium, recommendations for exclusive breastfeeding, postpartum contraceptive services, providing education and counseling, giving vitamin A capsules.[4] The results of observations indicate that not all of the scope of postpartum services have been implemented during postpartum services, so special socialization efforts and interventions are needed relating to changes in the behavior of health workers so that the services provided are following existing guidelines. A comprehensive postpartum visit should include a full assessment of physical, social, and psychological well-being, including the following domains: mood and emotional well-being, infant care and feeding, sexuality, contraception, and birth spacing, sleep exhaustion, physical recovery from birth, chronic disease management, and maintenance health.

During the COVID-19 Pandemic, it was recommended for health facilities to use a combination visit method, namely offline and online, but the results of the assessment on mothers showed that visits were made directly to health facilities while home visits and online visits were not obtained. Telehealth has proven effective to improve the mental health of postpartum mothers and to reduce the risk of mothers being infected during the COVID-19 Pandemic.[19] The results of interviews with midwives and stakeholders showed that home visits and online visits had been carried out but not optimal because there were no obligations or achievement targets. Home and online visits were carried out to several postpartum mothers at risk and did not return to health facilities but had not been implemented optimally. It was proven that all postpartum mothers studied had not received home and online visits even though most were at risk and did not make complete repeat visits.

Many studies recommend that the first postpartum visit use the home visit method because, in the first visit, health workers must build three critical things: effective communication, building interactions with families as social support for mothers, and individual functions as family members. Scheduling visits on days 2 to 2 weeks of the puerperium can increase the presence of postpartum mothers in visits compared to the last visit, which is six weeks of puerperium.[20] Telehealth is the most recommended method during the COVID-19 Pandemic, but several obstacles related to this method are implemented; namely, mothers are not used to it, there is no communication tool available, and midwives have additional tasks during this Pandemic such as vaccinating and tracing COVID-19 cases. Implementation of online visits or telehealth requires preparation, patience, and practice for telehealth to run effectively. [21]

Postpartum mothers are at risk because they are in the recovery phase, so additional monitoring is needed if during the COVID-19 Pandemic, there must be restrictions or reductions in the schedule of visits by face-to-face directly to Health Facilities. Emotional support is an important thing that must be given to postpartum mothers. During the COVID-19 Pandemic, women were more worried about the health of themselves and their families. One of the causes of anxiety is a feeling of isolation because they are not used to changes in health services.[22] The COVID-19 Pandemic also affects midwives in providing health services; midwives also feel stress and anxiety because many mothers have turned to online visits.[23] The problem with health services in developing countries is that the transition from offline to online services is still challenging to implement, related to the internet network, infrastructure, and the unfamiliarity of mothers and health workers in using online applications.

The assessment results on postpartum mothers and experts obtained recommendations on the importance of implementing the combined visit method during postpartum services. The postpartum visit method can be done offline, namely health facilities and home visits. Besides that, it can be done online using communication media commonly used by the community. The recommendation is also based on evidence-based, which explains that all methods have advantages to produce comprehensive care if carried out. The research results of Mistry *et al.* (2016) showed that home-visiting programs positively affect outcomes such as healthy babies at birth and repeat births.[24] Suggested materials for postpartum mothers include the introduction of the team that will provide services, schedule of visits that are equipped with where to visit, plans to breastfeed the baby, reproductive health plans including contraception, mental health, pregnancy complications that can continue during childbirth, problems during the puerperium and chronic diseases. [12,25]

Expectations and recommendations for services provided by postpartum mothers and health experts are essential things that

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must be considered to determine the most appropriate postpartum service model to be implemented. Up-to-date information based on evidence is essential because changes in service models can cause anxiety and uncertainty for mothers and health workers.[26,27] Service providers need to develop postpartum service models that can facilitate partner intimacy, increase social support, assist mothers in breastfeeding success, strengthening healthcare providers' counselling, Facilitate bonding attachment between mother and baby and suggestions for repeat visits according to schedule.[28–31] Mother's expectations related to service management, communication, and emotional support are essential things that must be considered, while expert recommendations related to service quality such as visit methods, visit schedules, socialization of service standards, increasing skills of health workers, cross-sectoral collaboration, and communication between health facilities are necessary. To be discussed further to formulate the most effective postpartum service model following local wisdom.

The limitation of the research is different information from informants, especially mothers and midwives. The future research will need a special method to conduct interviews so we will obtain honest and factual data.

Conclusions

The COVID-19 pandemic affects postpartum services method, causing anxiety for postpartum mothers and health workers. Collaborative stakeholders across sectors need to formulate the most effective postpartum service model to use. The postpartum service model includes the method of visit, schedule of visits, and the standard of service provided are vital items that must be discussed further to improve the quality of postpartum services and reduce the Maternal Mortality Rate (MMR) during the postpartum period.

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