ORIGINAL ARTICLE

# Mothers' Perspectives on Utilization of Maternal Health Services in Rural Health Units in Luzon: A Qualitative Study

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## ABSTRACT

**Introduction.** Despite implementing various maternal health care programs and integrating these into Service Delivery Networks, the Philippines continues to have high maternal mortality. Identifying factors that impede the utilization of available maternal care services may help reduce maternal morbidity and mortality and bridge the gap between the need and actual use of such services among mothers in the community.

**Objectives.** This study identified barriers, hindrances, and other factors influencing mothers in availing maternal health services in Luzon, the largest island in the country and the area that accounted for more than half of total maternal mortality.

**Methods.** Eight focus group discussions participated in by a total of 78 pregnant women and mothers were conducted across all of the eight regions of Luzon. In each session, the participants were asked to answer questions based on a semi-structured interview guide. The interviews were recorded, translated and back-translated, transcribed, and compiled before analysis by the deductive-dominant approach using NVivo12.

**Results.** Factors affecting maternal health service utilization center on the capacity of health facilities to provide services like evaluation of the progress of pregnancy, laboratory examinations, free medicines, and immunizations; and on region-bound individual factors. The availability of skilled health personnel and lack of financial resources were the most common subthemes.

**Conclusion.** This study identified some key factors that deter patients from availing of existing maternal health services in Luzon. Eliminating these barriers will not only help strengthen local health infrastructure and improve service delivery but also promote the utilization of such services, leading to better maternal outcomes.

*Keywords: maternal health, service delivery network, barriers to availing healthcare service*

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## INTRODUCTION

The utilization of healthcare services is expected to be high during a woman's child-bearing years.[1] Despite this, maternal mortality ratio (MMR) remains high among low-income countries like the Philippines, which is at 121 per 100,000 live births.[2] For instance, in Luzon, the country's largest island, the MMR is 80 per 100,000 live births.[3]

This may partly be attributed to women's perception that health facilities are unsafe,[4] provide poor quality of care,[5]

have rampant disrespect and abuses,[6] and are staffed with personnel who have a negative attitude towards pregnant women.[7] Financial constraints, prevailing socio-cultural beliefs,[8-11] social status, race, income class, educational level, occupation, personal or environmental factors[12] all largely influence decision-making in the availment of health services – thus affecting MMR. In addition, community factors like geographic location, difficult road situations, the absence of telecommunications, and the lack of transportation equipment can affect healthcare utilization.[13] Governance-related factors like the lack of receptive facility or hospital management, human resources, medicine, facility supplies and equipment, and insufficient knowledge on the quality of maternal health care from healthcare providers (HCP) also hinder a positive perinatal and birthing experience.[14,15]

One way to reduce MMR is by providing maternal care services that enable the education and counseling of mothers on proper maternal health and newborn care. Another is the assurance that the health facility can provide the standard of care during delivery, including possible complications.[16] In 2014, the Philippines established the Maternal, Newborn, Child Health and Nutrition (MNCHN) Service Delivery Networks (SDN)[2] to help curb the high MMR. The three-tiered MNCHN SDN includes (1) Community-level service providers, (2) Basic Emergency Obstetrics and Newborn Care (BEmONC), and (3) Comprehensive Emergency Obstetrics and Newborn Care (CEmONC).[16] To detail, community-level service providers, allows the availability of transportation and communication system 24/7 for prompt referral; BEmONC facilities can do the six signal functions, namely administer parenteral antibiotics, anticonvulsants, uterotonic agents, removal of retained products of conception, assisted vaginal delivery, manual removal of placenta, and newborn resuscitation;. In contrast, CEmONC facilities are considered end-referral, which is expected to manage complicated cases.

The MNCHN SDN was adopted to address gaps in maternal health referral systems and improve coordination across healthcare levels. This strategy is based on the WHO's framework for improving the quality of care for mothers and newborns, especially during labor and delivery. The "perceived service quality" of patients is a way of knowing their experiences and assessing the caliber of services rendered by the facility – since these affect utilization and overall trust in the health system and further impact maternal health outcomes.[17] The areas assessed are the quality and standard of care, effective interventions, monitoring and evaluation, latest and relevant evidence, and skills building[17] that are part of World Health Organization (WHO) standards of care and measures of quality.

This study aimed to determine the experiences and perceptions of mothers regarding their utilization of maternal care packages (like those in BEmONC facilities), particularly the facilitators and barriers. Their insights on factors that hinder them from receiving adequate maternal care in BEmONC facilities can provide vital information that may help improve the delivery of these services and aid in crafting policies that may bridge the gap between available health services and the needs of mothers in the communities.

## METHODS

This qualitative study focused on the experience of mothers in availing maternal services in their localities. We used a semi-structured guide in eight focus group discussions (FGDs) by pregnant women and mothers from the eight regions in Luzon from March to May 2021. Recruitment of the respondents was done by snowball sampling of pregnant women and mothers who have experienced consultation in the RHU at least twice. Responses were probed to clarify further issues or concerns raised by the participants. Luzon was chosen as a study site as it had the highest percentage of maternal mortality (52.5% of the total maternal deaths in 2020), as shown in the PSA report. A hybrid setup for data collection was implemented. This means that for participants living in areas under General Community Quarantine Classification, the FGD was done via face-to-face interaction following the minimum public health standard, while for those living in stricter areas, the FGD was done via Zoom.

Recordings in Filipino were translated into English and then back-translated for consistency. Transcriptions per region were done by two independent transcribers with an 80% concurrence for finality. Codes were assigned to all relevant statements and were then arranged into categories with themes based on the similarity of ideas and concepts. All FGD recordings and notes were compiled and subjected to thematic analysis (deductive approach) using NVivo 12.

This study used the integrated patient-centered health service delivery framework for maternal health by Cagayan et al. in 2020, which illustrated interactions between the supply of services by healthcare providers and mothers' demand for it in providing an integrated and holistic approach to accessible quality maternal health care. Input components were areas that allowed BEmONC to function, such as infra-structure, human resources, drugs, equipment, transportation, protocol, and supplies. Process components focused on the operations side, including providing care, training, monitoring, evaluation, and logistics. There was an emphasis on a patient-centered perspective, particularly respectful care and a supportive environment for increasing health service utilization, which in the long run might result in a reduction of maternal morbidity and mortality.[18]

The study received ethical clearance from the Single Joint Research Ethics Board, which abides by the guidelines set forth by the Philippine Council for Health Research and Development (SJREB-2020-75). This study was also registered with the Philippine Health Research Registry (PHRR201127-003171) and was funded by the Advancing Health through Evidence-Assisted Decisions – Health Policy and Systems Research (AHEAD-HPSR) program of DOH and PCHRD.

## RESULTS

A total of 78 mothers participated in a series of eight FGDs conducted across the eight regions of Luzon. The baseline characteristics of the participants are shown in Table 1.

From the discussions, several themes surfaced based on the mothers' experiences in their utilization of health services in primary birthing units. Table 2 summarizes mothers' responses during the FGDs.

**Table 1.** Demographic Profile of Mothers (n=78)

| Characteristic | n (%) |
|---|---|
| ***Age in years*** *(mean, range)* | 32.2, 18-47 |
| ***Civil status*** | |
| Single | 6 (7.7) |
| Married | 63 (80.8) |
| Live-in partner | 9 (11.5) |
| ***Area of residence*** | |
| Urban | 32 (41.0) |
| Rural | 46 (59.0) |
| ***Highest educational attainment*** | |
| Elementary graduate | 4 (5.1) |
| High school undergraduate | 7 (9.0) |
| High school graduate | 6 (7.7) |
| College undergraduate | 26 (33.3) |
| College graduate | 32 (41.0) |
| Postgraduate studies | 3 (3.9) |
| ***Employment status*** | |
| Unemployed/housewife | 23 (29.5) |
| Employed | 20 (25.6) |
| Business owner (e.g., small to medium scale business) | 35 (44.9) |
| ***Gravidity*** | |
| Primigravid | 22 (28.2) |
| Multigravid | 56 (71.8) |
| ***Parity*** | |
| Nullipara | 8 (10.3) |
| Primipara | 28 (35.9) |
| Multipara | 42 (53.9) |
| ***Number of Prenatal Check-ups during Pregnancies*** | |
| 0–3 | 6 (7.7) |
| 4–6 | 58 (74.4) |
| 7 and above | 14 (18.0) |
| ***Complications during pregnancy, delivery, and postpartum*** | |
| None | 58 (74.4) |
| Hypertension | 10 (12.8) |
| Abortion/hemorrhage | 10 (12.8) |
| ***Mode of delivery*** | |
| Vaginal | 54 (69.2) |
| Cesarean | 10 (12.8) |
| Others | 14 (18.0) |
| ***Place of delivery*** | |
| Home birth | 4 (5.1) |
| Lying-in clinic | 48 (61.5) |
| Hospital | 15 (19.2) |
| Others | 11 (14.1) |

### Patient factors

Generally, mothers had little to no out-of-pocket expenses incurred in utilizing services from public BEmONC facilities. In Region 1, some mothers reported being given an incentive of 2,000 pesos for giving birth at the BEmONC RHU. Mothers without Philhealth coverage had to pay only a minimal fee for the services. The fee was significantly lower than the expense they would have incurred if they had given birth in a hospital.

However, some mothers still expressed their lack of financial capacity to address their needs. A number of mothers reported that certain private lying-in clinics charged higher for other services. In contrast, monetary donations were given to the RHU to help sustain the services. In a few situations, mothers were requested to undergo laboratory tests and ultrasonography, which were not offered in the RHU. These accounted for the out-of-pocket expenses.

> *"The lack of funding and resources in some RHUs also force us [patients] to spend out-of-pocket for medications and services, which sometimes discourages us from visiting the RHU."* (42, G4P2, Region 3)

A few respondents from the National Capital Region (NCR) and Regions 1, 2, and 4B mentioned cultural beliefs as a barrier to giving birth in health facilities. They preferred to give birth at home, which they believed to be more convenient. They also believed that traditional birth attendants were sufficiently skilled and had enough experience in home deliveries with no complications. Some of those who had home deliveries during the pandemic were also fearful of getting COVID-19 if they went to the clinics or hospitals for check-ups and even deliveries.

> *"My neighbors tell me that all who go to the hospital for consult are diagnosed to have Covid-19 and need to be isolated."* (33, G2P1, NCR)

### Competence and attitude of healthcare providers

Most mothers said that they were satisfied with the service they received in their RHU. Mothers appreciated the efforts of healthcare workers (HCWs) in conducting house visits whenever the mothers missed their scheduled consults. In Regions 1, 2, and 5, the HCWs were reported to be diligent in going door-to-door in the communities to cater to the needs of mothers who could not go to the birthing facilities. The mothers were also regularly reminded of the benefits of breastfeeding.

> *"I can easily contact my midwife whenever I need to inquire about my health concerns."* (28 G3P2, Region 1)

> *"We get visited by BEmONC staff when we do not follow their advice and are reminded how important regular checkups are for our own good and the child we're having."* (40, G5P3, Region 4B)

Most mothers appreciated the diligence of HCWs in providing information for safer maternal and child care. They were also involved in discussions on birthing plan formulations and family planning. Generally, the mothers said that the RHUs provided a supportive, safe, and inviting environment for their health and wellness concerns.

> *"For us pregnant women, we really appreciated the very efficient services and personal touch of the staff, and these encouraged us to seek subsequent consults with the birthing units."* (35, G1P0, Region 2; 26, G1P0, Region 1; 32, G3P1, NCR)

Some mothers from NCR and Regions 1 and 2 noted the immediate referral to higher-level facilities when they were considered high-risk cases. However, in NCR, mothers also mentioned a pattern of recommending induction of labor regardless of indication of referrals from either public or private lying-in clinics.

Some mothers reported negative experiences with the RHU staff. These behaviors, seen more commonly in NCR and Region 1, included poor communication skills, lack of patience and empathy, and decreased motivation in explaining procedures. One mother from Region 1 reported encountering a midwife who gave her incorrect information, telling her that the vernix caseosa on her newborn was due to the accumulated sperm from sex during pregnancy. As such, mothers who had enough money preferred to go to private specialists in bigger hospitals rather than public birthing centers.

## Completeness of services

Mothers said that the services they often utilized were the assessment and evaluation on the progress of their pregnancy, as well as family planning methods during post-partum follow-ups. Their vital signs were taken during every visit and were managed when needed with available vitamins and immunization. The mothers were also encouraged by the HCWs in the RHU to give birth at the BEmONc facility and to have regular pre- and post-natal check-ups.

On the other hand, some mothers noted very long waiting times before they were attended to. This was most commonly reported in NCR. In one island municipality in Region 4A, mothers also encountered problems with other services outside BEmONC that were needed during pregnancy, like laboratory examinations and ultrasonography. They were referred to the mainland, which was five hours away from their respective residences.

## State of facilities

Infrastructure was a recurring issue noted in all of the FGDs across all regions. The mothers said that most of the facilities were well-maintained and spacious. They had their own rooms specific for maternal and newborn care. The mothers also shared that most facilities were clean and organized.

> *"There are many functional rooms for BEmONC, such as delivery rooms, post-natal ward, labor room, laboratory, pharmacy."* (26, G1P0, Region 4B)

> *"I appreciate that the RHU buildings are more beautiful than before, I remember that I was almost afraid to visit because of the previous appearance that it was not well-lighted and cluttered."* (34, G3P2, Region 1)

However, there were experiences wherein the BEmONC facilities were already worn down. In the Cordillera Administrative Region (CAR), a mother said that water dripping from the ceiling during rainy weather caused concerns. In the same region, some mothers noted that there was BEmONC-trained personnel, but there were no facilities in municipalities, which led to wasted potential and services of HCWs. In NCR, the limited bed capacity was a constant issue whenever patients for delivery arrived almost simultaneously.

## Completeness of medical supplies and equipment

In some regions, mothers reported that the equipment used was clean and well-kept. However, for mothers in Regions 4B and 5, the BEmONC RHU lacked equipment and could not cater to their needs.

> *"There are centers that have incomplete needs such as sterilizers, unlike in hospitals. In case of emergencies, I would rather go straight to the hospital to make sure me and my baby are safe."* (26, G2P0, Region 5)

Generally, the RHU pharmacy had enough stock of medicine for maternal care and mothers' needs. In Region 1, the supply exceeded the demand and almost led to the near expiry of medicine. Mothers from Region 2 mentioned that their watchers ("*bantay*") were never required to procure medicine and other labor needs outside the facility. Their pre-natal vitamins and other medications were given in the facility for free. In contrast, in Regions 3, 5, CAR, and NCR, some mothers reported a paucity of the medical supply, which forced them to buy from an outside pharmacy.

> *"Sometimes, there are no medicines. We have to buy from outside pharmacies. But the services provided by the midwives and doctors are good. "* (38, G4P3, NCR)

## Location of facilities and availability of transportation

The location of BEmONC RHUs and their accessibility to mothers in Luzon were not homogenous. For some mothers, the RHUs were within walking distance from their residence or easily accessible through public transportation. This was an improvement from past experiences when a patient had to be carried literally by adults in the community for two hours to reach a birthing facility. There were mothers who

still lived in locations that were geographically inaccessible from the RHU birthing facilities. This was mainly due to the lack of paved roads, as seen in Region 2.

> *"My mother used to walk 2 hours to be able to have her check-up. Now, I am more fortunate that we have recently built roads, and I can reach the RHU in around 30 minutes by tricycle."* (30, G2P1, CAR)

The reaction of mothers regarding transportation was a mix of concern and praise. Some mothers expressed how barangay ambulance vehicles were provided, which made transport from the RHU to the hospitals easy. In NCR and Regions 3 and 5, most RHUs provided free ambulance services for emergency cases, with a midwife or nursing aide accompanying them during the transport.

> *"Our area has a barangay transport vehicle since each barangay has a tricycle serving as an ambulance for pregnant women. We also take note of the women's schedules for ultrasound and every Wednesday at 1 PM, we pool and provide transportation to the city for our patients to undergo ultrasound."* (28, G2P1, Region 5)

In the other regions, however, a functioning ambulance or emergency transport vehicles were converted for use in the transportation of COVID-19 patients.

In geographically isolated and disadvantaged areas (GIDAs) and island municipalities, the need for improving the mode of transportation and quality of roads was more evident. There was an apparent dearth in sea- and land-based ambulances and emergency transport vehicles. In CAR, one mother was transported to the hospital using the car of a staff member.

**Table 2.** Summary of responses in the FGD of mothers (n=78)

| Themes | Number of responses (%) (N =78) | | |
|---|---|---|---|
| | Positive | Negative | Neutral |
| ***Costs*** | | | |
| Out-of-pocket expenses | 0 (0.0) | 34 (43.6) | 4 (5.1) |
| PhilHealth coverage/support | 23 (29.5) | 12 (15.4) | 2 (2.6) |
| Donations (vs. fees in private lying-in facilities) | 4 (5.1) | 5 (6.4) | 0 (0.0) |
| Willingness to give birth in BEmONC facilities | 37 (47.4) | 17 (9.0) | 7 (9.5) |
| ***Healthcare workers*** | | | |
| Conduct of house visits | 56 (71.8) | 5 (6.4) | 12 (15.4) |
| Diligence | 38 (48.7) | 9 (11.5) | 10 (12.8) |
| Provision of reminders | 25 (32.1) | 3 (3.9) | 2 (2.6) |
| Advice on birthing and family planning | 58 (74.4) | 0 (0.0) | 10 (12.8) |
| Timely and accurate referral | 32 (41.0) | 24 (30.8) | 10 (12.8) |
| Communication skills | 28 (35.9) | 26 (33.3) | 12 (15.4) |
| ***Completeness of services*** | | | |
| Pre-natal services | 45 (57.7) | 19 (24.4) | 11 (14.1) |
| Post-natal services | 23 (29.5) | 19 (24.4) | 21 (26.9) |
| Physical examination / Vital signs | 10 (12.8) | 2 (2.6) | 58 (74.4) |
| Patients' advice | 48 (61.5) | 12 (15.4) | 3 (3.9) |
| Diagnostic labs and exams | 6 (7.7) | 42 (53.8) | 12 (15.4) |
| Waiting time | 6 (7.7) | 16 (20.5) | 26 (33.3) |
| Unnecessary delays | 0 (0.0) | 13 (16.7) | 4 (5.1) |
| ***State of facilities*** | | | |
| Overall quality/maintenance of infrastructure | 20 (25.6) | 26 (33.3) | 8 (10.3) |
| Cleanliness and organization | 27 (34.6) | 23 (29.5) | 5 (6.4) |
| Number of rooms | 5 (6.4) | 15 (6.4) | 7 (9.0) |
| Number of beds | 8 (10.3) | 14 (17.9) | 11 (14.1) |
| ***Medical supplies and equipment*** | | | |
| Quality/Maintenance of equipment | 21 (26.9) | 18 (23.1) | 4 (5.1) |
| Stock/Supply of medicine | 17 (21.8) | 23 (29.5) | 19 (24.4) |
| ***Accessibility of facilities*** | | | |
| Location | 18 (23.1) | 12 (15.4) | 20 (25.6) |
| Availability of ambulance | 40 (51.3) | 9 (11.5) | 1 (1.3) |
| Quality of roads | 8 (10.3) | 19 (24.4) | 3 (3.9) |
| Other modes of transportation | 3 (3.9) | 15 (6.4) | 5 (6.4) |

## DISCUSSION

Most of the FGD respondents were educated and had a steady source of income. Several studies have shown that educational attainment and financial capability are major factors that contribute to the health-seeking behavior of a mother and consequently, to the use of maternal services.[18-20]

However, some mothers still prefer traditional and home delivery methods because of convenience, lower costs compared to an institution-based delivery, and their own personal beliefs and culture. This is consistent with the findings of Withers, Kharazmi, and Lim that show women's aversion to accessing maternal care from HCW comes from their beliefs and practices.[21]

### Seeking care in a primary health facility is largely influenced by a woman's perception of the institution's capacity to deliver necessary and timely care

Underutilization is common in regions where mothers note that facilities (1) lack medicine or diagnostic equipment, (2) have no regularly available skilled HCWs, (3) have long waiting times, (4) have no clear referral system, and (5) have personnel with a negative attitude. Various studies also show that these factors significantly affect health service utilization. Moreover, the experience of other community members contributes to such perceptions among women. In a study by Sultana and Shaikh, 90% of women do not use maternal services due to a lack of awareness, poor transportation, and personal financial issues.[18,22-25]

### Financial and social aspects influence women's compliance in consulting at a BEmONC facility

Despite the availability of PhilHealth Maternity Care Packages, which cover around 8000 pesos, this amount is not sufficient to cover peri-natal care for some facilities. Women who intend to give birth at health centers are reluctant to avail of their services due to concerns regarding out-of-pocket expenses. Patients prefer private birthing units and other lying-in facilities for their more affordable packages and better facilities and other incentives. While most BEmONC facilities are accessible, expenses incurred due to transportation and hospital stay prevent women from using available services, as seen in patients from GIDAs and island municipalities. Other studies in Malawi[26], Uganda[27], and Vietnam[28] demonstrate similar results.

### The utilization of maternal and neonatal care services improves when mothers have a safe space to ask questions and consult

Patient experience and service utilization do not end once mothers get the maternal services they need. Mothers often inquire about their conditions from their health care providers and would like to know more about birthing and family planning, breastfeeding, and vaccination. Patient education during and after pregnancy has improved mothers' knowledge and service satisfaction.[29] Note that MNCHN Core Services span from pre-pregnancy up to the childhood, and some examples of services include provision for iron and folate supplementation, family planning services, management of infection and lifestyle diseases, prenatal visits, delivery assisted by a skilled birth attendant, and prompt referral of complications, postpartum follow-ups, newborn and childhood immunization, promotion of exclusive breastfeeding.[16] Adolescent and youth health like sexuality, injury prevention, screening for risk taking behaviors, mental health, STI/HIV prevention, and adolescent pregnancy are also part of the core packages.[16] It can be seen that the MNCHN Core services from pre-pregnancy to childhood are well-known to the mothers and are accessed by mothers. However, adolescent services were never mentioned by the mothers.

### Physical access to maternal and neonatal care services contributes to higher utilization

Poor transportation infrastructure, such as roads and highways, are barriers that literally prevent the utilization of services from RHUs, especially for mothers who need to be transported to higher-level facilities. Location and distance, travel time, and travel costs are additional deterrents in this regard.[29] These findings are consistent with those of Yamashita et al.; that most women see financial and environmental factors as barriers to accessing maternal care from institutional facilities and thus, their preference for home deliveries.[30]

A well-implemented maternal health program anchored on a fully-utilized health care system is vital in reducing maternal mortality.[16,17] This study uses the Three Delay Model by Thaddeus and Maine (1994) and the integrated patient-centered health service delivery framework for maternal health to explore the experiences and perceptions of community stakeholders that affect their utilization of maternal health services in BEmONC facilities. The results are consistent with the Three Delay Model, which suggests the utilization of maternal health services is limited by (1) delays in the decision to seek care; (2) delays in the arrival at the health facility; and (3) delays in receiving adequate care.[31] The main subthemes seen in the experiences of the mothers are (1) patient factors, (2) competence and attitude of HCWs, (3) completeness of services, (4) state of facilities, (5) completeness of medical equipment and supplies and; (6) location and availability of transportation.

In addition, through the integrated patient-centered health service delivery framework, input components like transportation, RHU location, and the physical state of the facilities are generally facilitators for mothers to utilize BEmONC services. On the other hand, process components such as completeness of service, competence, and behavior of HCWs may be considered a deterrent factors[7]; however, the results of the study did not reflect this. The perception of mothers regarding the quality of care they receive can rein-

force their health-seeking behavior.[18] All these consequently influence their service utilization.

## CONCLUSION

Addressing persistent problems in maternal care is essential for improving maternal outcomes. Identified barriers in the utilization of existing service delivery revolve around perceived limited-service capacity of BEmONC facilities, individual factors like financial constraints and poor personal experiences, and other factors such as location and availability of transportation. New policies and programs aimed at eliminating such barriers while promoting facilitators can strengthen local health systems and improve health service delivery.

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### Statement of Authorship

All authors contributed in the conceptualization of work, acquisition of data and analysis, drafting and revising and approved the final version submitted.

### Author Disclosure

All authors declared no conflicts of interest.

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