

# Roles and Functions of Rural Health Midwives in Cordillera Administrative Region: A Qualitative Pilot Study

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## ABSTRACT

**Background.** Midwives have been frontline health professionals at the grassroots level, especially in rural communities. Their role was expanded from maternal and child healthcare providers to primary healthcare services providers. Despite their expanded functions, there have been limited studies investigating the professional practice of midwifery in the Philippines in a rural setting.

**Objective.** This study aimed to investigate the professional practice of midwives in selected rural areas in the Cordillera Administrative Region, Philippines.

**Methods.** This research is a qualitative pilot study using a semi-structured interview guide to collect the data. Key informant interviews were conducted through mobile phone calls convenient for the participants from September to October 2021. Data were analyzed through qualitative content analysis.

**Results.** A total of seven rural health midwives participated in this study. From the data analysis, six themes emerged related to the professional functions of rural Filipino midwives: 1) antenatal and postnatal care, 2) basic emergency obstetrical and newborn care, 3) health education and counseling, 4) treating common children and adult infections, 5) health promotion, and 6) beyond midwifery role.

**Conclusion.** Rural midwives play a role in providing several primary healthcare services mandated by the government and the profession. They also offer health services beyond their scope as midwives because of geographical difficulties and logistic issues. The findings inform the policymaker to review and amend the expanded roles of practicing midwives so that they will be empowered in providing quality and legal healthcare services. The study results will also be important in preparing midwives for rural midwifery practice.

**Keywords:** midwives, rural health settings, rural midwives, professional practice, midwife functions



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## INTRODUCTION

In many countries, midwives play an essential role in helping pregnant women and their newborns reach

healthy outcomes. In high-income countries, midwifery care is associated with positive results, including reduced preterm births, reduced fetal loss at any gestational age, and positive experiences described by women.<sup>1</sup> A study showed that scaling up quality midwifery practice coupled with enabling environmental factors can potentially help reduce maternal and neonatal mortality and stillbirths in low- and middle-income countries.<sup>2</sup> Strengthening the ability of midwives to provide quality mother and newborn medical services is a priority of the United Nations Population Fund (UNFPA) and the World Health Organization (WHO).<sup>3,4</sup> The International Confederation of Midwives (ICM) is also a lead organization in the midwifery field by prescribing fundamental skills in practicing midwifery and the international midwifery education standards.<sup>5</sup>

As of 2017, 43,044 Filipino midwives are working in the private and public health sectors. The distribution of working midwives per administrative region in the Philippines as of 31st December 2017 is presented in Table 1.<sup>6</sup>

The Cordillera Administrative Region (CAR) is located in the north-central part of Luzon, bounded by Ilocos Norte and Cagayan in the north, Pangasinan and Nueva Ecija in the south, Cagayan Valley in the east, and Ilocos Region in the west. Baguio City is the regional center, 258 kilometers away from Metro Manila which takes four to six hours to travel by land. The CAR is the only land-lock region consisting of mountainous provinces (Abra, Apayao, Benguet, Ifugao, Kalinga, Mountain Province, Apayao) that are composed of rugged terrains inhabited by indigenous peoples collectively

called the *Igorot*, with rich culture distinct from that of the colonized regions of the country.<sup>7</sup> Among the 17 regions, CAR has the highest percentage of barangays (villages) classified as geographically isolated and disadvantaged areas (GIDA).<sup>8</sup> Being in a GIDA is one factor that negatively affects the decision-making of the community people to access services for their health needs.<sup>9</sup> It was reported that 49% of women in CAR have difficulty accessing healthcare due to the distance to the health facility.<sup>10</sup>

The region is composed of 1,184 barangays (villages), of which only 63% (749) have Barangay Health Station (BHS).<sup>11</sup> With the 1,822,719 projected total population in 2021 based on the 2015 Census of Population, all provinces meet the target ratio of one BHS to 5,000 population; however, there are satellite health centers that do not have permanent health workers; hence the midwives and other healthcare providers set specified days of the week to conduct health checks in the villages.<sup>12,13</sup>

Midwives are part of the healthcare team in public and clinical settings. They are known to provide care to women during pregnancy, assist during labor and delivery, provide care after birth, and care for newborn babies.<sup>14</sup> Furthermore, midwives aim to prevent adverse pregnancy outcomes, detect maternal high-risk health conditions, procure medical assistance and execute emergency measures without medical help.<sup>14</sup>

In the Philippines, the scope of midwifery has been specified through the issuance of the Republic Act (RA) 7392, also known as the Philippine Midwifery Law. This law

**Table 1.** Distribution of working midwives in the Philippines as of 31st December 2017

Region	Midwives		
	Public	Private	Total
National Capital Region	3,475	857	4,332
Cordillera Administrative Region	1,675	67	1,742
Ilocos (I)	2,679	192	2,871
Cagayan Valley (II)	2,296	147	2,443
Central Luzon (III)	3,475	352	3,827
CALBARZON (comprised of Cavite, Laguna, Batangas, Rizal, Quezon, and Lucena) (IV-A)	3,022	426	3,448
Mimaropa (comprised of Occidental Mindoro, Oriental Mindoro, Marinduque, Romblon, and Palawan) (IV-B)	1,493	90	1,583
Bicol (V)	2,742	296	3,038
Western Visayas (VI)	3,661	160	3,821
Central Visayas (VII)	2,976	296	3,272
Eastern Visayas (VIII)	2,069	84	2,153
Zamboanga Peninsula (IX)	1,567	205	1,772
Northern Mindanao (X)	2,327	176	2,503
Davao Region (XI)	1,345	175	1,520
Soccsksargen (comprised of South Cotabato, Cotabato, Sultan Kudarat, Saranggani, and General Santos City) (XII)	1,961	299	2,260
Caraga (XIII)	1,348	70	1,418
Autonomous Region in Muslim Mindanao	1,027	14	1,041
Total	39,138	3,906	43,044

Source: World Health Organization. *The Philippine Health System Review*, 2018

mandates Filipino midwives to provide maternal and child care, carry out physicians' written orders regarding ante-, intra-, and postnatal care in normal pregnancies, administer immunization, dispense oral and parenteral oxytocic drugs after placental delivery, suture perineal lacerations to control bleeding, administer intravenous fluid during obstetrical emergencies provided they have been trained for that purpose, and inject vitamin K to the newborn.<sup>15</sup> RA 7392 also states that midwives offer primary health care services in the community, including nutrition and family planning.

The Senate Bill No.139, also known as "Midwife to the Barangay Act of 2010" filed by Senator Pia S. Cayetano, aims to deploy one midwife to provide primary healthcare to one barangay to complement existing health personnel, especially in far-flung areas with insufficient maternal health services.<sup>16</sup> Given this recommendation, there should be 1,184 midwives to serve each barangay. However, there were only 640 working rural midwives in the region.<sup>17</sup> To augment the lack of health workers, the government deploys midwives on a contractual basis in areas with no assigned midwives through the Human Resources for Health (HRH) Deployment Program, which aims to improve public health access.<sup>18</sup> Although the program's objective is promising, the retention of deployed health workers is low. It was found that limited resources to fund the continuity of the program and unresponsive and uncooperative local government units resulted in low retention and absorption of health workers in the host communities.<sup>18</sup>

Filipino midwives are the country's frontline healthcare service providers and the main backbone of the local health service delivery system at the Barangay Health Stations (BHS) and in rural health centers.<sup>19</sup> Furthermore, Filipino midwives implement the country's Maternal, Newborn, Child Health and Nutrition (MNCHN) Strategy, which aims to improve the local health system to ensure that every woman will have a planned, wanted, and supported pregnancy; ensure that every pregnancy is adequately managed throughout its duration; ensure that every birth is delivered in the health facility operated by skilled birth attendants, and; ensure that every mother and newborn benefit from proper postpartum and postnatal care.<sup>20</sup>

Given the low accessibility of health centers and the limited number of health workers, currently working rural health midwives implement strategies to provide primary healthcare to every unserved or unreachable village, specifically in rural areas. As midwives are the frontline healthcare providers that people are first in contact with, rural midwives tend to play roles beyond their typical midwifery care services, including being a healthcare service provider, counselor, manager, team leader, and supervisor of community health volunteers; control and prevention of communicable and non-communicable diseases; and recording and managing medication across different health programs.<sup>19</sup> Awareness of these various professional roles enables the rural midwives to be prepared to work efficiently in rural settings despite

the difficulties. With full appreciation and understanding of the roles of midwives, the provision of primary care in the field will be satisfying and fulfilling. Recognizing the significant contribution and roles of midwives in the rural setting is the key to overcoming the challenges of rural midwifery care.

Given the complexity of the roles of the midwife, there has been limited investigation of the professional practice of Filipino rural midwives. A study explored the professional practice of midwifery in the Philippines wherein some of their study participants were midwives deployed in the rural communities of Mindanao; however, these professionals were newly registered midwives who did not have much midwifery work experience.<sup>19</sup> To fill the gap, this study investigated the professional practice of midwives with at least three years of midwifery work experience in providing healthcare in the rural health setting in CAR, one of the 17 regions in the Philippines.

## METHODS

### Research design

This research is a qualitative pilot study using a semi-structured interview guide to investigate midwives' professional practice in providing primary healthcare in rural areas of the CAR, Philippines. The qualitative approach was used to have a more in-depth discussion with the participants.

### Study participants

Literature suggested a minimum of five participants in qualitative interviews and a decision to stop data collection when data saturation is reached.<sup>21-23</sup> Guided by this; seven rural midwives were purposefully selected and participated because there were no new themes that emerged from the transcripts. The purposive sampling technique enabled the deliberate selection of participants based on their characteristics which allowed a detailed understanding of their roles in rural healthcare.<sup>24</sup> The participants were asked about their work experiences providing healthcare in their respective catchment areas. The researchers strived to recruit participants working in rural CAR areas assigned in both barangays (villages) and in the rural health units (RHU) to obtain diverse responses in the study. We chose rural midwives because they were entirely in charge of the day-to-day activities of the village and the RHU. Retired midwives were excluded from the study.

### Data collection method

Individual informed consent was obtained from each of the participants. The sixth author facilitated the participants' recruitment and obtained the signed permission. Given the travel restriction due to the COVID-19 pandemic, data were collected from September to October 2021 through mobile phone interviews, which was feasible and convenient for the participants. A flexible semi-structured interview guide was

used to investigate midwives' roles in providing healthcare in the rural areas of CAR. The interview guide included asking the participants about their viewpoints on their roles and functions in the rural health setting and the healthcare services they provide to their clients. This method was designed to encourage midwives to discuss their experiences freely. The semi-structured interview guide is presented in Table 2. Either Ilocano or the Filipino language was used during the interview, depending on where the participants were comfortable communicating. Participants were given time to express their experiences with minimal interruption. The first author conducted all interviews. The interviews lasted from 30 to 45 minutes and were recorded through an audio recorder and then transcribed verbatim. Data collection continued until no new information was given, even with probing. Transcripts were translated into the English language before data analysis.

**Data analysis**

In data analysis, the qualitative content analysis described by Padgett was used.<sup>25</sup> Inductive content analysis was employed, so there were no anticipated themes to guide the study. Interview transcripts were read multiple times to develop the meaning of the participants' responses, and codes were developed. The first author led the coding and analysis with second reading and cross-checking by the third and fourth authors. Designed themes were made by categorizing similar words and phrases to ensure that they were representative of the participants' views. Themes were discussed and agreed upon by the researchers.

**Ethical consideration**

The Institutional Ethics Review Committee of Mountain Province State Polytechnic College approved the study. The study's purpose and nature were provided, and individual informed consent was obtained from all participants.

There were no significant risks expected in the conduct of the research, but the participants felt some discomfort in answering questions related to their personal fieldwork experiences. In these instances, the participants were ensured that they could withdraw from the study at any time during

the conduct of the study, and their information would be treated confidentially. The participants were informed that they do not have any primary benefits from participating in the research. Still, the information they provide will contribute to the body of knowledge regarding midwifery practice. The data collected were audiotaped and kept in a password-protected file, and only the research team had access. The personal identification of participants in the transcripts was anonymized and coded. All data will be deleted after three years after the completion of this study.

**Rigor**

The researchers followed up with the participants to validate the information and confirm their responses' interpretation. This effort ensured that the responses accurately represented the participants' views. Interviewed rural midwives were purposively selected because they worked in the specified rural setting. The sixth author first met the participants before the interviews to establish rapport and obtain individual informed consent. Meanings of responses were validated through probing, minimal verbal responses, and clarification. After reading the transcripts, the researchers developed a coding framework finalized by consensus.

**RESULTS**

All participants were full-time rural midwives in CAR who, at the time of the interview, served from 3 to 36 years. The demographic characteristics of the participants are shown in Table 3.

Emergent themes were identified from the narratives obtained from the participants' individual interview transcripts regarding the functions they do in the rural healthcare setting:

1. Providing antenatal and postnatal care
2. Basic emergency obstetrical and newborn care provider
3. Health education and counseling
4. Treating common infections in children and adult
5. Health promotion
6. Beyond midwifery roles

**Table 2.** Semi-structured interview guide questions

<b>Opening</b>	Can you share with me how did you become a midwife?
<b>Introductory</b>	From your perspective, what is life like to be a midwife?
<b>Transition</b>	What are the things you do every day at work?
<b>Key</b>	What are your roles and functions in your catchment area?  In your life as a midwife, can you share about your experience/s you consider as memorable event/s at work?
<b>Ending</b>	Is there anything else you would like to add?

**Table 3.** Demographic characteristics of the participants (n=7)

Participants ID number	Age (years)	Academic attainment	Length of service (years)
RHM1	33	Bachelor of Science in Midwifery	6
RHM2	33	Diploma in Midwifery	3
RHM3	49	Diploma in Midwifery	26
RHM4	63	Bachelor of Community Health Services	36
RHM5	31	Bachelor of Science in Midwifery	3
RHM6	31	Bachelor of Science in Midwifery	7
RHM7	34	Master of Science in Public Health	3

## Providing antenatal and postnatal care

### Maternal care for low-risk cases

Rural midwives' primary function is to provide antenatal and postnatal healthcare. All participants provide antenatal care, including prenatal assessments, birth assistance, and supplementation from pregnancy until the postpartum period.

*"I also assist them [laboring women] during normal deliveries."* (RHM1)

*"In the RHU (rural health unit), it is departmentalized. We do like an outpatient department kind of health services. We do prenatal check-ups."* (RHM4)

*"In our home visits, we go to the houses of our pregnant women. We provide them with iron supplements, and vitamin A... We provide them with vitamin A after they give birth."* (RHM 1)

*"We do home visits to postpartum women... We give them iron supplements and vitamin A."* (RHM3)

### Maternal care for high-risk cases

As part of antenatal health monitoring, midwives always pay attention to unusual or dangerous signs of pregnancy and guide pregnant women to go to the hospital for medical attention. For low-risk pregnancies, midwives assist with normal pregnancies and provide care until the baby's delivery. Rural midwives would refer them to the hospital for appropriate medical care for complicated and high-risk cases.

*"In cases when our pregnant women are high risk, if we cannot handle them, we refer them to the higher health facility."* (RHM1)

*"We do home visits to the homes of pregnant women. It is where we provide prenatal assessment and care."* (RHM5)

*"We observe what comes out from her [vagina] such as bleeding. When they experience something unusual, we advise them to have a check-up at the hospital. We also monitor their babies' health."* (RHM3)

*"When I take their [laboring women] blood pressure, and it is very high, we need to refer them and accompany them to the hospital."* (RHM7)

### Referral of high-risk maternal cases

Participants consider the first pregnancy a high-risk pregnancy; hence they would refer it to the hospital for closer medical attention.

*"Sometimes, if the barangay (village) health worker report to us that there are [new] cases of pregnancy with concomitant health conditions, we do a home visit. We assess their antenatal status, ask about their past medical and pregnancy history, and we encourage them to go to the hospital for a further medical checkup."* (RHM6)

### Newborn care

Rural midwives also conduct home visits to distant villages to provide newborn care.

*"We hike mountains, many mountains, even if it is raining... We also monitor babies' health."* (RHM6 Vanes)

### Basic emergency obstetrical and newborn care provider

Participants shared that they provide basic emergency obstetrical and newborn care (BEmONC) in the rural setting. They shared that because of the remoteness of the health center, pregnant women could not reach midwives for antenatal care. A participant also shared distance from the health center to the hospital is a challenge in helping pregnant women deliver. Despite these difficulties, midwives would still manage to provide healthcare services to pregnant women.

*"These are the things I cannot forget. Delivering a baby presenting with feet and buttocks. There are cases in normal deliveries that even if the head is delivered, the body does not come out... There are a lot of cases like this. I needed to have presence of mind until we reached the hospital. But, I am very grateful that nothing bad happened to the patient."* (RHM4)

*"Because of the distance of our barangay (village) health station, our pregnant clients will only come when they do not feel good. We better do home visits, which is more effective because we get to have personal contact with them."* (RHM5)

*"It is also challenging, especially when the pregnant mother we are visiting is located in the far-flung areas. We need to travel by hiking."* (RHM6)

### Health education and counseling

#### Remind needed healthcare services

Participants highlighted the importance of conducting health education in every health program they provide. Health education and counseling are their way of reminding their clients about schedules of immunization, schedules of coming to the health center when needed, and the benefits of every primary healthcare program being implemented in

the community. Health education and counseling are core activities in the health facility and during home visits.

*"After we attend to our client's [health] needs, we follow them up and monitor them. We remind them to bring their babies for immunization. We also explain to them about immunization and its importance."* (RHM2)

*"We also conduct health education and counseling to remind the family of the proper nutrition of their kids and the needed routine supplements and other healthcare needs."* (RHM1)

*"To remind them of the importance of having a toilet, we conduct monitoring and IEC (information education campaign), and we advise them to construct a sanitary toilet."* (RHM1)

### Food supplementation

Health education is also a way that rural midwives promote the use of iron-folic acid supplementation during pregnancy. This is given for free to prevent and treat anemia in pregnancy. Despite its affordability, some pregnant women do not take it because of the unpleasant taste of the supplement. So rural midwives need to explain the benefits of the supplements, which outweigh the unpleasant taste.

*"Some mothers are picky in taking that [iron-folic acid supplements] because they said the taste is like rust. But we advise them that they need to take it... They do not like the free [iron-folic acid supplements] from the health center because they want to buy coated ferrous sulfate tablets. But for others, they take what we give. We need to continuously explain what it is for."* (RHM1)

### Teenage pregnancy

One participant shared that she provided counseling to teenage mothers regarding pregnancy and birth. As pregnant teenagers are increasing in her catchment area, she needed to provide health education and counseling regarding health during pregnancy and delivery. This is because the participant considers being a young parent a problematic situation. With these, rural midwives would do their best to educate the young mothers to have a healthy pregnancy and delivery.

*"In the barangay (village), I conduct counseling to teenage mothers, especially now that there are many teenagers who are getting pregnant. Being a parent at a very young age is difficult. Through counseling them, I help them recognize the challenges of becoming a young parent and how to deal with them. I educate them on what they need to do to have healthy pregnancy and delivery. I tell them that we, in the health center, can*

*help them have a healthy pregnancy and safe delivery."* (RHM2)

### Contraception and family planning

Counseling about family planning is also critical in providing midwifery care. Midwives promote the use of contraception as part of promoting healthy parenthood and good nutrition for the mother and her future child. Rural midwives apply some strategies in promoting family planning (FP) among couples, including sharing personal experiences, conducting mother's classes, and having the FP users speak about their experiences on the benefits of FP.

*"We provide family planning counseling, especially to teenage parents. We even share with them our personal experiences with using contraceptives. You know, this is one way of promoting the health of the woman because [by using the FP methods] they will regain their health for a few years before another pregnancy. Some [teenage pregnant women] cooperate and use [FP method]. Every day, I consider it an achievement if I encouraged teenage moms to practice family planning and come to our health facility for assistance."* (RHM2)

*"We encourage and educate every couple to do family planning, especially in cases of teenage pregnancy. We schedule a session and call those FP (family planning) users to share their experiences about family planning and contraception. These FP users are our advocates in promoting FP use to every couple. Especially for the teenage or younger mothers."* (RHM3)

### Individual health education and counseling

Because of the COVID-19 pandemic, conducting health classes in public shifted to individual health education and counseling to prevent overcrowding. Despite this set-up, participants regarded this strategy as effective because they could personally interact with the husband and the wife at home.

*"Now that there is a pandemic, we cannot conduct mass gatherings anymore. We do health education and counseling individually. We avoid overcrowding. At least, we can also reach both the husband and the wife at home. I think this is more effective because it is more personal, and we can clarify their queries which they might not be comfortable sharing during mother's classes."* (RHM3)

### Promoting healthy lifestyle

Health education and counseling are also a way for rural midwives to promote good health during pregnancy and after delivery. Rural midwives identify health education to encourage healthy behaviors and practices.

*“During our health monitoring among pregnant and postpartum women, we check if they had regular antenatal check-ups, take nutritious food, and if they take their vitamins regularly. If not, we conduct health education and remind them of a healthy lifestyle and the needed healthcare services in the facility.”* (RHM6).

## Treating common infections in children and adult

### Under-five-year-old healthcare

One of the key themes that emerged from data analysis was providing healthcare services to under-five-year-old children. All participants mentioned that they do health assessments on children and give needed medication as necessary. One said treating common childhood infections is guided by the integrated management of childhood illness (IMCI) protocol. This is a protocol used in the health center to assess the signs and symptoms of children under five years of age, classify the type of infection, and treat classified childhood infections accordingly. For cases that cannot be managed in the rural health facility, all the participants would refer such patients to the higher health facility for further management.

*“Our doctor helps us to do many things... How to do IMCI (Integrated Management of Childhood illness) is the integrated management of children [with infection] under five years old. It is where we assess the patient if they need the first-line antibiotic because that is the only one that we can give. Or advise them on home management. We assess whether the case is severe, moderate, or mild.”* (RHM1)

### Adult healthcare

Aside from treating childhood infections, rural midwives also provide medication for common conditions among adults. They would assess the signs and symptoms of an adult's potential infection and give the medication. One participant shared that she provides treatment for respiratory infection to adult clients under the Control of Acute Respiratory Infection (CARI) program. With the CARI protocol, RHM assesses the condition and gives medication accordingly.

*“We used the CARI protocol in giving medication for the adult clients, such as treatment for cough and colds. There is a certain duration [of cough and colds] where we do not give antibiotics. It depends on the condition of the patient. The things that we can give are antihistamines and medicine for cough, such as lagundi (herbal medication for cough). And if it is seven days duration and above, we can give the first line of antibiotics.”* (RHM1)

## Health promotion

### Clean and Green Program

Sanitation is a component of a healthy community. All participants shared different activities to promote health in rural areas. Firstly, they mentioned implementing competition in the clean and green program. Each household in the villages should maintain cleanliness in their communities and plant vegetables for their consumption or income-generating project. They will be monitored, and the LGU will give the winner awards and recognition. To ensure that villages will participate in this program, midwives visit every home to encourage household cooperation in the program. All participants found this program helpful in promoting sanitation and food security in the community.

*“One of our programs in the barangay (village) is the clean and green program. Each village should have proper sanitation and household cleanliness. For example, [having a] toilet, for those who do not have one...In addition to having a sanitary toilet, we also encourage and help the community to practice BIG (Bio-intensive Gardening) or planting vegetables in the backyard. We help them and encourage them to plant whatever kind of vegetables. This can be a source of additional income, and for their consumption.”* (RHM1)

### Monitoring of children's body weight and supplementation

Secondly, in furthering the promotion of nutrition in the community, all the participants conduct weight monitoring of children. They do this during home visits to take children's body weights and provide food supplements as needed.

*“We also visit children with low birth weight. We monitor their body weight every month. We provide them vitamins from the BHS (Barangay Health Station) and the LGU, such as Nutra milk and other vitamins.”* (RHM1)

In the daily activities of the midwife, providing supplementation is vital in promoting proper nutrition for both children and adults. A participant shared that they include vitamins in their healthcare bags when they go for home visits. This way, they ensure that their clients will obtain the available food supplements from the health center. The participants shared that their clients have difficulty accessing healthcare from the health center due to the COVID-19 pandemic.

*“With this current pandemic, most of our clients cannot come to the health center to obtain their food supplements. They cannot go out of their houses. So, I need to bring [the food supplements] when I go to their homes.”* (RHM3)

### Immunization in children

Lastly, immunization is a vital primary healthcare service for rural midwives to promote community health. Immunization can be administered in health facilities, schools, villages, or even their clients' homes. Currently, most immunization activities are conducted in the clients' homes. This is in response to the current pandemic to minimize overcrowding in the health facility.

*"There was one time, a school-based immunization. We were all together there- doctors, nurses, and midwives. We conducted a mass immunization of school children."* (RHM6)

*"We also bring immunization programs for children to their homes. We do immunization in their homes rather than have them come to the health center. Because in the health center, they will be exposed to different diseases including COVID-19."* (RHM3)

### **Beyond midwifery roles**

#### **Monitoring of blood pressure and hypertensive medication**

Aside from providing primary healthcare services, rural midwives provide other functions beyond their typical midwifery functions. During the home visit, hypertensive clients are also catered to by rural midwives. The participants shared that they always bring their blood pressure apparatus to monitor the blood pressure of potential hypertensive clients. They even bring medicines commonly taken as a maintenance medication for hypertensive clients.

*"We visit hypertensive clients who are unable to come to the health center, then we give them their maintenance medication when they are out of stock. We also monitor their blood pressure."* (RHM1)

#### **Simple wound suturing**

One participant mentioned that the physician taught her to do a simple wound suturing procedure. Although, she shared that she did this with the supervision and assistance of the physician.

*"Our municipal health officer (general physician) helps us to do many things such as minor [wound] suturing. The most memorable procedure that I did was doing circumcision. But of course, with [physician's] supervision. I learn many things from him [physician]."* (RHM1)

All the participants explained that they do expanded roles in the rural healthcare setting for several reasons. One is the lack of healthcare providers in the rural health setting, and midwives are the primary healthcare front-liners that

most community people will go to. Hence, the physician would train the midwives to perform some simple procedures for the benefit of their clients. Another reason is the geographical issue of going to the nearest hospital. Midwives shared that travel time can be a barrier for the client to going to the hospital for medical treatment.

*"You know, we are only a few in the health center, so we need to know many things."* (RHM1)

*"For wounds, if they are small, we can suture them... We inject anesthesia, and we suture it ourselves. Our clients may not go to the hospital because it takes them hours [to travel]. Rather than endangering their lives, we feel it is better to help them."* (RHM2)

### **Working as a COVID-19 frontline healthcare provider**

Due to the COVID-19 pandemic, midwives are assigned additional tasks. They help track COVID-19 cases, report possible issues, and go on duty for 24 hours in the health center. This is an arrangement due to the lack of healthcare professionals to cater to COVID-19 patients. All participants mentioned that the COVID-19 pandemic affected their routine activities in providing primary healthcare in the community. They also noted that having additional work is very common in being a midwife in a rural healthcare setting.

*"Aside from our usual daily activities in the health center (i.e., antenatal and postnatal care, immunization, home visit), we conduct [COVID-19] contact tracing and do a home visit to a COVID-19 positive patient. This is because no one else is assigned to do things concerning COVID-19. We still do our usual activities in the health center. We just have added work due to this pandemic. And, having additional work for midwives is common when you are in the rural areas".* (RHM2)

*"Now, COVID-19 stole our time for our routine activities in the health center. Because of this pandemic, we even do overtime work. Instead of eight hours a day, it became 24 hours a day... This pandemic affected everyone."* (RHM4)

### **"Little doctors" in the community**

The participants explained the complexity of their role as a midwife in rural areas. They shared that a midwife conducts the client's assessment, plans the treatment, provides the management, and dispenses medicines. In everything they do, recording is essential.

*"In the rural setting, we interview clients, do a physical assessment, and decide on the treatment that we will provide. From the assessment and treatment plan, we record them, then dispense medicine just like what the nurse does in the hospital."* (RHM2)



*"I give medicine to a lady who ran out of her usual medicine. She stopped her maintenance because she told me that the medicine, I gave is more effective... it has treated her illness." (RHM3)*

When dispensing medicine, the rural midwife only has a limited type of medicine that they are allowed to give. Despite these expanded roles they do, midwives highlight the importance of referral of clients that they cannot manage.

*"In the village, there is no doctor... The only difference with doctors is that we have a limitation on the type of medicine that we can give... We give antibiotics, but usually, only amoxicillin, cotrimoxazole, cefalexin, and cloxacillin. These kinds [of antibiotics] only. For cough, we are only allowed to give Lagundi (herbal medication for cough). The cases that we cannot manage, we refer them." (RHM2)*

### **Working as utility workers in the health center**

Midwives are the only health professional assigned in the rural setting, especially in the villages. They do not have enough utility personnel or sometimes none who could assist them. This is why they even do menial jobs, from cleaning and doing the laundry of all beddings or clean clothes used in performing all healthcare procedures.

*"I also do janitor's work and do laundry in our health center. We have a utility that can do these things, but because of lots of things that we use in treating our clients, we must help our utility personnel and do everything. Even if it is not within our job, we must help them." (RHM4)*

*"When we go to work, we clean the BHS (Barangay Health Station). That is the first and foremost thing that we do - cleaning the health center." (RHM1)*

The practices of rural health midwives are interrelated. For instance, health education and counseling could be considered a health promotional strategy in all aspects of health care programs. However, community health promotion can also play a separate role because of specific implemented activities such as clean and green programs and immunization. Functions beyond midwifery practice, such as blood monitoring and COVID-19 contact tracing, can also be considered a community health promotion strategy. But because it is regarded as a non-midwifery function, it can be categorized as such. In situations where they cannot manage a case, rural midwives refer their clients immediately to higher medical attention for appropriate medical management, which reflects the functional referral system of the country.<sup>26</sup>

## **DISCUSSION**

This study investigated and described the roles of rural midwives in providing public health services in rural communities. One of the significant roles of rural midwives was providing antenatal and postnatal care to women. This included food supplementation during and after pregnancy, prenatal assessment, assisting laboring women, and providing healthcare to newborns. The responses also reflected those rural midwives did many strategies to promote healthy pregnancy and prepare expectant mothers for normal births.

Studies have shown that midwives are the primary healthcare providers who implement several approaches to support expectant mothers to have healthy pregnancies and normal deliveries.<sup>27,28</sup> This study also showed that rural midwives could assess abnormal ante-, intra-, and post-natal signs and symptoms and refer them, if found, to a higher health facility for appropriate management. These tasks that midwives played in the rural communities were following the expanded functions of midwives legalized in 1992. The mandated midwives' expanded roles included the provision of services related to nutrition and family planning, carrying out written physicians' orders on prenatal and postnatal care of typical maternal cases, providing immunization, dispensing parenteral and oral oxytocic drugs to laboring mothers after placental delivery, suturing perineal laceration for controlling bleeding, and intravenous infusion during obstetrical emergencies.<sup>15</sup> Therefore, rural midwives provided appropriate and optimum care and support to their clients using practice guidelines coherent with the competencies that were scientifically and universally accepted standards of practice set by health authorities and law.<sup>15,20</sup> It also reflected those midwives are the top maternal healthcare providers in rural areas of the country.<sup>29</sup>

Rural midwives also perform interventions in some maternal emergency cases, such as assisting inevitable breech delivery. Due to geographical difficulties, they needed to perform basic obstetrical emergency interventions because they could not bring the expectant mother to a higher health facility. The hospital could only be reached through hiking which took a long time that endangered the lives of the mother and her child. Geographical challenges are a common problem in rural areas.<sup>30-32</sup> Regarding the assistance to imminent breech delivery, there is an intervention within the Basic Emergency Obstetric and Newborn Care (BEmONC) program that a midwife can provide, together with other healthcare providers who were trained to do so.<sup>20</sup> Similar to other countries, such as Bangladesh, emergency obstetric care is also provided by midwives.<sup>33</sup> BEmONC aims to save lives in the community by managing the major maternal and newborn causes of morbidity and mortality.<sup>34</sup> This is a primary healthcare initiative in low- and middle-income countries, including the Philippines, to reduce maternal and newborn deaths.<sup>35</sup> BEmONC proficient midwives also provide parenteral administration of oxytocin after the delivery of

the placenta, parenteral administration of anti-convulsant during preterm birth, parenteral administration of the first antibiotic dose, remove retained placental products manually and provide newborn emergency interventions including newborn resuscitation, provision of warmth, and referral.<sup>20</sup>

Health education and counseling in the rural areas of CAR remains a critical health promotional activity conducted by rural midwives. This study found that health education and counseling are conducted in the health center, villages, and their clients' homes. Health education and counseling are their way to remind the community about the healthcare services they need to obtain from the health facility, promote the benefits of every health program, and encourage proper nutrition and good health. Participants also shared the challenging promotion of family planning and contraceptive use. To effectively promote them, midwives maximize villagers who advocate for them and let them speak about family planning and contraception benefits during health education and counseling sessions. Midwives across countries agree that family planning counseling is one of their core functions in the primary healthcare setting.<sup>36</sup>

Due to the COVID-19 pandemic, health education and counseling through mass gatherings needed to be shifted to the individual or household level of midwife-to-client interaction. Despite the shift in providing healthcare services to the community, health education and counseling remain the essential health promotion strategy for rural midwives. Midwives are still encouraged to continue providing healthcare services despite the pandemic.<sup>37</sup>

Like other studies, health education is a strategy for midwives to promote proper nutrition during pregnancy and breastfeeding and lessen pregnant women's fear of childbirth.<sup>38-40</sup> A study conducted in Canada found that doing health counseling was regarded as a significant part of a midwife's role in healthcare.<sup>41</sup> Health education and counseling are crucial primary healthcare services midwives provide in every healthcare setting among healthy and sick individuals and families.<sup>42</sup>

Providing medication for common infections in children and adults is another function that midwives do in rural areas of CAR. The midwives use the Integrated Management of Childhood Illness (IMCI) protocol to assess signs and symptoms of infection among children under five years old and use it to classify and treat the illness. Through the IMCI program, midwives can give medicine, such as antibiotics, to treat common childhood infections they assess. They added that childhood infection classified as severe is being referred to the higher-level facility for proper management. IMCI is a health strategy developed in 1992 by the WHO and United Nations Children's Emergency Fund (UNICEF) for healthcare in children under five years old.<sup>43</sup> This strategy is used to empirically assess a child for danger signs or possible bacterial infection in a young infant, common illnesses, malnutrition, and anemia, and to look for other problems. Aside from treating childhood infection, IMCI guides

healthcare professionals in helping their clients with illness prevention.<sup>44</sup> In the Philippines, IMCI was started as a pilot health strategy in 1996 that was eventually implemented by capacitating health workers, including nurses, physicians, and midwives at the frontline level.<sup>45</sup>

Rural midwives also provide healthcare to adults with common illnesses such as respiratory infections. For instance, the CARI program guides the health worker to give first-line antibiotics when a cough is seven days or more. The CARI was the Philippines' earliest nationwide primary healthcare program, launched in 1989. It aimed to prevent acute respiratory infection through immunization, especially measles and diphtheria-pertussis-tetanus vaccination and sought to reduce mortality through early detection and treatment of pneumonia.<sup>46</sup> They also provide alternative medication for respiratory infections. This shows that midwives positively perceive the benefit of alternative medicine in treating common illnesses, similar to a study in rural areas in Ghana.<sup>47</sup> Furthermore, rural midwives highlighted that they were guided by the health authority's protocol of not providing medication and treatment beyond their scope. This reflects that the midwife understands when to refer cases if complications arise. Along with nurses, midwives in low- and middle-income countries provide services ranging from immunization to palliative care and everything in between; they provide interventions to individuals and community level and promote good health behavior to mitigate risk factors of diseases.<sup>48</sup>

The public health focus for midwives in many developed countries has extended from health protection issues such as reducing the death rate among mothers and newborns and disease control to health promotion such as promoting smoking cessation and normal body weight.<sup>49</sup> In the Philippines, midwives are expected to perform multiple health promotion functions such as promoting community sanitation, proper nutrition and supplementation, and immunization activities.<sup>19</sup> First, rural midwives strategized to encourage a "clean and green" environment by building and using the sanitary toilet in every household and backyard vegetable gardening. This is one of the solutions to the unsanitary environment in the community and limited access to a safe and nutritious food source. Promotion of cleanliness and gardening were already part of Filipinos' culture wherein each *purok* or village grouping helped each other keep surroundings neat and clean and maintained public gardens.<sup>50</sup> Second, rural midwives implemented strategies to promote good nutrition for children and adults. Through weight monitoring, malnourished children were provided with food and micronutrient supplements. Rural midwives also offer micronutrient supplementation to pregnant and postpartum women. Lastly, rural midwives ensure that children are immunized through immunization services in the health center, school, and home. The provision of micronutrient supplementation and immunization are among the primary healthcare services of Filipino midwives.<sup>20</sup>

As the leading providers of primary health care in the community, Filipino midwives do multiple tasks in three main programs of the Department of Health Philippines, including Maternal, Newborn, and Child Health and Nutrition (MNCHN), National Tuberculosis Program (NTP), and Field Health Service Information System (FHSIS). In the MNCHN program, the midwife is expected to be the leader of community health volunteers in providing healthcare to women and their families, be a competent healthcare provider of contraceptive methods and family planning services, BEmONC services, and postpartum care, and conduct administrative functions such as conducting weekly meetings with community health volunteers, reporting community health plans to the municipal/city health office and receiving, and storing of health supplies.

In the NTP, the midwife is expected to ensure the proper collection of specimens among prospective tuberculosis patients, timely assessment, diagnosis, and medication of diagnosed cases, and adequate documentation and monitoring of tuberculosis cases. Lastly, in the FHSIS program, the midwife is expected to maintain an organized and systematic individual treatment record and target client list, record data related to health programs and accomplishment reports, and accomplish and maintain consolidated data related to mortality and morbidity, to name a few.<sup>19</sup>

This study found that primary health care functions are a core component of rural midwifery practice. It has been the fundamental function of Filipino midwives even before the devolution of local government in 1991. Midwives remain the primary healthcare professionals in rural health settings, villages, city health centers, and public and private birthing facilities in the Philippines.<sup>19</sup> This explains why rural midwives are the key players in collaborative and participative efforts to deliver essential primary healthcare services and programs in the community.

Doing other healthcare services beyond the usual midwifery functions in the rural setting is very common. First, midwives provide suturing and treatment of minor wounds or cuts under a physician's supervision. The limited number of healthcare providers is why midwives are left with no choice but to do these. Second, midwives are added as COVID-19 front liners for contact tracing and surveillance. They felt that this pandemic affected their regular functions in healthcare. However, they recognize that having additional roles in the primary healthcare setting is expected. Third, rural midwives do client health assessments and dispense medication, although midwives have limitations in the medicines they can give. Fourth, midwives also do menial jobs in the health facility. Expanded functions of rural midwives are a manifestation of the limited number of healthcare providers and logistic issues typical in remote and rural communities.<sup>28,51</sup>

The continuous complex roles and functions of rural midwives up to the present have been influenced by some factors. A study reported that nurses have the most significant number of Filipino health workers migrating to other

countries for better opportunities, contributing to midwives' overwhelming healthcare functions in the workplace.<sup>52</sup> To augment the lack of human resource workforce, especially in the rural setting, the Philippine health authorities implemented the Rural Health Midwives Placement Program (RHMP) in 2008 through the Department of Health Philippines Resolution No. 112-232 series 2007.<sup>53</sup> This program deploys midwives in rural areas to supplement the lack of healthcare professionals providing maternal and child health services. Despite these beyond the midwifery scope practices, rural midwives expressed their determination to continue providing healthcare services to their clients. This is because rural midwives remain courageous, resilient, and resourceful healthcare providers in dealing with the many tasks faced in their everyday practice just to serve their clients, similar to the midwives' situation in the rural communities of New Zealand and Scotland.<sup>54</sup>

The study contributes to the broader understanding of midwifery practice, especially in the rural setting. This study highlighted the passion of rural midwives for providing all possible services to their clients at all costs while adhering to referral protocol when needed. This implication to midwifery education and practice is the need to prepare future rural midwives to gain the required knowledge, skills, and attitude in performing their midwifery functions. Concerning the regulation of the profession and decisions in policy-making, this study provides awareness of the realities of services being provided at the grassroots. It must be time to revisit midwives' competencies, acknowledge other primary healthcare capabilities that rural midwives can provide competently, and amend the Philippine Midwifery Law.

Policymakers and health authorities need to revisit the legal basis of midwifery functions and make needed revisions and amendments. Amendments and regulations and the legal mandates of the profession ensure that midwives provide quality healthcare that is within the bounds of midwifery practice. On the other hand, integrating rural midwifery practice into midwifery education will prepare future midwives to be competent and efficient midwives in the communities.

### Limitation

The study's main limitation is the tiny sample size, and the study covered only one region in the Philippines. Therefore, the findings may not represent the roles and functions of all rural midwives in the country. Nonetheless, this is a critical study investigating the functions that rural midwives do, which will guide human resource management policies and decisions in the health sector of CAR.

### CONCLUSION

Previously, the roles and functions of midwives in the Philippines were limited to the improvement of maternal and child health. However, the midwifery practice has expanded,

especially in rural settings. Rural midwifery practice has evolved to provide primary health care services beyond the midwifery competencies mandated by law. Some of these practices include: suturing of wounds, blood pressure monitoring, contact tracing for COVID-19, (limited) dispensing of medication, and even being utility workers in the health center. This is due to the lack of human resources for health and geographical challenges as a common situation in a rural setting.

Rural health midwives require administrative and organizational support in the practice of their profession. This calls for the review and amendments of existing policies and programs to craft Philippine midwifery practice guidelines. If there are problems in the workplace, the professional organization is an important support system for rural midwives to lobby health authorities regarding issues and concerns that need to be addressed.

Despite the multiple tasks being played, midwives in the rural areas of the CAR demonstrate courage, resilience, and love of service as a unique set of characteristics that underpins their practice. Rural midwives will continue to be primary healthcare providers in the community and the fundamental implementers of direct healthcare programs.

### Data availability statement

Due to the sensitive nature of the questions asked in this study, interview participants were assured raw data would remain confidential and would not be shared.

### Ethics approval and consent to participate

Ethical approval was obtained from the Institutional Ethics Review Committee of Mountain Province State Polytechnic College, Philippines. Informed consent was sought and obtained from each study participant before starting the interviews for the study.

### Statement of Authorship

EBF-D conceptualized the study and collected and analyzed the data. EBF-D developed the initial draft of the paper. FWL, MJRT, MTH, ABS, and YJBD provided critical feedback for the subsequent revisions of the document. MJRT serves as the corresponding author for the paper. All authors read and gave final approval to the manuscript submitted.

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