

## **Development of a Midwifery Care Model for a Rural Community**

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**Abstract :** The global challenge of midwifery today is to provide care that is relevant and appropriate for those needing midwifery services. Rural communities have particular care needs and in this paper a conceptual model of midwifery care appropriate for rural Thai communities was designed and tested. The aim was to develop a midwifery care model for a rural community in an area of Southern Thailand. This mixed methods participatory action research involved qualitative and quantitative analysis of data from nurse-midwives, village health volunteers and childbearing women. Findings reveal that participants regarded the overall quality of midwifery care as fairly good and identified changes needed to improve rural midwifery care: midwifery education for the care team; service linkages and access to specialist services; psychosocial support for women and family; skills and knowledge in prevention of maternal complications; volunteers' participation and education; and specialist clinical support for nurse-midwives. The rural midwifery care model incorporates five components: well-connected teamwork; professional development benefits; continuity of care perspective; integrated care and collaboration; and benefits for women. The implications of this study are that a similar process could be undertaken in any rural setting in any society to ensure that the core values of the community and the central concerns of those who use it are addressed. The midwifery care model developed in the Thai context could be used as a guide for nurse-midwives to effectively enhance the quality of rural midwifery care in all rural and remote area contexts.

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### **Introduction**

One of the challenges of midwifery care today is to meet the healthcare needs of childbearing women in rural communities the world over. Despite the avoidable nature of most maternal deaths and disabilities and the small rural-urban gap in maternal health services, research indicates that there is a concentration of all undesirable maternal health indicators among rural dwellers when compared with those living in urban areas.<sup>1,2</sup> The cause of this disparity is not clear and various factors may be influential in difference

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communities and locations. However, there is a general consensus in the Thai context that these risks to maternal and newborn health could be associated with the seemingly ambiguous direction of health service provision and the lack of an appropriate model of midwifery care for rural communities.

It is well documented in Thailand and internationally that rural women have less access to health services than women residing in urban areas.<sup>3-5</sup> The challenges and issues that uniquely relate to the provision of safe and effective rural midwifery care have been canvassed and expounded throughout the literature.<sup>4,6,7,8</sup> Significant gaps have been reported in midwives' knowledge and expertise regarding rural women's needs as well as the childbearing process itself.<sup>4,7,8</sup> Several researchers have linked this lack of skills and knowledge to the low density of midwifery clients in rural locations and suggested that this may affect the ability of all providers of rural care services to maintain adequate clinical practice proficiency. Further, recruitment and retention of rural care practitioners is also difficult, and this applies also to midwifery care.<sup>2,6,8</sup> Importantly, a dominant feature of most midwifery services is that they are fragmented and centered on organizational imperatives, rather than on the health and safety needs of women and babies.<sup>6,8,9</sup>

Midwifery service fragmentation by itself or in conjunction with other factors has been shown to pose difficulties in accessing services; the delivery services that are of a poor technical quality; irrational and inefficient use of resources; unnecessary increases in service production costs; and low levels of satisfaction by those receiving the services.<sup>10</sup> Also reported as arising from service fragmentation are difficulties in collaboration between different levels of care services; poor utilization of productive capacity; and inappropriate location of healthcare services within hospitals.<sup>11,12</sup> Despite these challenges, it remains important that childbearing women can satisfy their strong desire to remain in their homes or communities, close to family and friends, and receive midwifery care from practitioners and support people they know; as well as being able to

avoid incurring travel expenses and undermining their rural values of self-reliance and mutual aid.<sup>4,7,13</sup> Internationally, a groundswell of support exists for the development of appropriate models of midwifery care that are responsive to rural women's needs and augment the unique strengths and challenges of rural communities.<sup>4,13,14</sup> It is likely that the complexity of different challenges facing certain rural communities acts as a deterrent to the development and implementation of effective and appropriate midwifery services, but this does not justify the neglect that has occurred in this regard, and the project reported here demonstrates that it is feasible to set up a midwifery care service that meets the challenges faced by particular communities, in this instance, those in rural Thailand.

Research to elucidate strategies for overcoming the challenges referred to above has contributed to the building of several models of midwifery-led care in similar contexts.<sup>9,12</sup> A systematic review in 2013 by Brown & Dietisch<sup>14</sup> on the topic identifies midwife-led services providing continuity of care as important for all childbearing women, especially those living in rural communities, but evidence as to the best components of such a model is limited. Most of midwifery-led care models focus on ensuring continuity of caregiver.<sup>9,14</sup> Nevertheless, the models share a common philosophy of midwifery with the goal of enhancing existing capacity within healthcare settings, rather than imposing solutions from outside.<sup>15,16</sup> These principles have provided the foundation in this study for developing a model of rural midwifery care.

In determining what type of midwifery care model should be developed for rural Thai communities, it is important to focus on enhancing the role of nurse-midwives who are the lead providers of midwifery care, and then to promote collaboration that will ensure continuity of care. Nurse-midwives in their practice require organizational support, as well as opportunities to collaborate with village health volunteers to implement and sustain rural midwifery care. In this sense, when developing a midwifery care model for any rural

community, commitment to the project from organizations in facilitating continuity of care and collaboration between nurse-midwives and village health volunteers (VHVs) is of great significance and crucial to the success of such a model. In this research, the core skills needed for rural midwifery care are identified along with recommendations for improving proficiency and the components needed to implement a model for rural midwifery care.

## Review of literature

Due to the practical nature of midwifery and the range of stakeholders involved in developing and promoting a care model that is appropriate and relevant for rural communities, participatory action research (PAR) was identified as the most suitable.<sup>17,18</sup> PAR acknowledges the subjectivity of everyday life and its often incompatible relationship with scientific research, a phenomenon known as *lebenswelt*.<sup>19,20</sup> As well, PAR draws upon critical social theory with its orientation towards critiquing society and empowering people and is an approach that supports an interactive inquiry process that balances the views of different participant groups in a collaborative way; so that the underlying issues are identified and resolved by the groups. PAR has been successfully used to facilitate changes and improve service provision in education and in healthcare.<sup>21-23</sup> The processes of PAR support the development of new care models and efforts to change clinical practice because it involves participants in reflecting on the process during planning; requires them to take action to develop practice; and then to participate in further cycles of observing, reflecting and re-planning. For nursing and midwifery practitioners, PAR melds well with the nursing process: steps of assessment, planning, implementation, evaluation, and re-planning.<sup>24</sup>

The role of PAR is to empower nurses through the construction of their own knowledge in a process of action and reflection.<sup>25</sup> By identifying and addressing rural midwifery care issues, nurse-midwives in this

study were able to reflect on why certain procedures are performed and determined the influence of research evidence or tradition; and also considered whether the women's best interests would be well served by continuing with these procedures. Participant nurse-midwives increased their knowledge through reflection, and were able to act within the 'safe environment' of the PAR context to collaborate in developing a model of midwifery care more appropriate to the needs and sensitivities of rural Thai communities. Implementation of the new model of care will be compared with May's<sup>26</sup> Normalization Process Theory.

## Preparatory processes for PAR

Using the six steps of model development<sup>18</sup> the research process addressed issues around midwifery care and patient experiences, as well as support for nurse-midwives and VHVs in the delivery of a different model of care.

### **Step 1: Establishing contact with participants and stakeholders.**

The researcher contacted members of the Maternal and Child Health (MCH) Board, including a community hospital director, a chief nurse, a supervisory nurse-midwife, three head nurse-midwives, an obstetrician, and two representatives from two district public health offices to inform them about the study and provide them with information on the objectives, the research process, and the risks/benefits of the study. It was essential to raise their awareness and encourage their interest in the research, so as to secure their commitment to the study and allowing staff to participate.

### **Step 2: Forming a core-working group and planning group activities.**

Discussions with senior nurse-midwives to raise their awareness of rural midwifery care (RMC) problems and the existing unmet care needs of childbearing women in the region, six experienced nurse-midwives expressed their needs to improve quality of RMC and volunteered to be members of the core-working group

(CWG). Because they were to be co-researchers it was necessary to enhance their research ability through a group workshop organized to share knowledge and understanding about the PAR process; methods of qualitative data collection; and the fact that their statements would be transcribed verbatim and shared with the group. Their CWG role and responsibility for model development was explained and an action plan was created for the work ahead.

***Step 3: Assessing participants' perceptions of rural midwifery care.***

The researcher and the CWG conducted nine focus group discussions with participants from all participant groups and conducted individual interviews with four MCH Board members. A reflection process using semi-structured, open-ended questions was used to elicit in-depth information from all participants about their understanding of the quality of RMC; quality-related factors; and their views on the midwifery skills and other factors needed to improve RMC services.

***Step 4: Clarification of issues related to rural midwifery care.***

The researcher and the CWG organized group meetings to analyze and clarify the data collected from all participants and stakeholders. Through this process the CWG were able to further increase their understanding of RMC problems and clarify the need for RMC improvement. Through critical questioning and facilitation by the researcher, CWG members reflected on their own understandings and assumptions about RMC and explored ways in which they might influence the development of a midwifery care model to address the care needs of the rural community. They accepted the task of identifying any organizational issues related to RMC improvements and followed up on these issues during the development process.

***Step 5: Developing a tentative model of rural midwifery care.***

Regular team meetings facilitated by the researcher and CWG members occurred with all members of midwifery care team (MCT) providing them with

opportunities to clarify the situation of RMC and unmet care needs of rural women. Through this process their opinions and consensus were obtained in relation to developing the RMC model. The CWG then explored several reports and articles on evidence-based midwifery practice to identify options and take guidance related to RMC model development. At the local level, they also identified contexts of care and the consequences for quality midwifery care of the existing rural health structure and current approaches to care provision. When agreement was reached on the need to design a model of practice that built on the skills and knowledge of midwifery care practitioners, the key element endorsed by the group was the establishment of organizational and practitioner linkages between antepartum, intrapartum, and postpartum care services. A draft of the proposed RMC process and MCT role was provided to stakeholders for discussion to give them the opportunity to provide critique and also enhance the likelihood of role acceptance and optimal role utilization when the RMC commenced. As a result of their feedback, greater attention was paid by the CWG to continuity of care, teamwork, and accountability. The proposed version of the model of midwifery care for rural communities was accepted once the RMC design process and MCT role clarification was approved by the MCT members and the MCH Board. The action stage of PAR then continued with plans for piloting and refining the tentative RMC model.

***Step 6: Piloting and refining the tentative RMC model.***

As planned, the RMC model was piloted in a logical sequence involving orientation of participants and stakeholders to components of the RMC model. Potential role-holders acquired the necessary education and training in midwifery while administrative support and enabling resources were put in place. At that stage the field trial commenced. The midwifery care model for rural communities was considered to be fully developed when the RMC design process and the MCT role was successfully transitioned into existing health

services frameworks, an outcome that occurred after nine-months of field trials.

## **Study Aim**

This study aimed to develop a midwifery care model for a rural community by involving nurse-midwives and VHV. The article is focused on the model's development and implementation.

## **Methods**

**Design:** Participatory action research (PAR) using a mixed method approach within a critical social theory, theoretical framework and utilization of May's<sup>26</sup> Normalization Process Theory to guide implementation.

**Study setting:** The study took place in a community hospital and a rural sub-district health promoting hospital (HPH) in Southern Thailand from August 2008 to December 2009. The 120 bed-community hospital is located near a bus route on the main road and services approximately 150,000 people living in the two districts. Public maternal health services are implemented through the network of 14 HPHs in district A; 9 HPHs in district B; and 1,296 VHV from both districts. In order to develop a midwifery care model for rural community, a purposive selection was made so as to include a community hospital locates in district A and a sub-district HPH locates in the mountainous area of district B and 22 VHV living within its catchment. The selected HPH serves a population of approximately 10,200 per year, including 120–130 women of childbearing age. The setting for this study was selected as a result of participants' and stakeholders' willingness to participate in the research, and also because of the high rate of maternal and neonatal complications when compared with the national targets. Importantly, support for the study was provided by the secretary of the MCH Board, who was also the head nurse-midwife of the community hospital labor ward.

**Sample:** Three categories of research participants were involved:

(1) Experienced nurse midwives. These formed the CWG of 5 experienced nurse-midwives from the community hospital and one from the selected HPH. Their contribution was their extensive experience working in the rural area; providing direct care for women; as well as their ability to influence their colleagues and act as change agents and mentors in the clinical areas throughout the entire research process.

(2) The midwifery care team (MCT) of 14 nurse-midwives and 22 VHV. Two teams were established: a team of one community nurse-midwife and 22 VHV who worked in the catchment areas of the selected HPH; and a team of 13 hospital nurse-midwives who worked in the community hospital. Inclusion criteria for these nurse-midwives were that they be licensed as full-time nurse-midwives; providing direct care for rural women at any stage of childbearing; and willing to participate in focus group discussion and in the MCT. VHV's inclusion was based on their residency of villages in which midwifery services were being provided; also that they were reliable and literate; and willing to participate in focus group discussion and in the MCT.

(3) The client group included 31 young women living in the catchment area of the selected HPH. In order to gather the perceptions of women about RMC and explore their unmet care needs, a range of strategies was used to recruit four sub-groups of women: (i) ten pregnant women; (ii) six women who had given birth within two days; (iii) six women who had given birth to their first baby within the past month; and (iv) nine women who had given birth to a second or subsequent baby within the past month.

**Ethical considerations:** Ethical approval was obtained from the Research Ethics Review Committee, Faculty of Nursing, Chiang Mai University and the MCH Board of the participating health services. All participants received written and verbal explanations about the research purposes and process; the voluntary

nature of participation; anonymity and confidentiality issues; and their right to withdraw from the study at any time without explanation or fear of repercussions. Those agreeing to participate provided written informed consent.

**Data collection.** Data was collected from focus group discussions with participants; individual interviews with the MCH Board members; notes taken during participant observation, group workshops and team meetings of CWG and MCT; and the researcher's reflective diaries. Guidelines for focus group discussions and individual interviews were developed by the researcher with the CWG and related to broad questions, for example: *What are the needs of rural women regarding midwifery care? What are the contexts and consequences of these needs? What factors contribute to these needs?* As the RMC model developed, midwifery education and skill training programs for nurse-midwives and VHWs were designed to assist them to understand and participate in the RMC when implemented. Program content included philosophy of midwifery, continuity of care, quality-related factors, and update evidence-based midwifery practice guidelines for antepartum, intrapartum, and postpartum care. The program was developed by the researcher and tested for the content validity by 5 experts. The reliability of instrument for measuring the knowledge and skills in midwifery care was tested with 12 nurse-midwives and 18 VHWs, which resulted in 0.76 and 0.72, respectively.

**Data analysis.** Transcribed data from focus group discussions and individual interviews were analyzed qualitatively using content analysis.<sup>27</sup> The researcher conducted line-by-line coding on the text and compared the data with recorded perceptions of nurse-midwives, VHWs, and childbearing women. This enabled elaboration of components of the RMC model. Emerging themes within each category were verified with the CWG and the MCT members through a reflection and feedback process.

**Rigor and trustworthiness.** The principles of trustworthiness of Guba and Lincoln<sup>28</sup> were applied

to ensure the rigor of the study. Multiple methods of data collection were used to compare a variety of data sources to confirm the accuracy of findings on key ideas. Findings were then introduced to participant and stakeholder discussions to verify their interpretive accuracy. A clear audit trail was maintained to ensure that all findings were directly derived from the data and guarantee confirmability.<sup>29</sup>

## **Results**

The results of the study are presented in two parts: (1) midwifery skills needed to improve RMC; and (2) essential components of midwifery care model for rural communities.

### **1. Midwifery skills needed to improve RMC**

Six midwifery skill areas were prioritized for improvement:

*1. Specific education for the MCT.* Most MCT members lacked the knowledge and skills needed to competently care for women over the course of childbearing and childbirth. The provision of midwifery education opportunities for all members of the MCT was deemed essential to increasing team capacity to deliver safe and appropriate midwifery care. Such education would keep them abreast of changes in best practice and help them translate contemporary midwifery research findings into practice. In response, the CWG drew on published research and evidence emerging from the study to organize training and education strategies to meet the learning needs of MCT members. The CWG also provided supervised visits and in-services training to address specific learning needs within each MCT, as well as recommended management and education response strategies to address existing shortcomings of midwifery services.

*2. Linkages between MCT and access by childbearing women to specialist care.* The difficulties faced by rural women in accessing specialist care were

highlighted by nurse-midwives, VHV, and childbearing women. This is especially so when they must travel long distances to receive obstetric and/or medical care when their energy and strength is limited by their condition. Complicated coordination of care across healthcare services or settings was also identified as problematic. As a result, two CWG members and one member of each MCT volunteered to act as resource nurse-midwife. This team facilitator role was instrumental in improving linkages between MCT and access to specialist services, thereby augmenting existing arrangements with a variety of health services and resources to support team practice in offering care for childbearing women with complications.

*3. Psychosocial support for childbearing women and their families.* MCT members acknowledged that they are ill equipped to address psychological, social, emotional, and spiritual issues that can arise at any stage of childbearing. Two strategies to address this need were implemented: (1) enhancing team member competence and confidence in providing psychosocial support to low-risk women and their partners; and (2) building formal linkages with hospital-based specialized psychosocial resources for referral of women who need such support.

*4. Preventing maternal complications.* Prior to the development phase of the RMC model, clear protocols and guidelines for preventing maternal complications were nonexistent throughout the study setting and MCT members were unaware of this information. To overcome this issue and to prevent future avoidable maternal complications, Maternity Support Services and Maternity Care Management programs were established in tandem with the maternal and neonatal health policy that informs and governs management and clinical responses in such situations.

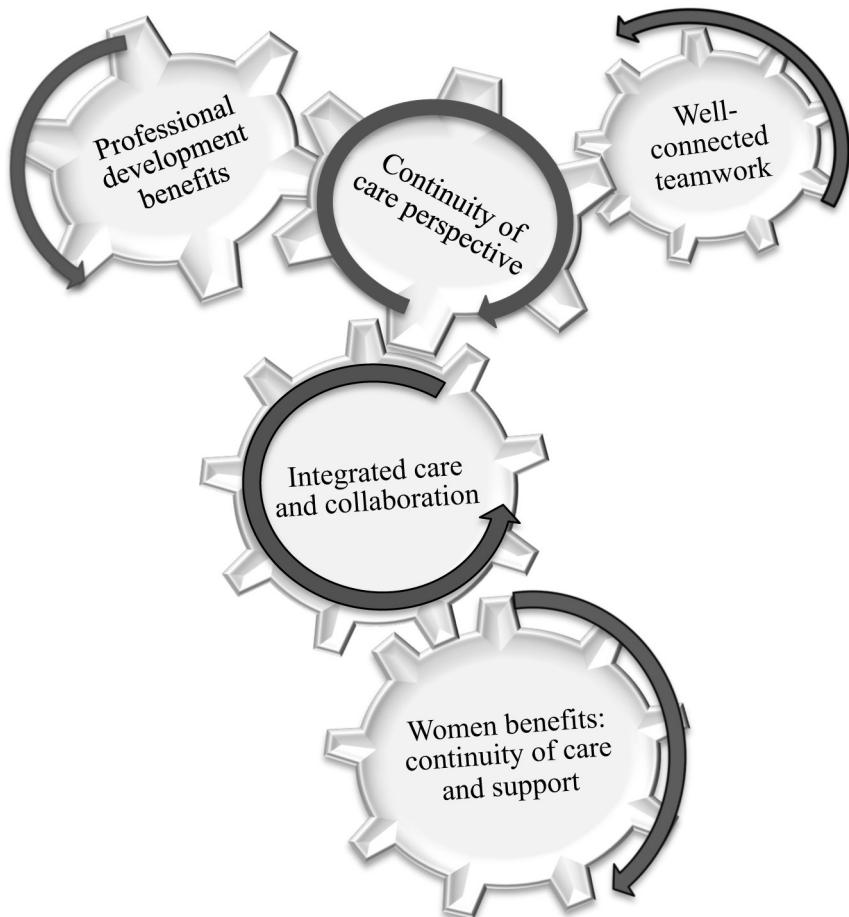
*5. Volunteers' participation and education.* VHV play an important support role to midwifery services, however, because of time and resource limitations on nurse-midwives, volunteers' education

and work organization within maternal and newborn care contexts was constrained. Without the direction of the MCT, the capacity of VHV to devote significant time to their new role as maternal health supporter was also limited. To overcome this issue, monthly team meetings were organized by community nurse-midwives to enhance VHV's knowledge and performance; increase their confidence in undertaking tasks; and improve their communication skills.

*6. Specialist clinical support for nurse-midwives.* Pre-existing protocols restricting access to specialist care by rural midwifery services were long standing. As a result, the responsibility for providing care to rural women and families with such complications fell to MCT members who were ill prepared for the task. As a result of this project, the researcher and the CWG provided nurse-midwives with specialist training programs, such as cardio-pulmonary resuscitation techniques for both mothers and newborn babies and critical care for severe postpartum hemorrhage and severe pre-eclampsia. The CWG also collaborated with hospital emergency services to establish a process for identifying women with life threatening conditions; a system for dispatching them to hospital; and an operational policy requiring appropriate responses to calls for tertiary care transfers.

## **2. Essential components of midwifery care model for rural communities.**

The model grounded in the needs of rural women and care providers, adopted pre-existing, widely accepted rural structures and resources pertaining to maternal health services in the district health network. Consequently, the general structure of the RMC model incorporated five essential components: well-connected teamwork, professional development benefits, continuity of care perspective, integrated care and collaboration, and benefit for women, that are illustrated in Figure 1.



**Figure 1.** Conceptual model of midwifery care for rural communities

**Well-connected teamwork.** Well-connected teamwork underpins a strategy of joint actions to ensure that shared understanding of the importance of, and need for, continuity of care continues. Good connections among and between MCT members, the team facilitators and the CWG produced benefits for all involved. It was recognized as a key attribute of continuity of care perspective and supported through the women benefits of continuity of care and support provided by MCT members.

**Continuity of care perspective.** System awareness of available supports and resources and how these fit

together to provide midwifery care was identified as crucial to the RMC. The importance of continuity of care emerged as a trigger for a joint initiative to inform all stakeholders about other links in the chain of care and the benefits to women using the services. Much of this strategy required MCT members to be 'with' or 'close to' each other and their patients and families, fostering opportunities for communication.

**Professional development benefits.** Professional development benefits accruing to the professionals involved in the research included building supportive relationships and enhancing self-confidence, participatory

learning opportunities, meaningful work and enjoyment of their role. With professional development benefits were facilitated and maintained through collaboration and joint actions involving MCT members committed to a continuity of care perspective. Interestingly, collaboration and shared perspectives within the MCT seemed to trigger more professional development and benefits, which consolidated team connectedness and generated more benefits for women in their care.

**Integrated care and collaboration.** The main concern of nurse-midwives was to ensure that all women benefited and experienced continuity of care and support throughout their childbearing cycle, which was also consistent with the women's needs and expectations. Collaboration between team members, such as joint home visits between nurse-midwives and VHV's; joint parental education classes between hospital and community nurse-midwives; and joint clinical care activities between hospital nurse-midwives broke down divisions between these groups. The integration of efforts by all involved seemed to be the central cog of the RMC model that guided service delivery and enabled all other components of the model to function effectively. Integration and collaboration activities also had an expected effect on perceptions of women's needs for support and continuity.

**Benefits for women.** Continuity of care and support was identified as significant benefits for the women and were achieved through three strategies: participatory learning, information transfer and the establishment and maintenance of supportive relationships. Participatory learning includes mutual agreement or consensus about policies and protocols (joint policies) and providing the women with information about their situations and the processes they will face, that they can then use to learn from one another (joint learning). Part of this strategy involved transfer of general information about childbearing women during formal and informal meetings; and also provision of specific information during joint home visits for individual women in need of special care/support and continuity of care. The

approach triggered the establishment of establishing supportive relationship among and between team members and women. Participants worked to coordinate all of these strategies to promote continuity of care and support.

## Discussion

The focus of the study is on identifying the essential components of a midwifery care model that is suitable for rural communities and as such, is an original approach to this type of research. In terms of authenticity and rigor, the use of PAR ensured that the nature of the midwifery care model is fully understood by all stakeholders and that researchers can be confident that appropriate methods of investigation were utilized.

The new midwifery care model was developed from a strong consultative base involving managers, clinicians and patients as well as researchers. As a result, a good theoretical understanding of how the new care model causes change enabled weak links in the midwifery services chain to be identified and strengthened.<sup>30</sup> This is particularly important given that the components of the midwifery care model are interlinked and related closely to organizations and community contexts in which the model was developed. Considered in phenomenological terms, this study is consistent with the life world theory or *lebenswelt*, which differs sharply from the world of science by emphasizing the importance of everyday experiences. In essence, it means in order to understand a social reality one must analyze the knowledge members have about that reality. In this study the pre-theoretical stance of *lebenswelt*<sup>19,20</sup> combined with the synthesis of qualitative studies with rural women and nurse-midwives enabled essential components in the RMC to evolve. The results of the present study share similarities with central concepts in most midwifery theories and models.<sup>9,13,16,31</sup>

Theoretical knowledge can also inform researcher understandings of model implementation. Outcomes that may have been expected include institutionalizing,

normalizing<sup>32,33</sup> and routinizing<sup>26</sup> of changes as the process of the RMC model becomes part of everyday work at the intervention site before being integrated and embedded into midwifery practice. May's<sup>26</sup> rational model for assessing and evaluating complex interventions in healthcare supported researchers and participants in identifying the conditions required to support the introduction of the RMC model. A change such as the introduction of the RMC both within organizations and communities is expected to impact in many ways, including alteration of resource allocations, changes to roles and responsibilities of nurse-midwives, VHWs and other staff and possibly a different way of working as well as a changed perception of the service by those who use it.

The RMC model developed in this study comprises five essential components that are important to be embedded as part of the complex changes.<sup>26</sup> *Well-connected teamwork* relates to how the work is different and how individuals need to work differently in the midwifery care model. Clearly, a complex change is required and one that will impact on other links in the chain of care both within the service and for those who use the service. *Continuity of care perspective* relates to how the work is understood and explores the share understanding of changes to work allocation within the midwifery care model for rural communities. Implementation issues will include the views of all stakeholders as to the expertise required for any new roles, and team members' beliefs about who is appropriate to undertake certain roles and responsibilities. *Professional development benefits* highlight the significance of the work in the division of team member roles and the agreed operational governance of who is responsible for doing or benefiting from the work and the skills, knowledge and attributes each need to deliver safe and effective care. *Integrated care and collaboration* emerged as a result of contextual integration of how organizational sponsorship and control of work allows the midwifery care model to operate collaboratively within the organization and community, and includes the allocation of resources for joint activities.

Drawing on the theoretical assumptions of the Normalization Process Theory for model implementation and evaluation,<sup>34</sup> the following is a brief description of how the five components of the midwifery care model might apply to rural communities. *Well-connected teamwork* could be identified as shared information and understanding of the new role, particularly by those who receive the services. If the model 'normalized,' the women accessing the service would perceive this as a model of care that they can access for safe and satisfactory care, with a clear understanding of the role of the midwifery care team.<sup>35</sup> The construct of *continuity of care perspective* could reflect peer and professional perceptions of the model. The MCT could become normalized if the care provided by team members was seen to be safe, and if the members of the team were seen to have the skills needed to perform their role, and were able to assume their responsibilities as a team.<sup>36</sup> *Professional development benefits* are a component that reflects the organizational division of MCT members in terms of who should do it, and should benefit from the work. For MCT to be normalized in both organization and community there would need to be a clear articulation of team roles and responsibilities in relation to other staff, including medical doctors and allied health workers. The construct of *Integrated care and collaboration* could be reflected by changes in MCT practices and care approaches within the organization and community to ensure the availability of midwifery care along with sufficient allocation of resources and appropriately located to provide continuity of care and support for the model to 'fit' with the needs of rural women and care providers. The final construct of *Benefits for women*, which focuses on continuity of care and support, could become normalized in the existing maternal health services if the RMC model was introduced as a component of cost effective services and offered as both organizational and community options.

## **Limitations**

The study was conducted in a small rural community in Thailand and therefore was subject to strong cultural and regional influences on the design and testing of the midwifery care model. While these influences are present to some extent in any community, the Thai emphasis may render the findings unsuitable for some culturally diverse communities. It may be that the study has greater relevance for cultures and rural communities with similar values and characteristics to that encountered in this research.

## **Conclusions**

The successful development of the RMC model in this study has hinged primarily on identifying and addressing the unique needs of rural women, respecting rural values and strengths, and engaging local partners to provide quality midwifery care for rural communities. The six steps of model development and the specific strategies in each step have enabled researchers to illustrate five model components and to embed them in their understanding of many aspects of the development process, using both qualitative and quantitative methods. A full description of the process and strategies for model development and essential components of RMC model were described. The use of Normalization Process Theory also deepened understanding of how each model component contributes to the RMC model and its legitimacy and thus the likelihood that the Model will be implemented and evaluated in rural communities.

## **Implications for practice**

This research has implications for midwifery nursing and service planners hoping to design midwifery care systems that pay particular attention to the collaboration and joint action needed to engage any close knit community and address their core concerns. By testing the design as well as the process of implementing such a service, it is likely that similar

processes could be undertaken in any rural setting in any society to ensure that the model of midwifery care reflects the core values of the community of interest.

The midwifery care model developed in the Thai context has proven to be crucial to the success of rural maternal health development and could be used as a platform to effectively enhance the quality of rural midwifery care in all rural and remote area contexts. Recommendations for future development of this model include: improving physician involvement; advocating to other staff for support for ongoing availability of safe and quality care; and extending collaboration with other services.

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## การพัฒนารูปแบบการพดุงครรภ์สำหรับชุมชนชนบท

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**บทคัดย่อ:** ความท้าทายของการพดุงครรภ์ทั่วโลกในปัจจุบันคือ การให้การดูแลที่สอดคล้องและเหมาะสม สำหรับบุคคลที่ต้องการการบริการพดุงครรภ์ ชุมชนชนบทมีความต้องการการดูแลที่มีลักษณะเฉพาะ และในบทความนี้ได้ออกแบบและทดสอบแบบจำลองเชิงแนวคิดของการพดุงครรภ์ที่เหมาะสมสำหรับ ชุมชนชนบทที่ไทย มีวัตถุประสงค์เพื่อพัฒนารูปแบบการพดุงครรภ์สำหรับชุมชนชนบทแห่งหนึ่งในภาคใต้ ของประเทศไทย การวิจัยเชิงปฏิบัติการแบบมีส่วนร่วมนี้มีการเก็บรวบรวมข้อมูลแบบผสมผสาน ประกอบด้วยการวิเคราะห์ข้อมูลเชิงคุณภาพและเชิงปริมาณจากพยาบาลพดุงครรภ์ อาสาสมัคร สาธารณสุขหมู่บ้าน และสตีรรภะยะมีบุตร ผลการวิจัยพบว่าผู้ร่วมวิจัยระบุคุณภาพการพดุงครรภ์โดย รวมดีมาก แต่ยังมีจุดที่ต้องปรับปรุงอย่างต่อเนื่อง การให้ความรู้การดูแลและการเข้าถึงการบริการเฉพาะทาง การสนับสนุน ทางจิตสังคมสำหรับสตรีและครอบครัว ทักษะและความรู้ในการป้องกันภาวะแทรกซ้อนของมารดา การมีส่วนร่วมของอาสาสมัครและการให้ความรู้ และการสนับสนุนความเชี่ยวชาญทางคลินิกของพยาบาล พดุงครรภ์ รูปแบบการพดุงครรภ์สำหรับชนบท มีองค์ประกอบที่เอื้อเชิงกันและกัน 5 ประการคือ การประสานงานอันดีของทีมงาน ประโยชน์ต่อการพัฒนาวิชาชีพ มุ่งมองของการดูแลแบบต่อเนื่อง การดูแลแบบผสมผสานและความร่วมมือ และประโยชน์สำหรับสตรี การประยุกต์ใช้ผลการศึกษานี้คือ การนำกระบวนการที่คัดลักษณะกันไปปฏิบัติในพื้นที่ชนบทได้ฯ ในสังคมได้ฯ เพื่อให้เกิดความมั่นใจว่า ค่านิยมหลักของชุมชนและข้อห่วงใยสำคัญของผู้ใช้บริการได้รับการใส่ใจ รูปแบบการพดุงครรภ์ที่พัฒนาขึ้น ในบริบทของไทยนี้สามารถใช้เป็นแนวทางสำหรับพยาบาลพดุงครรภ์ เพื่อยกระดับคุณภาพของการ พดุงครรภ์ได้อย่างมีประสิทธิภาพในทุกบริบทของชุมชนชนบทและพื้นที่ห่างไกล

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**คำสำคัญ:** การให้การปรึกษาชุมชน รูปแบบการพดุงครรภ์ การวิจัยแบบผสมผสาน การวิจัยเชิง ปฏิบัติการแบบมีส่วนร่วม การพดุงครรภ์ในชนบท

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