The Implementation of Providing Support in Labour by a Person of the Birthing Woman's Choice at the Port Moresby General Hospital (PMGH) in Papua New Guinea (PNG)

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Certification of Authorship and Originality

I certify that the work in this thesis has not been previously submitted for a degree except as fully acknowledged within the text.

I also certify that the thesis was written by me. Any help or assistance I have had in my research work and in the preparation of the thesis itself has been acknowledged. I also certify that all the information sources and literature used are indicated in the thesis.

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and came across her year ten certificates. She never scored a pass, she scored all distinctions and credits. I regretted the fact I had never encouraged her to go further than where she was. Like my husband she always believed in me and when I came to do masters she was even more proud. I owe my Doctorate to her as she would have been excitedly over the moon to see me through a Doctoral degree. ‘We remember you deep down in our hearts, Maggie’.

ABBREVIATIONS

BW	Birthing woman
CHW	Community health worker
MW	Midwife
NDOH	National Department of Health (PNG)
NHP	National Health Plan (PNG)
O&G	Obstetrics and Gynaecology
PIFS	Pacific Islands Forum Secretariat
PMGH	Port Moresby General Hospital
PNG	Papua New Guinea
SMHS	School of Medicine and Health Science
SP	Support Person
UN	United Nations
UPNG	University of Papua New Guinea
UTS	University of Technology, Sydney
VBA	Village Birth Attendant

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ABSTRACT

Background

Providing social support for women during labour and birth has benefits for both women and babies. Social support from family members or friends during labour and birth is practised in many developed countries as well as a few developing countries. Traditionally in Papua New Guinea (PNG), women provide support to women in labour in the village settings. Women in labour are cared for by immediate family members and relatives as well as close friends. In only very few places the birthing woman is left alone to care for herself and labour alone. In hospitals throughout PNG however, women are not provided with such support during labour and give birth alone.

Aim

The aim of the study was to introduce support in labour by a person of the women's choice at the maternity unit of Port Moresby General Hospital (PMGH). The study also aimed to examine the challenges associated with undertaking a change such as support in labour using Greenhalgh's diagram as the model identifying all aspects of Diffusion of Innovation theory.

Method

A descriptive study using qualitative data was undertaken. Data were collected from midwives and birthing women prior to the implementation of providing support in labour through surveys and observation of practice in the Labour Ward. The intervention of providing support in labour by a person of the birthing woman's choice was implemented for eight weeks. During the implementation of intervention support in labour, further observations were undertaken of the practice in the Labour Ward. Support persons and the women were interviewed after they had given birth. Data were also collected from midwives after the implementation process of support in labour.

Findings

The majority of women and their support persons agreed that providing support in labour had benefits for them. Support in labour provided a valued opportunity to be with their loved ones. Midwives were unable to provide support because of the busy nature of their work and the limited staffing. Women wanted to have support in labour in the Labour Ward of PMGH. The most preferred person to provide support was their mother, followed by their husband, and others, such as an aunt, grandmother, friend or mother-in-law.

Despite these positive findings, providing support in labour was hard to implement. Approximately half the midwives did not support the implementation although this reluctance was often hidden. The theory of diffusion of innovation was used to analyse why support in labour was difficult to implement. The process highlighted that the key attributes for innovation adoption were not totally adopted by the midwives. Though some of the influences that help spread innovation were implemented, such as the use of champions, formal and informal engagement and the use of evidence, the prevailing organisational culture was a strong negative influence and was the main reason for midwives not accepting the innovation of support in labour.

Implications for practice

The findings revealed that the support provided by the person of the women's choice during labour and birth had a positive effect on women and support people. This intervention was well accepted by the woman in labour, her support person and some midwives. Suggestions for providing support in labour at the Port Moresby General Hospital should be implemented after certain conditions are provided. These conditions include the design within the labour ward to accommodate the support person in the

cubicles and improved privacy. The provision of guidelines so women and their support persons are well prepared at the antenatal clinics prior to the labour is also necessary. Further studies needs to be conducted into the ability of midwives to implement providing support in labour especially in developing countries like PNG. The midwives also need support and guidance to adopt flexible routines and evidence based practice using the diffusion of innovation key attributes for successful implementation.

CHAPTER 1: INTRODUCTION

Traditionally in Papua New Guinea (PNG), providing support in labour has always been the norm. Birth has been a communal event where older women gather around to assist the woman who is giving birth. This traditional way of care was discontinued as soon as women started to give birth at the formal health settings. Despite the growing evidence and benefits of providing support in labour in both the developed and developing countries this has not occurred in many developing countries. Many countries, like PNG, do not enable support from a companion of the woman in labour in hospital settings. Therefore this thesis sets out to test and implement providing support in labour to birthing women by a support person of the women's own choice at the Port Moresby General Hospital (PMGH).

This chapter will outline my role as a researcher, the importance of the study, the study setting, its contribution to knowledge, significance of the study, as well as overall aim and the objectives. It will provide a brief explanation of the four stages of the study as well as provide an outline of the thesis structure.

My role as a researcher

My current role is as midwifery lecturer with UPNG. Previously I was the coordinator of the midwifery program with the Department of Health in PNG. I provide clinical supervision of midwifery students in their clinical placements. I obtained my midwifery post basic certificate in 1992 after having been a registered nurse for some years. Following my midwifery education I obtained a diploma in Nursing Administration in 1996. I was subsequently appointed to be the coordinator of the midwifery program.

After four years in the role of coordinator I undertook my Masters of Nursing in Professional Studies at the University of Technology, Sydney (UTS). After having obtained my Masters degree I went home and our Midwifery course was transferred from the Department of Health to UPNG. I secured my position with the midwifery program again as a midwifery lecturer and team leader with UPNG. My roles and responsibilities in relation to the provision of midwifery education did not change greatly. There was one thing that did change. The need to undertake research and participate in research presentations and conferences was a requirement. This need enhanced me as a midwife in developing my skills in research and examining the issues affecting women's health in PNG. I thought if I was to bring about change it had to be related to women's health or in the area of midwifery. In making my decision I considered the issues I was faced with each and every time I was with midwifery students in their clinical placements especially in the Labour Ward. I had to be realistic and consider practical, achievable changes, despite the challenges that this would bring.

The Labour Ward at PMGH is always busy with all the beds filled with women in labour (more about the Labour Ward is explained in Chapter 2). There are not enough midwives to offer support to individual women in labour. It causes me a lot of stress and distress to see women labouring and sometimes give birth alone. At times, having medical students and midwifery students in the Labour Ward did improve support but not entirely as staff numbers were always limited.

This study was therefore prompted by the way women are being cared for at the Labour Ward at PMGH compared with how they would be cared for in the village settings. The

traditional model of care, which includes more support and presence of the relative/s, has immense benefits. Providing support in labour has been and continues to be emphasised as beneficial to labour outcomes as will be shown later in Chapter 3. For these reasons and the practicality of providing support in labour, I decided to do a study in which I would introduce support in labour at the Labour Ward of PMGH.

The importance of providing support in labour

Providing support to the birthing woman by a person of the woman's choice is a well evaluated intervention that has many benefits (Hodnett et al. 2011a). Globally, both in the developed and the underdeveloped countries, randomised controlled trials have been carried out and these have shown positive outcomes for both mother and baby (Bruggemann et al. 2007). The woman receiving this type of support is more likely to give birth without analgesia, less likely to have a caesarean section operation or an instrumental vaginal birth. She is also less likely to report dissatisfaction with her childbirth experience. The baby also benefits from the mother's positive attitude towards her childbirth experience. This builds and fosters mother to child bonding and results in successful childrearing and breastfeeding practices (Parke 2010). The support provided to the birthing women is most effective when it is provided by a person who is not an employee of the hospital and it is provided early in labour (Maimbolwa et al. 2001).

Despite the evidence of overwhelming benefit when a birthing woman receives support from a support person, implementation of the intervention sometimes meets resistance, particularly from health care providers working in maternity units of the formal health settings. This resistance is particularly evident in developing countries. Furthermore,

this resistance is present even in environments where there are less staff or where forms of analgesia are not available. These are situations where support persons would be of benefit or of comfort to the birthing women (Maimbolwa et al. 2001).

Support from a close female relative seems to be a practical intervention that could meet the woman's need for emotional support in labour however this is not always supported by staff even though it is responding to the lack of staff. In a focus group of post partum Thai women, some wanted their relatives to be with them because they felt that they did not receive enough support from their health care providers (Jirapaet & O' Brien 2008). Many women said that they would have had a more positive experience if a relative could have been with them during labour. The women in the same study in Thailand reported that they would like to receive social support from their close relatives because they feel more comfortable asking for help from them (Jirapaet & O' Brien 2008).

It seems likely that women in PNG would have similar needs to women in the Thai study. Therefore the aim of my study was to introduce the intervention, support in labour by the support person of the birthing women's choice, into the Maternity Unit's Labour Ward of PMGH, by way of implementing testing and proving support in labour.

The study setting

The study was undertaken at the Labour Ward, which is part of the Maternity Unit of PMGH in PNG. There were other wards, which were also included in the study and they were the Antenatal Clinic as well as the Postnatal Ward. The reason for including these wards was that the awareness sessions for the study were conducted at the Antenatal Clinic and women discharged without being interviewed were to be interviewed the

following day at the Postnatal Ward. The Postnatal Ward was going through renovations and postnatal women were often discharged an hour or two after birth from the Labour Ward. Those women who were considered high risk were admitted to the Postnatal Ward after birth for observation and care. At the time that the study was undertaken, the Postnatal Ward shared half of the Antenatal Ward.

Contribution to Knowledge

There were several attempts in the last two years prior to the study to provide support in labour in the Labour Ward. The implementation did not succeed and more about this will be explained in Chapter Three. Despite these attempts to implement providing support in labour by midwives at the Maternity Unit of PMGH, there is no study on providing support in labour to birthing women in PNG. There are studies that were undertaken on village birth attendants (VBA) in PNG, which is closely related to providing support in labour although not in a formal health setting. These studies were undertaken mostly by non-PNG researchers (Bettiol et al. 2004). The studies in these areas are useful because they established important factors in the care of women and babies by traditional support attendants or female attendants. My study looks at the support that this person would give to the birthing woman in a formal health setting rather than a traditional setting. The research is the first study ever done on providing support in labour in PNG.

The outcome of this study will be useful to managers, policy makers, senior obstetricians and senior midwives in public hospitals and other private facilities that do not allow support in labour. The experiences of all parties including birthing women, support person and midwives may also be useful to other health facilities with similar

cultural, economic and political environments such as the Pacific Island Countries and the South East Asian Nations.

Significance of the study

This study is important because it contributes to a broader understanding of providing support in labour and the benefits for women in labour. It also significantly contributes to research in PNG and other surrounding Pacific Island Countries. It is my understanding that very few nearby Pacific Island countries allow support in labour.

This study encourages insight into an issue that has never been implemented because of hospital policies and has until now been unexplored in PNG. This study was important for PNG for the following reasons. First, traditionally support is provided in village settings except for very few cultures where the woman gives birth alone. This traditional model of care to women should continue into formal health settings where many women now give birth. Second, the dissimilar political, social and economic settings are very different between developed and less developed countries and therefore studies undertaken elsewhere may not be applicable in the PNG context.

Overall Aim

The overall aim of the study was to introduce a system to enable support in labour to be provided by a person of the women's choice at the Port Moresby General Hospital's Maternity Unit.

Research Question

The research question asked in this study was "Can a system to enable support in labour, provided by a person of the women's choice, be implemented at the PMGH Maternity Unit?"

Objectives

The objectives of the study were to:

- Identify barriers to the notion of introducing a system to enable support in labour by a person of the woman's choice and develop strategies to overcome these barriers;
- Explore the issues associated with the change to providing support in labour with staff and managers;
- Implement a system of enabling the provision of support in labour for a pilot period;
- Reflect on the process of implementing the change and the experience of those involved, including women, women's supporters and staff and provide strategies for future implementation of change.

Stages of the study and a brief description of each stage

The study was undertaken in stages to support each objective.

Stage One: Pre-implementation stage

The aim of Stage One was to explore and observe current practice in the Labour Ward staff to better understand the current practise and to identify some of the challenges in bringing about support in labour for women.

Stage Two: Information and Engagement stage

The aim of Stage Two was to explore the issues associated with the implementation of support in labour with staff and managers and engage with some senior nurses as champions. This was undertaken through a series of meetings. I conducted the main meeting with the staff as well as other informal meetings concerning the implementation of providing support in labour.

Stage Three: 'Recruitment and implementation stage

The aim of Stage Three was to implement the intervention (providing support in labour) for a three month period. The support person came into the Labour Ward with the birthing women while I observed the support being provide and conducted interviews with women and their support persons after the women had given birth.

Stage Four: Implementation stage

The aim of this stage was to evaluate the implementation of the intervention. Midwives were distributed with questionnaires to fill after the study was completed. This was also where an in depth reflection of the barriers to implementation was undertaken using the model of Diffusion of Innovation (Greenhalgh et al. 2004).

The thesis consists of seven chapters and the contents of these seven chapters will be briefly outlined and discussed.

The structure of the thesis

This chapter has briefly outlined the rationale behind the development of this study. It has also highlighted the fact that providing support in labour to birthing women still needs to be fully embraced by many developing countries including PNG.

Chapter One provided the reader with the background to the study and the reason why this study was undertaken and implemented. It also outlined the aims and objectives for the study as well as my position as the researcher and my experiences which led me to conduct this study.

Chapter Two gives the reader a description of where the study was conducted. It briefly describes the history of maternity care in PNG, as well as the care women receive from maternal health services. It outlines some of the relevant statistics on perinatal and maternal morbidity and mortality rates and explains the birthing practices in PNG. It also briefly describes extracts from the National Health Plan 2011- 2020 (Papua New Guinea National Department of Health, 2010) specifically in relation to maternal care. Chapter Two also sets the context of the study in relation to the Millennium Development Goals (UNDP 2008) in PNG.

Chapter Three provides the literature review. A definition of support in labour is primarily important, so this definition as well as context and outcomes are discussed. This is followed by a description of the effectiveness of providing support in labour by a support person of the woman's choice. The effectiveness of support in labour from a health professional was also reviewed. Support in labour in other developing countries was also reviewed and discussed. Partners support in labour is crucial and this is reviewed in this chapter. It is important to also review women's views about support and so their perception of support was also examined. Lastly, gaps in the evidence were identified and discussed.

Chapter Four outlines the design and methods. In this chapter, all four stages of the study are introduced and a detailed description of each stage is outlined. Each stage has its aim, method, sample, data collection technique, and data analysis techniques described and outlined. The ethical clearance processes are also described.

Chapter Five presents the findings according to each stage. Stage One presents findings from the observations, which were carried out prior to implementing the intervention of providing support in labour to birthing women in the Labour Ward of PMGH. Stage Two provides the findings from the questionnaires that were distributed during the main meeting that was conducted to explore the midwives' and community health workers' views on the proposed implementation of support in labour. Stage Three outlines the findings of the implementation aspect of the study. At this stage women who were admitted into the Labour Ward had the support person of their choice with them to provide support. They were then interviewed within an hour of giving birth. Stage Four was the post implementation stage, where midwives were interviewed after the implementation aspect of providing support in labour.

Chapter Six discusses the implication of the study. The chapter starts by summarising the findings and then compares these to the other research in the area.

The limitations of the study are described in detail in Chapter 6. The discussion chapter integrates much of Roger's Diffusion of Innovations (2003) work as well as Greenhalgh's (2004) conceptual model for considering the determinants of diffusion dissemination and implementation of innovations in health service delivery and organization. I have used Greenhalgh's model (2004) to discuss the implementation

aspect of the study and why certain aspects of the study were not embraced fully when the study was undertaken. I have highlighted the weaknesses and strengths of the implementation process and made recommendations for the future.

The next chapter explains the context of the study.

CHAPTER 2: CONTEXT FOR THE STUDY

Introduction

This chapter provides and describes information about Papua New Guinea (PNG) which is the setting for the study. The population, geography and regions, transport, economic situation, religion, cultural factors and social indications will be briefly outlined. It is important to examine the context of PNG as this influences the health status and wellbeing of the population. This chapter will also describe the main hospital in PNG, the Port Moresby General Hospital (PMGH), and the maternity unit in particular which was the location for the study. The PNG National Department of Health, 2011-2020 National Health Plan strategies for maternal health will also be discussed in the context of my study.

Background and Population

PNG is the largest country in the Pacific region and home to more than 6.9 million people who speak 800 plus languages. PNG's population was 5.7 million in 2004 and in 2009 it was estimated to be 6.9 million. The population is growing by an annual average rate of 2.7%. The population of PNG is generally young with about 40% of the total population being under 15 years old (AusAID, 2009a) with 58% between the ages of 15-64, and only 3% over the age of 64. The country is diverse in terms of ethnicities and traditional cultures, as well as geography and history. PNG is also rich in terms of natural resources including significant deposits of gold, oil, gas, copper and other strategic minerals (UN, 2008). PNG occupies the eastern half of the island of New Guinea (the western half, called Irian Jaya or West Papua, is part of Indonesia) (AusAID, 2009). Most of the population live in rural communities based on the

traditional village structure and are dependent on subsistence farming supplemented by cash crops. Around 13% of the PNG population lives in urban areas (AusAID, 2009). PNG is a democratic country after having gained independence from the Australian Government in 1975. Prior to the Australian Government's administration, the western part of the mainland of New Guinea was administered by the Dutch government and was known as Dutch New Guinea. The southern end of the island was administered by Britain and it was known as British New Guinea. In 1905, the Australian government took over administration of both western and southern parts of the island. Australia continued to administer the territories of PNG separately until 1949, when the joint Administration of the Territory of PNG was formed. Under a trusteeship agreement with the United Nations (UN), Australia was able to legitimately exercise greater control of legislations, administration and jurisdiction over PNG. Under the conditions of the Trusteeship, Australia was obliged to prepare PNG for self government or independence and this was realised in 1975. There is a strong bilateral relationship between Australia and PNG. This means that Australia continues to assist through Australian Department Assistance Agency created by the Whitlam government, now known as AusAID, as a statuary body to administer Official Development Money (Temby 2007).

Geography

PNG includes the eastern half of the island of New Guinea, the islands of New Ireland, New Britain, Manus and Bougainville, and smaller nearby islands. PNG is largely mountainous, and much of it is covered with tropical rainforest (AusAID, 2009a). With a landmass of approximately 465,000km, PNG is by far the largest and most populated of all the Pacific Island Countries. PNG has vast natural resources, especially mineral,

forest and marine resources and it is home to many rare and endangered species of animals and plants. Topographically, it is one of the most rugged and diverse countries in the world, with an extraordinary range of ecosystems.

Much of the country is rural and not well served by a well developed infrastructure especially roads and health services. A very large part of the rural areas are not easily accessible creating major problems for the delivery of basic services throughout the country (UNDP 2004). Almost 97% of all land in PNG is customary owned, either by individuals or under some form of clan ownership, and thus is governed by traditional land tenure system (UNDP 2004).

Regions

PNG is administratively divided into four regions. These are Southern Coast (Papuan) Region, Northern Coastal (Momase) Region, Highlands Region and the New Guinea Islands Regions. Each of these four regions make up the current twenty provinces (UNDP 2004). Two new provinces will be added soon due to the increase in population so there is equal distribution of population within each province. Each of the provinces is further divided into districts, local level government areas and council wards. Decentralisation of administration of the health system in PNG over the past decade has been identified as central to the decline in service delivery, particularly in rural areas (Bauze, Morgan & Kitau 2009). There was transfer of health services responsibilities and power from the centre to the lower levels but this has not been effective. The process of transition from a centralised to a decentralised authority has resulted in a combination of provincial, national and concurrent powers. Provinces are now responsible for most day to day operations of primary health care facilities and program (Campos-Outcalt & Newbrander 1989). The National Department of Health was given

no role in provincial budget and staffing decisions, and the national health budget was fragmented into the health components of provincial budgets. The impact of decentralisation on health workforce development was particularly severe and largely unforeseen (Lisa & Aitken 2006). Many difficulties were inherent in the manner in which decentralisation regulations structured power relationships. Others arose as a result of the administrative confusion and inflamed relationships that accompanied the forceful transfer of power from a very reluctant national DOH to the provinces (Lisa & Aitken 2006). There were some positive aspects of the devolution though, however, the extent of their implementation and the improvements of care varied according to the skills and enthusiasms of the provincial health managers involved (Lisa & Aitken 2006).

Transport

Transport in PNG is heavily limited by the country's mountainous terrain. Port Moresby, the capital city, is not linked by road to any of the other major towns, and many remote villages can only be reached by light aircraft or on foot. As a result, air travel is the single most important form of transport for human and high value freight. In addition to two international airfields, PNG has 578 airstrips, most of which are unsealed and many are very small. Assets such as airport facilities and airstrips are often not maintained to high operating standards and poor transport remains a major impediment to the development of services and for national unity.

The transport system and lack of infrastructure, mostly in the rural areas, is such that makes it difficult for people who live in rural areas to access health care services. The nearest health facility may be several days walk over mountains and un-bridged rivers

(AusAID 2009b). Only a limited number of roads are available for those who move between the main towns and the villages and even many are poorly maintained. Essential social services are yet to materialise for many citizens, in particular, the 85% of whom reside in remote rural areas (UNDP 2004).

Economic Situation

PNG has a relatively small dual economy, made up of a formal and informal economy. The formal economy is dominated by large-scale resource projects, particularly in mining and petroleum, and provides a large proportion of government revenue. The formal sector employs around 15% of the workforce. PNG's natural resources include large reserves of minerals, extensive forestry and fishery assets, significant agricultural land, and many beautiful locations with potential for ecological and cultural tourism. The informal economy supports 85% of the people through semi-subsistence agriculture. Following a relatively stable macroeconomic performance in the first decade after independence, PNG experienced a series of macroeconomic crises in the 1990s. PNG is currently experiencing an economic recovery, with improvements in several macroeconomic indicators such as mining and employment (AusAID 2009b).

The improvement in macroeconomic performance has not, however, translated into improved service delivery. PNG continues to face considerable short and medium-term economic challenges. Concerns include degraded infrastructure, law and order problems and a weakly performing public service. The selling of cocoa and copra all depends on the market and have benefits if the selling prices are good. Generally the majority of population cannot afford to sell their food items in markets simply because the food

often perishes because it has been on the roadside waiting for transport to the markets (AusAID 2009b).

Religion

The country is predominantly Christian in religion, but the animist or traditional religious and ancestral worships still exist in some places, especially the villages. The predominance of Christianity is recognised in the Constitution's preamble in the phrase "our noble traditions and the Christian principles that are our now" (Barlow 2000). A country census has estimated the percentages of adherents of religions as follows: 27% Roman Catholic, 19% Evangelical Lutheran, 11% United Church, 10% other Christians, 10% Seventh-Day Adventist, 5% Evangelical Alliance, 3% Anglican Church, and 0.4 -0.5% Baptist, Jehovah's Witnesses, and Church of Christ. The other minority religions are the Baha'i, with 40,000 followers, and Islam with 3,000 adherents mostly of immigrant origin and few PNG followers (Barlow 2000).

The existence of different religions and religious beliefs is due to the people's Constitutional right to exercise freedom of religion and belief (Barlow 2000) . Government policy and practice enables people to freely practice their religion. The role of the government's Department of Family and Church Affairs is confined to ensuring that the people know about the government's respect for the church and the religions. As a result of the constitution and other systems, many Christian denominations and non-Christian groups preach freely in the country. Even immigrants and non-citizens are free to practice their religion as evidenced by the existence of a Muslim mosque and a Muslim community in Port Moresby. The operation of many schools and health services in many parts of the country is also supported by the government. In the

practice of religion, some rituals cannot be avoided. Many citizens even combine the faith with traditional indigenous practices, although many such rituals are focused on health and fertility, such as the initiation rituals for male and female in some villages. Some religious death rituals are also held oftentimes to pay off the deceased's debts, or recognise his or her accomplishments during his/her lifetime (Barlow 2000).

Cultural language and lifestyle

The culture of PNG is many-sided and complex. It is estimated that more than 1000 different cultural groups exist in PNG, and most groups have their own language. Because of this diversity, many different styles of cultural expression have emerged; each group has created its own expressive forms in art, dance, weaponry, costumes, singing, music, architecture and much more. To unify the nation, the language Tok Pisin, once called Neo-Melanesian (or Pidgin English) has evolved as the lingua franca, the medium through which diverse language groups are able to communicate with one another in Parliament, in the media, and elsewhere.

The way of living is traditional in many areas of PNG. In the rural areas, people typically live in villages or dispersed hamlets which rely on the subsistence farming of sweet potatoes, taro, banana, and cassava. The principal livestock in traditional PNG is the oceanic pig (Sus papuensis). To balance the diet, people of PNG hunt, collect wild plants, or fish depending on the local environment and mode of subsistence. Those who become skilled at farming, hunting, or fishing and are generous and earn a great deal of respect in Papua New Guinea (AusAID 2009b). In the urban areas people who are formally employed with private or government organisations live and work. Their employment status enables them to sustain their living in the city. There are also

unemployed people who come to stay with their relatives and these are mainly the young people. Although some may participate in the cash labour force, many more remain unemployed. This contributes to the social problems of urban areas (Rallu 2009).

Millennium Development Goals (MDG)

In this section I will discuss the UN Millennium Development Goals (MDGs) in relation to where PNG stands. The assessment of MDGs indicates whether or not a country is doing well to meet both local and global goals.

The MDGs are an important global measure. In September 2000, member states of the United Nations (UN) gathered at the Millennium Summit to affirm commitments towards reducing poverty and the worst forms of human deprivation. A total of 189 countries, including Papua New Guinea, committed themselves to making the right to development a reality for everyone (UNDP 2004). PNG therefore is a signatory to the United Nations and as such is participating in the aim to meet the Millennium Development Goals. The Goals represent human needs and basic rights that every individual around the world should be able to enjoy. There are eight MDGs and the international aim is to achieve these by 2015. The most relevant goals for this topic are MDGs 4 and 5 – Maternal and child health. These will be discussed in the next section.

Progress towards MDGs in PNG

Progress towards the eight Millennium Development Goals in PNG has been either very slow or not able to meet the required goal by 2015, according to the UN report (UNDP

2010). They are eight goals, 18 targets and 48 indicators, covering the period 1990 to 2015 (UNDP 2004). The table below outlines the eight goals and the main targets.

Table 1: The Millennium Development Goals and selected targets

Number	Millennium Development Goal	Selected targets to be met by 2015
1	Eradicate extreme poverty and hunger	Halve the proportion of people living on less than $1.25 a day
2	Achieve universal primary education	Ensure all children complete primary school
3	Promote gender equality and empower women	Educate boys and girls equally
4	Reduce child mortality	Reduce the mortality rate among children under five by two-thirds
5	Improve maternal health	Reduce the maternal mortality rate by three-quarters
6	Combat HIV/AIDS, Malaria and other diseases	Halt and begin to reverse the spread of HIV/AIDS, malaria and other major diseases
7	Ensure environmental sustainability	Halve the proportion of people without access to safe water and sanitation
8	Develop a global partnership for development	Increase aid and improve governance

Source: UN Millennium Development Goals Report, 2010

The importance of MDGs

The adoption of the Millennium Declaration represented a historic global commitment. It was the first time that so many governments and global institutions came together to pledge their commitment to tackling poverty. This is recognising that mass poverty is unacceptable given today's wealth and technological achievements, the international community created a blueprint for their development efforts, one that is most ambitious to date (Banda 2008).

The MDGs are seen as an agreement between the rich and poor countries. There is also an exchange cooperation to sustain political and economic reform in developing countries for direct support from the developed world in the form of aid, debt, trade and

technology transfer. The Goals 1-7 commit poor countries to put their right type of policies in place while Goal 8 commits rich countries to deliver on aid, debt, trade and technology transfer. The MDGs are also seen by many as a means to advocate for a development agenda or a frame work and not an end in themselves. The MDGs are seen as achievable and not ambitious targets, but the UN has recognised that they require political will (UNDP 2010).

PNG has made slow progress towards meeting the MDGs. For example, MDG 2, *To Achieve Universal Primary Education*, has seen PNG improving but still progress is lacking overall. PNG is unlikely to reach the global Goal to educate boys and girls equally by 2015, although it is making progress (PIFS 2010). The government aims to eliminate gender disparity both at the primary and secondary levels by 2015 and at higher levels by 2030 (UNDP 2006). Only PNG and the Marshall Islands which is a Polynesian country in the South Pacific, have yet to maintain an enrolment rate of over 90% for both boys and girls (PIFS 2010)). The net enrolment rate in PNG increased from 52.9 per cent in 2007 to 63.6 per cent in 2009. That meant there were approximately 1.27 million students in elementary and primary schools in 2009 compared to around 0.98 million in 2006 (PIFS 2010). The PNG government, with support from AusAID, has recently announced that school fees are to be abolished as a means of accelerating progress towards the MDG target (PIFS 2010).

Equally, the MDG goal related to child health and reducing child mortality will not be met in PNG (PIFS 2010). According to the latest available figure, PNG, which had the highest child mortality rate (CMR) of 115 per 1000 live births in 1990, had reduced this by about 35%, to 75 per 1000 live births by 2006 (PIFS 2010). Immunisation programs

need to be improved as does malnutrition and access to health services. Reduction of malaria is also another important aspect to meet this goal, which remains highly challenging in PNG.

MDG Goal 6 is related to HIV/AIDS. HIV/AIDS is still not a government priority in PNG, and this makes an efficient multi sectoral response difficult (UNDP 2006). PNG has the highest incidence of HIV/AIDS in the Pacific (PIFS 2010). The generalised nature of the HIV and AIDS epidemic and the increasing risks and the vulnerabilities associated with labour mobility and the continuing growth in the extractive industries in the country are of great concern (PIFS 2010). The incidence of HIV is still rising in the Pacific, most notably in PNG, which accounts for 99% of the reported new infections of the region. In 2008, reported new HIV cases numbered 5,169 in the South Pacific with 5,084 of these being in PNG (PIFS 2010).

MDG 3 is about *Gender inequality*, that is, to promote gender equality and empower women. Gender inequality contributes to poverty in PNG. Girls marry at a very early age and this reduces the number of girls in primary and secondary education (UNDP 2006). PNG is recorded as improving but still unable to meet the MDG among the South Pacific Island Nations (PIFS 2010). To reduce gender inequality and hasten empowerment, the government aims to eliminate gender disparity at the primary and lower secondary levels by 2015 and at the higher levels by 2030.

MDG related to maternal health

Millennium Development Goal (MDG) number five is to improve maternal health (PIFS 2010). A country's maternal mortality ratio (MMR) is a sensitive indicator of the

state of the entire health system (Bauze, Morgan & Kitau 2009). PNG has a culturally diverse and fast growing population, which is predominantly young and rural. The total fertility rate remains high with a reduction in maternal mortality of only 26 percent since 1990. The current MMR in PNG is among the highest in the Western Pacific (UNFPA 2011). Attendance at birth by skilled attendance is low, and this is mainly due to an acute shortage of midwives, poor accessibility, lack of adequate birthing facilities and low levels of trust in the public services (UNFPA 2011). The current National Health Plan 2011-2020 does address the needs for health facilities at the community level (UNFPA 2011). Many pregnant women are unattended by health professionals and few rural pregnant women attend antenatal clinics. Reopening of Aid Posts and Health Centres, the revival of antenatal clinics, and skilled birth attendants are all necessary in order to reduce maternal mortality (PIFS 2010). Aid Posts provide basic medicines and wound treatments. These are located in village settings and are staffed by health workers who are commonly referred to as Aid Post Orderlies.

About 39 percent of women give birth in villages or in their homes and are attended by family members or a village birth attendant. In PNG, only 59 percent of births are in the health facilities, an increase from 53 percent in 1996 (Bhutta et al. 2010). PNG's maternal mortality ratio in 2008 was 250 per 100 000 live births (WHO 2011), currently it is 530 per 100 000 live births (WHO 2011). The maternal mortality ratio in PNG is the highest in the Pacific region. The countries with the next highest ratios are Kiribati at 284 per 100,000 births and the Federated States of Micronesia at 317 per 100,000 births (PIFS 2010).

Childbirth in Papua New Guinea

Traditionally, in PNG, childbirth occurred in village settings, as in other developing countries. Women gave birth in a special area in the village, often a hut. Childbirth was regarded as sacred and a taboo and so children, men and younger girls were never allowed near the birthing hut or where women would be attending the woman in labour. Older women would be summoned close by and they would be regarded as consultants by the younger women in attendance with the woman in labour. This is the experience in most cultures in PNG. In a very small number of cultures in PNG, the woman is left to labour and give birth alone, but this is unusual and very rare.

In most traditional situations, a woman in labour in PNG will have women in attendance around her. These women will offer support, advice and give herbs. Herbs are sometimes given as a form of analgesia, or to speed up the birthing process. Some women will be in the kitchen hut cooking food and boiling water for the mother and the baby, while others will be cleaning around the birthing area. Labour and birth is a communal event where female relatives and friends of the woman in labour gather to offer their support.

The situation is similar in remote areas of PNG or in situations where labouring women do not get to the hospital. Other women choose to give birth in the village because of fee paying policies in hospitals, it can either be they have very little money or no money at all. The cost of transportation to the hospital can be another factor. Women who live far from health care are unlikely to give birth in the hospital because they will not be able to afford transport costs. Others may live where it is totally impossible for them to get to the hospital or it may even take days to walk.

Traditional Birth Attendants (TBAs) or Village Birth Attendants (VBAs) are found in most communities of the world although their nature and function vary considerably (Bergstrom & Goodburn 2001). The World Health Organisation definition of a TBA is that she is a person who assists mothers during childbirth and someone who acquired her skills by delivering babies herself or working with other TBAs (Leedam 1985). There would also be an increase in the VBAs if support in labour is introduced into major hospitals throughout PNG and PMGH in particular where the study is based. VBAs in some provinces are volunteers who undergo a three week training course in basic midwifery skills under the instructions of a nurse and or a Community Health Worker (VBA trainer). Women chosen to train as VBAs have had at least one child of their own, this therefore enhances their status in the community (Bettiol et al. 2004).

Birthing in the formal health system in Papua New Guinea

As Western development took place in Papua New Guinea in the mid 20th Century and health facilities were being built, women living close to hospitals started giving birth in these environments. The formal health system, through health talks and awareness raising sessions in the community by health workers, encouraged women to use the facilities to attend antenatal clinics and to give birth in the health centres or hospitals. The rationale is that women will receive care from skilled birth professionals and that facilities are close at hand should any emergency occur. It also ensured women were being followed up during subsequent antenatal visits right through to the date their baby was due. They also had their weekly iron tablets and malaria prophylaxis to take during pregnancy. The proportion of births that are now attended by skilled health personnel is 53 percent (UNFPA 2011).

Women started to give birth in health facilities, which were unlike village settings with the availability of instruments and resources. This model of care did not allow the support people into the Labour Ward and birth so that today, women are left alone in labour and are often intimidated by a strange environment. Midwives or nurses do not have time for one- to- one care because they are too busy to provide support.

Port Moresby General Hospital

Port Moresby General Hospital (Figure 1) is the largest hospital in PNG and has the largest amount of births in PNG. Port Moresby General Hospital's facilities and the services it provides are described in brief in the following pages.

Figure 1: Port Moresby General Hospital front block built by the Australian Government in 1974

Port Moresby General Hospital (PMGH) is located in Port Moresby, which is the capital city of Papua New Guinea. The total population of the city of Port Moresby is a little over 237,000 people. The main hospital has two blocks. The front block was built in

1974 by the Australian Government and the second block was built in 1996 by the Japanese Government. An old block built in the 1960s was demolished to make way for the new structure built by the Japanese Government. The capacity of PMGH is about 813 beds (Pyakalyia 2008).

Port Moresby General Hospital is a major referral and teaching hospital. Nurses, midwives, doctors and allied health workers have been educated in the hospital since the early 1960s. The hospital used to receive students from the South Pacific Island Nations however, now that they have their own training institutions the numbers have decreased over the years. Only Solomon Island and Vanuatu still send staff for training. Most exchange students also come from Australia and New Zealand, and occasionally from Canada and the United Kingdom.

The Port Moresby General Hospital provides services in all areas of the health care delivery system. The services provided are outpatient services such as accident and emergency, separate adult and children's outpatients. There are specialist consultation clinics in ophthalmology, ear, nose and throat, psychiatric (mental health), surgical, medical, orthopaedics and cardiology. There are also inpatient services where patients are admitted over a period of time in the surgical unit, medical unit, paediatric unit, intensive care unit and the maternity unit.

The PMGH has diagnostic services including pathology, medical imaging, pharmacy and central sterilising services unit. There are two operating theatres, one main one and the other for the maternity unit. The hospital does charge patients for the services provided at different rates depending on the type of service rendered. There are private

practices also available in the city and only those that can afford them seek medical attention at these private facilities.

PMGH is governed by a hospital board with directors and the Chief Executive Officer as the head of the board. Administratively, the medical doctors and allied health staff come under the medical director of the hospital. The hospital nursing structure has an administration manager as well as a clinical manager for each unit. The administration manager attends to administration matters concerning nursing (including midwives) staff and the clinical manager attends to clinical matters or practices of the unit. The hospital has a staff ceiling of 613 nurses with 121 employed at the Maternity Unit of the hospital. Of the 121 nurses, 49 are midwives and 20 of the 49 midwives are employed at the Labour Ward (Pyakalyia 2008).

All the wards in the hospital, apart from the maternity unit, allow support person to stay with their relatives in the hospital. The support persons who provide support to their admitted relatives are referred to as guardians, and they may stay overnight.

The Maternity Unit at Port Moresby General Hospital

The Maternity Unit is located at the McGregor Wing towards the eastern end of the main hospital. Most of the facilities were built in the 1960s and there have been renovations done to the buildings to ensure safety for public use. The only new blocks at the Maternity Unit are the Labour Ward, the Obstetrics and Gynaecology operating theatre and the Postnatal Ward. The Obstetrics and Gynaecology operating theatre is accessible through the Labour Ward and is used for emergency purposes. The Maternity Unit of PMGH comprises of the Labour Ward, Gynaecology Ward, Antenatal Ward,

Postnatal Ward, Special Care Nursery Ward, Family Planning and Antenatal Clinics and the Obstetrics and Gynaecology operating theatre. All the wards have staff on duty 24 hours a day over three shifts except for the clinics which are Family Planning and the Antenatal clinic. These clinics are only day clinics and they open at 8am and close at 4pm. The clinics are conducted every day from Monday to Friday.

The maternity unit is one of the busiest units at PMGH hospital where the patients outnumber the total number of staff. All the wards in the Maternity Unit, except for the Special Care Nursery, are staffed by midwives and community health workers. The Special Care Nursery is staffed by paediatric nurses as well as community health workers.

At PMGH Maternity Unit there is also the 'Susu Mamas PNG Incorporated', which is a non profit, non-government organisation dedicated to reducing PNG's high infant mortality rate. It has been operating for 33 years. They provide services in breastfeeding, nutrition, infant feeding including HIV positive mothers, hygiene, antenatal and postnatal care, immunisation, family planning and voluntary counselling and testing (VCT). The facility employs five dedicated and highly trained nurse midwives who provide free education and counselling to around 8,500 to 10,000 women per month.

During the period of data collection for this study, major renovations were being undertaken in the Postnatal Ward and the Labour Ward. This thesis is based on situation prior to the renovations.

Antenatal Care

The routine antenatal care provided to women is the same and standardised throughout PNG. Antenatal care is provided by the government institutions as well as the private health care facilities. This will be discussed further into the thesis.

The Labour Ward

The Labour Ward has a bed capacity of 24 with 22 beds used. Birthing beds are separated by partitions and curtains pulled across the entrance into the cubicles for privacy. The staffing in the Labour Ward consists of specialist chief obstetricians, obstetrics registrars, resident medical officers, medical students, midwives, community health workers, trainee midwives and nurses, cleaners, kitchen maids, and clerks. There are 20 midwives and 10 community health workers in total who cover the three shifts. The shifts are for eight hours (morning from 7am to 3pm, afternoon from 2.30pm to 10.30pm and night from 10pm to 7am the next morning). Each shift is staffed by at least one or two midwives including one or two community health workers. During day shifts they may have four midwives on duty although this is very rare.

In the Labour Ward there are around 30 to 40 births a day, equating to more than 1,000 a month which gives an annual birth rate of 12,000. Midwives assist women to give birth as community health workers are not allowed to supervise women giving births. Medical students and midwife trainees can assist with births when supervised by their clinical supervisors or the midwives on duty if time permits. It is evident from the number of births per day compared with the number of midwives in the labour ward that individual care and support to women in labour is not provided. Women at times

have to give birth on their own as community health workers are not allowed to attend births.

The process for admission to the Labour Ward requires that the woman is booked into one of the antenatal clinics at one of the urban day clinics within the city suburbs or at the antenatal clinic at PMGH. Women are asked to carry their antenatal card with them at all times towards the end of their pregnancy. Upon arrival in the reception of the Labour Ward, the woman is admitted by the admitting clerk and, if there is an available bed in the Labour Ward, she is immediately given a bed. If all the beds are taken up (which is common), the woman sits on a bench in the Labour ward to wait for the next available bed. All pregnant women who come into the Labour Ward for admission have relatives with them, for example their husband, partner, mother, aunt or other extended family members. The family members are not allowed in the Labour Ward unless the woman is very sick in labour. This is due to hospital policy, which has been in place since the colonial administration, and the policy up to this day is still being enforced.

Women who utilise the Labour Ward at PMGH mostly live in Port Moresby, although women who live in the surrounding villages also use the facility. Women who have relatives in the city come to live with them and wait till they give birth and return to the villages if they live far from the city. They can either attend antenatal clinic at PMGH or attend antenatal clinics at one of the several urban day clinics located in the various suburbs of Port Moresby. Those who can afford private clinic fees can attend antenatal clinic at the private facilities and give birth there. There are less than ten private facilities that also have birthing suites. The private facilities do allow support in labour, especially for husbands or partners to be with their wives during labour and birth. The

care within the public health system is directed by the PNG National Health Plan. The next section describes the plan and its relevance to maternal health.

The PNG *National Health Plan 2011-2020* and its strategies towards maternal health

The *National Health Plan 2011-2020* (NHP) of PNG is a set of policies, strategies, plans and directions formulated by senior health policy makers of the PNG National Department of Health and other stakeholders (Papua New Guinea National Department of Health, 2010). The current NHP is the sixth since independence. The implementation of the National Health policies, plans, and strategies is the responsibility of the stakeholders, who are the key to successful implementation of the NHP.

The main health concern according to the *National Health Plan 2011-2020* is poor maternal health, in particular, the increase in maternal deaths in the past decade in a time when these should have been reducing to meet MDG Goal 5. A safe and accessible birthing environment could save many lives and the NHP identifies the main causes of death as prolonged labour and excessive bleeding. The risks for maternal deaths have increased due to high fertility levels as well as improper spacing of children (Papua New Guinea National Department of Health, 2010). Poor maternal health and birthing environment results in neonatal deaths, which has not changed much over the last decade. Maternal mortality remains very high and a Demographic Health Survey undertaken by the National Statistics Office in 2006 suggests that it has increased over the last decade.

The *National Health Plan 2011-2020* has outlined a number of goals and strategies to improve maternal health. These are outlined in Figure 2.

Figure 2: The *National Health Plan 2011-2020* - goals and strategies to improve maternal health

Objective	Strategies
Ob 5.1 Increase family planning coverage	Ensure every health facility has the capacity to offer family planning services to offer at all times; Advocate for the advantages of having fewer children and increased spacing of children; Extend the reach of the village health volunteers (VHV) program and community based distribution systems.
Ob 5.2 Increase the capacity of the health sector to provide safe and supervised births	Increase the number of facilities capable of providing supervised births; Increase the number of health workers skilled in obstetric care; Ensure every health facility is capable of providing quality service and support before during and after pregnancy.
Ob 5.3 Improve access to emergency obstetric care (EOC)	Increase the capacity of all facilities to provide essential EOC ; Increase the number of facilities capable of providing comprehensive obstetric care; Ensure every maternal death is investigated and audited, and practice improved.
Ob 5.4 Improved sexual and reproductive health for adolescents	Increase the knowledge of adolescents about sexual and reproductive health; Increase cross- sectoral collaboration with schools to strengthen education of students in sexual and reproductive health.

The topic of my study fits into Objectives 5.2, as providing support in all these areas of care to the birthing women is crucial. It is possible that more women would attend health facilities to give birth if they were able to bring support people with them. In a report by Kruske (2006) it indicated that many women are not seeking health services for pregnancy and childbirth, largely due to the demographic and geographical challenges of PNG population although health service fees and staff attitudes were also thought to affect access. With PNG's increasing maternal mortality it is with the stakeholders to determine how they can best implement the directives from the NHP.

Summary

This chapter has described the following; background and population, geography and regions, transport, economic situation, religion, and culture of PNG. PMGH and the services it provides have also been outlined. The progress towards MDGs, including maternal health and maternal mortality, have also been discussed. Lastly, the Papua New Guinea National Department of Health's *National Health Plan 2011 – 2020* and its objective and strategies on maternal health have also been outlined.

In the next chapter a literature review exploring support in labour, both internationally and locally in Papua New Guinea, is presented followed by the methods employed in the study.

CHAPTER 3: LITERATURE REVIEW

Introduction

The purpose of this Chapter is to review literature relevant to this study. This will place the study in the context of research evidence and highlight the reasons for introducing support in labour into Port Moresby General Hospital.

I will begin the chapter by reviewing the definition of support in labour. I will then critique the evidence that labour support may improve outcomes for both women and their babies. I will also review evidence pertaining to support provided by health care professionals (midwives and nurses) and by lay supporters, such as 'doulas'[1], relatives and partners. Lastly, I will review women's perception of support in formal Labour Wards.

Review Methods

A number of databases were searched to identify research papers that address one or more terms related to aspects of providing support in labour. These included CINHAL, MEDLINE and the Cochrane Database of Systematic Reviews. Search terms included combinations of keywords such as 'support provided by a female relative at birth', 'support by a relative', 'labour support,' 'support during birth,' 'doula' and 'women's perception of support during labour'. The initial searches were restricted to the years 1980-2009 and two years later I revisited this process in order to search for

[1] The term 'doula' is a Greek word for a maid and is used to identify a person who provides continuous support to a woman during labour, delivery and the immediate postpartum period. Doulas assist women during labour and birth, and remain with them constantly until they give birth. According to Ballen and Fulcher (2005) a doula's role is to provide information, give perspectives, allow choices, assist with physical comfort, and offer encouragement.

contemporary literature. The focus of the review was to explore outcomes related to support in labour, to include women's experiences of different sources of support in labour. I also sourced additional literature by examining the reference lists or bibliographies of the papers that I reviewed.

I identified over 500 papers. Those used for the study were systematic reviews, randomised trials, quasi-randomised trials, prospective cohorts and other studies. I also identified a number of qualitative studies and reviewed these through the chapter.

Support in labour: Definitions, contexts and outcomes

Globally, for many centuries, women have received support during labour. Historically, they received this support from local women and family members; this tradition persists today in many developing countries where women do not access care from qualified health professionals. Research on support in labour is mostly confined to settings in which women are attended by health professionals in institutions. In looking at findings from research, it is therefore appropriate to look at the contexts in which support in labour has been studied as well as what has been defined as 'support in labour' in those settings.

One of the very first studies in this field was undertaken by Sosa and Kennel (1980). They defined support in labour as 'human companionship during labour and birth'. The study was a randomised control trial conducted in a large public hospital in Guatemala. The aim was to study the effects on labour and on mother-infant interaction after birth where women were attended by a lay woman, referred to as a 'doula'. All participants were healthy Guatemalan women having their first baby and the study was conducted in

a setting in which women would routinely undergo labour and birth alone. The control group followed hospital routines, which consisted of infrequent vaginal examinations to monitor the progress of labour, occasional auscultation of the fetal heart, and assistance to the women only during birth. Women received no form of support from caregivers and laboured alone. Women in the experimental group, in addition to routine care, also received constant support from an untrained woman or 'doula', someone who they had not met before, from the time of admission to the labour ward to the birth of their baby. The support consisted of physical contact (for example, rubbing the mother's back and holding her hand), conversation, and the presence of a friendly companion. The results showed women who had a doula present were awake more after giving birth; they stroked, smiled at, and talked to their babies more than the women who received standard care. Labour was also shortened, and some aspects of maternal behaviour in the first hour after birth were enhanced. The likelihood of development of certain problems that require intervention during labour and birth was lower for women who had a supportive companion.

The findings in this study were replicated in developed countries where women already received some degree of support. Clearly, addressing the isolation that women experience in settings where they labour alone lends itself to improvements where support in labour is introduced, even where the support person is not someone the woman knows. This is highly significant for my study.

A study undertaken by Holroyd and colleagues (1996) in Hong Kong, where midwives and maternity nurses provided routine care during labour and birth, defined support as 'intentional human interaction' and looked at situations in which nurses provided

concrete, material help or offered their time to the women. A prospective cross-sectional design was used to identify which aspects of support from nurses Chinese women found most helpful in contributing to a positive labour and childbirth experience. This was the first study of its kind on the topic of support in labour with participants from the Chinese Hong Kong population. Data were collected using a Chinese language version of the Bryanton Adaptation of Nursing Support in Labour Questionnaire. A purposive sample of 30 Chinese women were surveyed 24 to 38 hours after birth. The category of 'informational support' was identified by women as the most supportive aspect of labour support. The activities listed under this category were: praise, information about progress, instruction in breathing and relaxation exercises, being included in decision making, explanations about hospital routines, encouragement of the partners' involvement, familiarisation with the surroundings, and support for the way the partner and the woman worked together. Women identified the specific behavior of 'praise' as the most important supportive behaviour and tangible support, such as 'touching', as the least helpful behaviour (Holroyd et al. 1996).

Scott, Gale and Klaus (1999) undertook a meta-analysis to compare intermittent and continuous support during labour. This study, unlike other systematic reviews, (Ballen & Fulcher 2006) contrasted the effects of intermittent support and continuous social support during labour in relation to five childbirth outcomes: length of labour; the use of analgesia; oxytocin augmentation; forceps birth; and caesarean section. Included in the meta-analysis were 11 separate randomised controlled trials. The study characterised support in labour as being support for a woman in labour from specially trained caregivers (nurses and midwives) or from those close to her or doulas. Intermittent social support was defined as the labour attendants leaving the mother during labour and

birth, for any length of time and for purposes other than assisting the woman to attend the toilet.

The meta-analysis demonstrated that the continuous presence of a doula during labour and birth had a greater beneficial effect on all outcomes than support provided on an intermittent basis by health professionals. While this analysis provided important data on the benefits of support in labour, the authors recognised that it was likely that the meta-analysis had underestimated or diluted the positive effects of support during childbirth through combining the data groups of studies with varying sample sizes (Scott, Berkowitz & Klaus 1999).

In explaining the differences in outcomes when comparing support from professionals and non-professionals, the authors of the meta analysis, Scott, Berkowitz, and Klaus (1999), identified that the employed nurses and midwives were performing two tasks, namely, ‘‘medical-care giving’’ and social support; they suggested that this might mean their level of interest in providing support was less compelling than their obligation to provide routine care. It was also noted that nurses and midwives were required to leave their assigned women to attend other women and assist with other interventions and births. The provision of support was not highly valued. Midwives and student midwives stated that they felt devalued by the task of providing support and that their continuous presence was unnecessary. Resistance to providing support may have been due to the fact that much of their time was required to be spent on ‘medical’ tasks. The nurses and midwives valued these ‘professional’ tasks more highly than providing support and reported that it felt as though they were ‘doing something’. Exploring such attitudes and the findings of this meta analysis form an important strategy when introducing the

notion of support in labour to maternity staff who work in labour wards such as PMGH, where there is little opportunity for staff to provide support and where there is a history of not allowing support people into the unit.

Companionship in labour has been theorised as something that most women would prefer, with various authors suggesting what companionship should entail. Podosyan (2009) in his discussion paper on social and professional support in childbirth in the USA states that a central feature of support in labour is the promise that the labouring woman will not at any time be left alone without support. He suggests that the mere physical presence of a support person is not enough, and that support activities should be provided by the support person in terms of both physical comfort measures and emotional support. Podosyn (2009) argues that the provision of comfort measures must, and should be, provided in response to the woman's own needs and wishes. This may vary from culture to culture, and from individual to individual. Examples of support activities given by Podosyn include: assisting the labouring woman to find a comfortable position; helping her with a bath or a shower; massaging her back; offering food and fluids; or walking with her. The support person may also provide pain relieving measures, such as counter pressure; applying cold compresses with an ice pack; or heat with a hot water bottle to painful areas of her body. Podosyn suggests that the use of breathing exercises or other rituals the woman may have practised during pregnancy can be crucial to help the labouring woman to relax. In summarising, Podosyn postulates that there is strong evidence to recommend that every woman should choose her source of social support in labour; this could be her partner, another family member or a close friend. Midwives, doctors and nurses must respect her choice

and provide additional care and appropriate physical and emotional measures where it is needed (Podosyan 2009).

It can be seen that all the aforementioned studies have defined support in labour according to the nature and context of their study. There is not one standard definition of support in labour, however there are many similar aspects within each of the definitions reviewed. It seems clear from the evidence in a variety of settings that women should be allowed to ask for support according to their needs during labour.

Support in labour by a non-health professional

The next section of this chapter reviews studies that have examined the effectiveness and benefits of support in labour to birthing women provided by someone who is not a health professional. I will start by reviewing the highest level evidence – a systematic review.

Hodnett, Gates, Hofmeyr, Sakala, and Western (2011b) undertook a systematic review entitled 'Continuous support for women during childbirth' to assess studies that had compared the effects of continuous, one to one labour support with standard care. Their objectives were: to determine whether the effects of continuous support were influenced by routine practices and policies in the birth environment that may affect a woman's autonomy, freedom of movement and the ability to cope with labour; to compare outcomes where support is given by a lay person and where it is provided by a member of the staff institution: and to look at evidence related to whether the continuous support begins early or later in labour. The study's data collection and analysis strategy used the approach dictated by the Cochrane Collaboration Pregnancy and Childbirth Group.

Sixteen trials involving 13,391 women met the inclusion criteria and provided usable outcome data. The systematic review found that women who had had continuous intrapartum support were likely to have a slightly shorter labour, were more likely to have a spontaneous vaginal birth and were less likely to have intrapartum analgesia or to report dissatisfaction with their childbirth experiences. In general, continuous intrapartum support was associated with greater benefits when the provider was not a member of the hospital staff, when it began early in labour and in settings in which epidural analgesia was not routinely available. Continuous support was associated with a reduced likelihood that women will report feeling low levels of personal control during labour and birth.

A number of randomised controlled trials have been undertaken specifically to study support in labour from a support person who is not a health professional. Although most of these are included in the systematic review previously discussed, I will review a couple of studies in detail as they have direct relevance to the study in this thesis in terms of the contexts in which support in labour was introduced for the first time.

One such study is a randomised controlled trial that was undertaken in Botswana, Africa, to determine the effectiveness of the presence of a female relative as a labour companion on labour outcomes (Madi, Sandals, Bennett, Macleod 1999). One hundred and nine primigravida women experiencing an uncomplicated spontaneous labour were randomly allocated to an intervention and a control group. The control group had standard care, that is, they labored without the presence of a relative or a family member. The experimental group each had a female relative with them during labour.

During the period of the study, 420 primigravid women were admitted to the labour unit of one of Botswana's main referral hospitals, Princess Marina Hospital. Of those admitted, 109 were recruited to the study with 53 women (n=53) in the experimental group and 56 women (n=56) in the control group. The study was powered to show a difference in the effectiveness of the presence of a female relative as a labour companion on labour outcomes. The criteria for the selection of the participants were: women having their first baby with a singleton pregnancy at 32 to 42 weeks gestation; no history of complications during pregnancy; cephalic presentation; normal spontaneous labour with regular uterine contractions; and cervical dilatation of one to six centimeters. The presence of a female relative who was willing to remain with the woman for the duration of the labour was also one of the important criteria for inclusion in the study. It was not stated whether the female relative who provided the support had some information prior to actually going into the labour suite. Prior to this study, the hospital policy prohibited relatives or companions from entering the delivery suite. That means it would have been a completely new environment for the female relative as well as the labouring women, a situation comparable to the one in my study.

In this trial that Madi et al (1999) undertook in Botswana, a statistically significant greater number of women in the experimental group had a spontaneous vaginal birth (91% vs.71%). Women with support used less analgesia; had less oxytocin augmentation; had fewer amniotomies to augment labour, fewer vacuum extractions and fewer caesarean sections, than women in the control group. The study did not verify a power analysis of the sample size, however it did mention that the randomisation of women for the study was satisfactory. This is contradictory since a limitation of the

study was that randomisation was manually done instead of through a computer generated randomisation method, which can be open to manipulation. The lack of blinding in the study may have led to some bias (Madi et al. 1999). Another limitation of the study was that the midwives responded simultaneously to the study by inviting companions to be with women who were not in the study. This as well contradicts with findings from other studies, in which staff members did not welcome the presence of a companion. While the study is useful in my context, the characteristics of support and the preparation of the support people were not well articulated.

A similar randomised controlled trial was undertaken in Brazil, South America, at the Federal University of Santa Catarina, between February 2004 and March 2005 (Bruggemann, Parpinelli, Osis, Cecatti & Neto, 2007). The aim of the study was to evaluate the effectiveness and safety of the support given to women by a companion of their choice during labour and birth. A total of 212 women were recruited with 105 allocated to the group in which support was permitted and 107 women allocated to the group where support was not given. The sample size was based on a previous study in which the support given by a nurse during birth was evaluated. Considering a difference of 15.1% between the groups regarding patient satisfaction, a significant level of 5% and a power of 80%, minimum sample size was calculated of 96 women in each group. Considering a possible loss of information or discontinuation of up to 10% the total sample size was calculated to be 212 women. The women who agreed to participate in the study were randomly allocated either to the intervention group (support from a companion of their choice) or to the control group (no support). Randomisation was carried out using a computer generated sequence of 212 random numbers and individual

number assignment numbers were placed in an opaque container to assure allocation concealment.

The results showed there were no significant differences between the groups in the socio-demographic and obstetric characteristics of women at the time of hospital admission (Bruggemann et al. 2007). Having a companion during labour and birth was strongly associated with higher satisfaction in the intervention group. The women in this group had more spontaneous vaginal births and were more satisfied with the care they received during labour and with the medical guidance they received, than women in the control group. Overall, the women in the support group were more satisfied with labour (median 88.0 versus 76.0, $p<0.0001$) and delivery (median 9.1 versus 77.1, $p<0.0001$). The study reported not statistical difference between the two groups with respect to any of the other variables (Bruggemann et al. 2007).

Another relevant study was a randomised controlled trial conducted in a Mexican public hospital by Langer, Campero, Garcia and Reynoso (2005). This trial evaluated the effects of psychosocial support by a female companion (doula) assigned to them during labour, birth and the immediate postpartum period. The outcomes included breastfeeding practices, duration of labour, medical interventions, women's emotional conditions and the health of the newborns. Data were collected from the clinical records and interviews were conducted with women in the immediate postpartum period while in hospital, and at their homes 40 days after birth. The interviewers were unaware of the women's allocated group, that is, whether they were in the intervention group (support in labour) or not.

The study found that the frequency of exclusive breastfeeding one month after birth was significantly higher in the intervention group, as were the behaviours which promote breastfeeding, such as a calm environment during breast feeding sessions. More women in the intervention group perceived a high degree of control over their birthing experience, and their duration of labour was shorter than the women in the control group. There were no effects on medical interventions, mothers' anxiety or self esteem, women's perceptions of pain and satisfaction, or in newborns' conditions between the groups. This trial, like many others, demonstrated that support in labour was also associated with the reduced use of narcotics for analgesia in labour.

According to Buckner and Papagni (2006), women in developed countries are increasingly seeking assistance from doulas. Women choose to labour and give birth with doula support for a wide range of needs, goals, and concerns about their childbirth experience. The authors suggest that all women want to be encouraged and supported as they give birth, particularly those who labour without pain medications. For some women there is also a desire to feel a liaison between themselves and the medical staff.

A number of studies have focused on the experiences of women who received support from a doula during labour and birth, making comparisons with the experiences of women whose only source of support was a health professional providing routine hospital care. One such study was carried out by Campero, Garcia, Diaz, Ortiz, Reynoso and Langer (1998) in a large public hospital in the Mexico City metropolitan area. The objective of this qualitative study was to explore women's feelings about their labours whether they were assigned a doula or left alone in labour. The significance of psychosocial support during a women's first labour and birth as well as the quality of

the relationships established between the woman, the doula and the hospital staff were assessed. Women were interviewed immediately after birth and at home six weeks after childbirth. The significance of psychosocial support during a woman's first labour and birth as well as the quality of the relationships established between the women, the doula and the hospital staff were assessed.

After having given consent, the women who arrived in the laboring suites were randomly assigned a doula who they had not met before or routine care (Campero et al. 1998). The sample was limited to women having their first baby and women who had had one previous caesarean section, with a single live fetus, no serious medical problems and no other indication for elective caesarean section. On admission they had to have a cervical dilatation of less than six centimeters.

Women who had a doula reported feeling at peace throughout the labour process. The doula was able to communicate between staff and the women in labour, particularly if the woman was too scared to ask questions. The doula was able to answer some questions based on her previous experiences. Women who went into labour without a doula had to depend on the little information they received from the staff in the institution.

Support in labour from health professionals

Across the world, midwives and nurses are providers of support to labouring women in the course of their role in providing care in labour. As an initial part of my study would be to observe the support provided by midwives to women labouring in PMGH, I was

interested to review studies that had looked at the provision of labour support by midwives and nurses in publicly funded maternity units in other settings.

In Canadian hospitals, obstetric nurses provide the care and support that is provided in many other countries by midwives. A study in a large Canadian teaching hospital in Quebec was undertaken by Gale (2001) to examine the amount of labour support being provided by obstetric nurses and factors that influenced the provision of support. An exploratory and descriptive study design was used to determine the percentage of time nurses spent in supportive care activities. Twelve nurses participated in the study and were observed over six non-consecutive day shifts in the hospital birthing unit. A total of 404 observations were made of nurses in supportive care activities. The nurses were then interviewed to determine their perception of what constituted supportive nursing care, including factors that facilitated or inhibited the provision of this care.

The results established that nurses spent only 12% of their total time providing supportive care to labouring women. Interviews with the nurses revealed that perceptions of the components of supportive care were comparable to the operational definitions of support listed by the researchers in preparation for their observations, namely: physical, emotional, and instructional/informational support and advocacy. The nurses identified the barriers to providing support as lack of time and insufficient staffing. Further content analysis of the interview data revealed that the nurses had a pervasive sense of control over labouring women and their partners (Gale 2001).

This study demonstrated an incongruity between what the nurses perceived as being supportive care and the amount of support that was actually provided in a situation

where support had been identified as an important aspect of care in childbirth. Gale's study did not specify whether the nurses in the study who were chosen for interviews had been selected on the basis that they had been observed providing a number of support activities identified by the researchers (Gale 2001).

Another study was a randomised trial studying the introduction of one to one nurse support for women in labour. This was conducted in a 637-bed university hospital in Montreal, Quebec by Gagnon, Waghorn, and Covell (1997). The aim was to compare the risks and benefits of one to one labour support with usual intrapartum nursing care. The study included 413 nulliparous women who were more than 37 weeks' pregnant, carrying singleton babies, and in labour. Women were excluded if they were undergoing scheduled caesarean section or induction of labour; if they had a breech presentation, if they had hired paid labour support or if, on admission, they were more than 4 cm dilated. Randomisation took place to either one-to-one care or usual care. One to one care consisted of the presence of a nurse during labour and birth, who provided emotional support, physical comfort and instruction for relaxation and coping techniques. Usual care consisted of nurses caring for two or three labouring women simultaneously, with various types of supportive activities. The study found a beneficial trend due to one to one nurse support with a 17 % reduction in risk of augmentation of labour. No significant differences were found in: overall labour durations; overall rates of total caesarean section; caesarean section for cephalopelvic disproportion; epidural analgesia; admission to the neonatal intensive care unit; instrumental vaginal delivery; and perineal trauma.

Support in birthing and the presence of partners during birth

A number of studies have explored the presence of partners during labour and birth. It was important for me to review this literature in order to consider whether there was evidence that would assist discussions in setting up my study. Although I had originally planned for women to be able to choose a female companion of her choice, I was aware that there was a possibility that some women might prefer to choose their husband or male partner, as indeed turned out to be the case. Resistance to the idea of letting men into the Labour Ward at PMGH was anticipated and I therefore set out to review literature pertaining to this topic.

A systematic review was undertaken by Yardley (2009) to explore the role of fathers during labour and birth. Only articles from peer reviewed journals were included. The researchers anticipated difficulties in transferring research findings from differing maternity systems and so they decided that only research carried out in the United Kingdom in the previous 10 years should be included. Only five studies - two qualitative and three quantitative - were ultimately included in the review. The quantitative studies were based on data from questionnaires.

Despite the shortcomings of some of the research in the review the papers provided valuable and interesting conclusions about an area of midwifery practice, which the author identified has been under-researched. It is evident that childbirth is an emotionally and socially significant time for fathers. This review provides some interesting recommendations for practice that may assist midwives in facilitating a positive experience for fathers but it is clear that further research is needed in order to

fully understand the needs and expectation of fathers in other settings. It also adds to my understanding of the impact on the women of having 'partner' support (Yardley 2009).

The study concluded that the midwife should see her role not as just caring for a woman but caring for a family unit. Discussion around what women and their partners would like the man's role to be during labour and birth may be helpful to reduce men's feelings of anxiety. In terms of education, it was suggested that antenatal classes that are specifically aimed to meet the needs of men should be offered. These should give men the opportunity to consider their role, reduce anxiety and equip them to better support their partners during labour, birth and the postnatal period. This is an important consideration for my study where currently there is no preparation for labour for support persons or partners as they are prohibited from entering the labour ward (Yardley 2009).

Other research has studied partners' during labour. Yim (2000) conducted a study in the postnatal ward of a public hospital in Hong Kong using a retrospective, correlation design to measure the relationship between women's ratings of partners' participation during labour and maternal outcomes as measured by anxiety level, pain perception, dosage of pain relieving drug used and length of labour. Convenience sampling was utilised and 45 primigravid women were selected. All women were first time Chinese mothers who were at least 18 years of age. The women had attended antenatal classes and their partners were present during labour. A series of scales were developed to measure the partners' participation during labour. A visual analogue scale was used to measure labour pains. Maternal anxiety during labour was measured by the use of the State Scale of the State-Trait Anxiety Inventory. The study reported that the women's ratings of their partner's practical support were significantly lower than their ratings of

their partner's emotional support. There were no significant associations between levels of emotional support and maternal outcome measures. The perceived practical support was, however, positively related to the dosage of analgesia used for pain relief and the total length of labour.

A similar study by Julkunen and Liukkonen (1998) in Finland used a survey design to describe how fathers who are present during childbirth experience the event, what they feel during childbirth and how they understand the meaning of childbirth. Fathers who were present with their partners at the birth of their babies were administered questionnaires. Over a one-year period 1,677 fathers had been through the delivery room of the University hospital at Kuopio in Finland. Hospitals had allowed fathers, or other support persons, to be present during childbirth since the 1960s. By 1990, 61% of women in labour had the support of their partner or someone else in the birthing rooms. Around the time of this study a total of 2,138 births took place each year with fathers present at 78% of the births. A non-random sampling method was used to select 137 fathers who had attended births between February 1995 and February 1996. During the two-hour follow up period after childbirth the midwives in charge of the births informed the fathers of the study, asked if they would consent to participate, and if so, presented them with the questionnaire with a covering letter. The fathers filled in the questionnaires before the mother and baby were discharged from the hospital, normally within three days, and returned it in a sealed envelope to the maternity ward.

The study found that younger fathers were more uncomfortable than others during birth, however most fathers said they had very good experiences. They stated that being there for the labour and birth was important for their growth into fatherhood and described it

as the best experience ever seeing their baby enter the world. They also said more attention should be given to pain relief options and guidance and support to fathers. They did not specify what type of guidance should be provided.

A partner's role in the Labour Ward is not always clearly defined. Longworth (2006) found that women valued their partners' presence as support and did not necessarily feel a need for them to provide supportive interventions. In an experimental design study in a large university hospital in Istanbul, Turkey, Gungor and Beiji (2007) found that women considered the support of a partner to be crucial to a fulfilling experience, and that their presence could alleviate loneliness, pain, and uncertainty during labour, giving them strength to endure pain. The study's hypothesis was that women whose partners attend labour and birth view their experience more positively than those who are lonely, that the length of labour is shortened when fathers attend labour and birth and the need for pain relieving medication is reduced when women are supported by partners.

Fifty primigravid low-risk women and their partners were recruited to the study. Half of the women were included in the experimental group, and their partners were allowed to participate in labour and birth. The other half were included in the control group, and their partners were not allowed to participate in labour and birth. The couple's experience during labour and birth were evaluated by using the Perception of Birth scale and Father Interview form. The study concluded that the women who had support in labour and birth by fathers had more positive experiences in all aspects of childbirth. There was no relationship between father's support and length of labour, use of pain reliving drugs, or obstetric intervention in birth.

Women's perception of support

Several of the studies already discussed have identified women's perceptions of support in labour after they have given birth. Some studies in places where, like PMGH, support in labour has not been an option, have invited women to comment on their perceptions of the idea of introducing a system to allow support in labour or their opinions following the introduction of such an initiative.

A study in Ethiopa undertaken by Teshome, Abdella and Kumbi (2007) looked at women's views of labour support in a context similar to that in Papua New Guinea. The purpose of the study was to assess the attitudes of women in relation to the idea of labor support in hospital settings. Data on women's views about labour support were collected from 406 women who gave birth at three University hospitals in Addis Ababa; Saint Pauls's, Gandhi Memorial and Tikur Anbessa. This was a cross-sectional study by design. Definitions of labour support were very specific in this study; the researchers defined 'labour support' as continuous non- medical care of a woman, including physical comforting such as touching, massaging, bathing, grooming, applying hot or cold compresses. They defined emotional support as continuous companionship, reassurance, encouragement, anticipatory guidance, information provision, and non-medical advice.

These formal health institutions in Ethiopia had never allowed any companions into the Labour Ward settings. As in PMGH, women were left alone with unfamiliar health professionals, unsupported in a strange environment with no one to attend to all their fears and worries. Home birthing is the common practice in Ethiopia accounting for

almost 90% of the births. Earlier studies in Ethiopia revealed that women preferred to give birth at home because they wanted to be cared for by a relative. Support in labour maybe a strategy to increase facility births.

Data on labour support were collected by trained nurses using a pre-tested questionnaire (Teshome, Abdella & Kumbi 2007). The results were analysed using computerized software packages. The findings of the study revealed that women had a number of fears about labour mainly due to: the associated pain, caesarean section, being among unfamiliar people, and being in an unfamiliar environment. More than half the women said they would prefer to have a companion during birth and they named their preferred companions as their mothers, husbands, partners, sisters or girlfriends [in order of preference]. The reason they gave for wanting companions was that they thought this would provide them with emotional support, information and physical support (Teshome, Abdella & Kumbi 2007).

Those who were opposed to having a companion said there was no need for such a companion as they wished to rely on health workers. Others felt that it was not part of their culture to have support in labour. This is contradictory as women also said they preferred to give birth at home because they wanted to be cared for by their relatives. Regardless, the study showed that there was a need to introduce companions into the Labour Wards. Further exploratory and operational research was suggested in order for a systematic approach to introducing labour support in the hospitals, including policies and guidelines (Teshome, Abdella & Kumbi 2007).

Another similar study in Zambia, Africa, a study undertaken by Maimbolwa, Sikazwe, Yamba, Diwan, Ranjo-Arvidson (2001b) explored the views of 84 mothers and 40 health staff about whether women should be allowed to be attended by a supportive companion during labour in both urban and rural maternity units. The 84 women interviewed were accompanied to the Labour Ward by a support person. Observations were made related to the presence and activity of the social persons and health care staff attendance to laboring women. It was not clearly specified if the social support persons were chosen by the birthing women to provide support. Data were collected for one month at the University Teaching Hospital at Lusaka and one week each at an urban and rural health facility. At each facility, a midwife with research experience and knowledge of the local language collected the data.

All staff in the Zambian study, Maimbolwa et al. (2001) cited hospital policy as the principal reason for prohibiting social support persons from staying with birthing women. Of the 84 primiparous women interviewed, only 60% wanted a supportive companion to be present during labour. The women were being interviewed eight to twelve hours after they had given birth. Their preference of support companion ranged from mothers, sisters, sisters in law to cousins. They did not prefer their partners or spouses as their support companions. Women who had given birth felt their social support persons provided practical and emotional support, guidance, security and company. The study also reported that some women had opposing views to the idea of a support companion saying that they lacked the training in maternity care and hence were not competent to stay with the women in labour. They did not state what component of support they thought the support companion lacked.

The women in the study Maimbolwa et al. (2001) also revealed they did not like the attitude of the health care staff, especially when they asked for assistance during labour. They identified that such negative responses in a strange environment make women frightened, causing stress and making them feel neglected and insecure.

An intervention study to introduce support in labour was recently conducted in Malawi. In four university health facilities, a cross sectional survey was conducted before and after the introduction of a supportive companion by Banda, Kafulafula, Nyirenda, Taulo and Kalilani (2010). The purpose of the research was to study the acceptability and experience of supportive companionship during childbirth by women, health professionals and supportive companions. A combined qualitative and quantitative approach was utilised. A total of 220 mothers, 60 midwives and 325 potential companions were recruited for the first study where women were not allowed to have a support person with them in labour. In the second study women were allowed to have a support person and the study recruited 192 supported women, 148 companions and 25 health professionals. The main outcome measured was the perception on labour companionship among participants.

The findings of the study revealed the majority of both women who had support persons (99%) and health professionals (96%) found the intervention beneficial. The main reasons cited were the provision of psychological and physical support to the birthing woman and assistance for healthcare providers. A few support people (39%) unwillingly accompanied the women they were supporting and three percent of support persons mentioned that their presence in the Labour Ward setting was an opportunity for them to learn how to conduct births (Banda et al. 2010).

There is no evidence to identify whether the developing countries who carried out the preliminary research into the introduction of support in labour cited above actually implemented support in labour as a main stream option for their maternity units. Reporting on the wide scale implementation following such studies is lacking.

It is evident that being alone in a labour ward setting during labour can be a lonely and a stressful experience for some women. Essex and Pickett (2008) studied this issue in their millennium cohort study, which is a large scale survey of babies born in the four countries of the United Kingdom of mothers without companions . The goal of their study was to first compare the characteristics of women who were unaccompanied at birth with those who were accompanied, and secondly to establish whether or not being unaccompanied at birth is a risk marker for adverse maternal and infant health outcomes. The sample comprised of 16,610 mother infant pairs, excluding women with planned caesarean sections.

The findings of the study revealed that women unaccompanied at birth were more likely to have a preterm birth, an emergency caesarean section, general anesthetic and a low satisfaction of life nine months postpartum (Essex & Pickett 2008). Their infants had significantly lower birth weight and were at a higher risk of delayed gross motor development. Women who were unaccompanied at birth were more likely also to have low scores on a measuring scale of maternal satisfaction with childbirth. In other words, labour support increased women's positive experiences and satisfaction with childbirth. This is significant because it is known that the childbirth experience can exert a powerful lifelong effect on women. Being unaccompanied at birth might therefore have

some potential as a risk marker for women and infants who might benefit from close follow up and support for parenting.

Gaps in the evidence and support in labour in developing countries

It is evident from all the literature reviewed that although there has been extensive research into providing support in labour there is very little information concerning the implementation aspects of introducing such an intervention. In Western countries where support in labour has been implemented for many decades studies revealed benefits of providing support in labour. In developing countries when childbirth shifted from home to the hospital, many childbirth practices were lost or subsumed by technological interventions, and for a long time, women suffered a loss of companionship during birth in the formal Labour Ward settings.

There is a need for further global research into the reluctance of midwives to embrace providing support in labour, particularly in settings where support people are not allowed into birthing settings. The premise for this is the need for change in light of the wealth of evidence that support in labour has important benefits, not only for women but also for babies and arguably for families and societies. It is also possible that if women in developing countries can have support in labour from a companion of their choice they will be more willing to attend facilities to give birth and receive care from a skilled birth attendant.

Conclusion

The studies identified in this literature review offered important insights for discussion with colleagues at PMGH, where there is usually not the luxury of choosing whether or

not to provide support due to understaffing and the number of babies born each day. There is, however a culture of not providing support, even when the Labour Ward is less busy. In particular, sharing the evidence for improved outcomes associated with continuous support from non-professionals was an important strategy when engaging colleagues to support my study. Evidence will continue to support the efforts of all who wish to see the situation change at PMGH.

The next chapter describes the design and methods used in this study.

CHAPTER 4: DESIGN AND METHOD

Introduction and overview of stages

This chapter provides an overview of all four stages of the study. It also outlines the methods that guided the study. The design of the study was descriptive, aiming to gather mostly qualitative data about introducing the provision of support to the birthing women in the Labour Ward of the maternity unit at Port Moresby General Hospital. Methods included: audio-recording and field notes of meetings; participant and non-participant observation using an observational tool; questionnaires; and interviews of midwives, birthing women and the support person of their choice. The study was conducted in four stages. For each stage, an outline identifies the aim, method, sample, data collection and data analysis respectively. Initially, the ethical considerations are described including the approval processes.

Use of descriptive qualitative study

Qualitative descriptive designs are typically an eclectic but reasonable and well considered combination of sampling, and data collection, analysis, and re-presentational techniques (Sandelowski 2000a). Descriptive studies use a variety of approaches to measure the variables of interest, including observation or questioning of the participants via a questionnaire or interview (Elliot et al. 2007). Qualitative descriptive studies are arguably the least 'theoretical' of the spectrum of qualitative approaches, in that researchers conducting such studies are least encumbered by pre existing theoretical and philosophical commitments (Sandelowski 2000b). I chose to use this design because I wanted to highlight the issues surrounding implementation of providing support in labour. As Sandelowski (2000b) suggests, comparisons to other methods are

for the purpose of illumination, not ranking or denigration. As long as I was in the field, I was obliged to consider as data whatever I observed in the field (Sandelowski 2000b), bearing in mind that experiments aimed at predicting and controlling are the gold standard when compared with designs that are non experimental and weak (Talbot 1995). Nonetheless, for the purposes of my study, a rich description of the context, issues and processes involved in implementing support in labour was required. Hence a descriptive study design was seen as most appropriate. In addition, previous randomised controlled trials had shown significant benefits from support in labour so it was decided that another trial of this design was not needed.

Ethical Considerations

The study was approved firstly by the University of Technology, Sydney's Human Research Ethics Committee in February, 2009. Ethical approval was also granted by the University of Papua New Guinea's School of Medicine and Health Science. The institution where the research study was to be undertaken, Port Moresby General Hospital, also provided ethical approval to conduct the study. Copies of the ethical approvals from these institutions were submitted to the National Health Department's Ethics Committee for acknowledgement purposes as required. The process of obtaining ethical approval in Papua New Guinea took longer than expected which delayed the commencement of the study.

All those who participated in the study did so voluntarily. No one was coerced to participate. All consent forms had information sheets attached to them for the participants' perusal. I as the researcher explained the study verbally to participants, especially to those who were unable to read or in situations where it was inappropriate

to expect them to read (for example, when women were in labour). All participants were also assured that the information they provided to the study would remain confidential.

Study setting

The main setting for the study was the labour ward of the maternity unit at the Port Moresby General Hospital (PMGH) where the intervention of care of women in labour provided by a support person was implemented. The other areas included in the study, within the maternity unit, were the antenatal clinic and the postnatal wards. The reason for their inclusion was that pregnant women attending the antenatal clinic were informed about the study and advised about the potential to bring in a support person when they came into labour. Women who received care from the support person during labour were followed up and interviewed in the postnatal ward. Interviews with midwives and meetings also took place in other areas of the maternity unit of PMGH.

Stages of the study

The study was conducted over four stages. These are summarised in Table 2 and described in detail in the next section.

Table 2: Stages of the study and a brief description of each stage

Stages	Brief Description of Each Stage
Stage One: Pre - Implementation	Aim: To explore current practice in labour ward and assess the challenges ahead for the study. Midwives in labour ward were observed using a non participant approach to better understand the current practices and to identify some of the challenges in bringing about change in relation to support in labour. Individual meetings were held with midwifery and obstetric managers.
Stage Two : Information and Engagement	Aim: To explore the issues associated with the change with midwives and managers and engage with some senior nurses as the champions. A main meeting was held with midwives and managers. Other smaller formal and informal meetings were also held.
Stage Three: Implementation	Aim: To recruit women and midwives and implement the intervention support in labour by a person of the woman's choice. The support person came in with the woman and labour support was observed by the researcher in the labour ward.
Stage Four: Post Implementation	Aim: To evaluate the implementation of the intervention. Midwives filled in questionnaires and interviews were conducted with women and their support persons were in order to complete questionnaires. Several women and their support persons were able to fill in the questionnaires themselves.

The tools used for data collection during all the four stages of the study were formulated through a comprehensive literature search, consultations with my supervisors and various discussions with student colleagues during group supervision sessions. This is outlined in Table 3 and described in more detail in this chapter.

Table 3: Outline of stages of the research and the data collection methods for each stage

Research Stages	Data Collection Methods	Participants
Stage One: Pre - Implementation	Field notes of meetings and observations; Observational tool to examine care and processes in labour (tested at UTS prior to commencing field work).	Maternity Unit Managers and obstetric leaders at PMGH Midwives and CHWs in labour ward, PMGH.
Stage Two: Information, Engagement and Exploration	Audio-recording and minutes of main meeting; Field notes of meetings; Questionnaires.	Maternity Unit Managers at PMGH; Midwives and CHWs in labour ward, PMGH; Midwives.
Stage Three: Implementation	Observation using structured observational tool; Questionnaires and Interviews ; Field notes of observations.	Women in labour and support people who participated in the study.
Stage Four: Post Implementation	Questionnaires and interviews; Field notes of reflection	Midwives at PMGH, CHWs, clerk, support persons, birthing women.

*CHW: Community Health Workers

A detailed description of the study stages outlined in Table 3 and Table 4 is discussed in the following pages.

Stage One: Pre-Implementation

Aim

The first aim of the Pre-Implementation Stage was to observe the activities in the Labour Ward at PMGH to determine the level of support and the processes of care in labour that were provided to women by the midwives. The second aim was to investigate the potential issues associated with implementing support in labour in the PMGH through meetings with the midwifery and obstetric managers and leaders. It was anticipated that these activities would provide a better understanding of current practice in the maternity unit at PMGH and identify some of the challenges that might arise in bringing about change.

Method

A number of processes were employed during, Stage One. These were:

- Meetings with managers (midwifery and obstetric)
- Deciding with the labour ward manager the area to be used for the initial observations on women in labour
- Obtaining consent from the women for observations
- Undertaking observations

These processes will now be explained.

1. Meetings with managers in the maternity unit (obstetric and midwifery)

Two informal meetings were undertaken with both the Professors of Obstetrics and Gynaecology at PMGH. It was important to meet with these doctors prior to meeting with the midwifery managers because as senior obstetricians they needed to be aware of

the study. I also wanted to provide them with an opportunity to ask questions and make suggestions and contributions. The first professor will be known as Professor A in this thesis and the second will be known as Professor B. These two are the leaders in obstetrics. I made the appointments through their office, as arranging a meeting with them directly was difficult. The first appointment was with Professor A. We met in his office and I had papers related to my proposal with me in order to show him a brief overview of my study. He felt that I should conduct a randomised control trial for my study, that is, I should randomly allocate half the women to support in labour. This was a problem as ethical approval was not given to me on the basis of conducting a randomised control trial. I decided at that point in time to wait until the meeting with Professor B before addressing these issues.

During my meeting with Professor B, it was evident that he understood the plan to implement and test the provision of support in labour and recognised that I was not planning to undertake a randomised controlled trial. He agreed that I should not do a randomised control trial on the grounds that it would be likely that any new trial would show the same results as those of previous studies. He was aware I had already been in the country for some time waiting for ethical approval without being able to commence the project, so he urged me to hasten completion of Stages One and Stages Two of the study and start the implementation stage (Stage Three).

I then met with the two senior managers of the maternity unit, two midwives (one of whom was the Maternity Unit's Administration Supervisor and the other was the Labour Ward Manager), to negotiate carrying out my initial observations of the current

practice in the Labour Ward. I made field notes of these meetings. The senior managers all indicated support for the study to be implemented.

The maternity unit midwives meet once a week, and I was invited to one of these meetings by the Maternity Unit Administration Supervisor. The meeting was open to all midwives in the wards that are part of the maternity unit. The meetings are held in the lecture room. The lecture room was recently renovated for presentations and other purposes that are deemed educational by the unit managers. It is located within the administration block of the maternity unit. I had been asked to give the talk a week earlier. The Maternity Unit Administration Supervisor was holding a session the same morning for another topic and asked if I would also talk about my project after she had done her presentation. I took the opportunity as I wanted the midwives and the community health workers to be aware of my study. I did not want to start without their knowledge of the purpose and nature of the study. During the meeting, the implementation aspect of the study was discussed and it was further explained this was going to be a pilot study. The stages of the study were identified and outlined to the midwives as well as an estimation of the time frame in which the study would occur. I also offered to make myself available to them if they needed any assistance with anything related to the project.

2. Deciding on the area to undertake the initial observations

The Labour Ward Manager encouraged me to choose an area in the Labour Ward to undertake my initial observations. I identified three cubicles in the Labour Ward that would be appropriate for this purpose. There were two work-desks from which the midwives and community health workers and doctors worked, referred to as ‘Nurses’

Station One' and 'Nurses' Station Two'. I decided to focus on three particular cubicles because of their location and their proximity to Nurses Station Two, where I would be able to sit and observe while also being reasonably close. The midwives were less likely to use 'Nurses' Station Two' as they would only use it to record the births and I felt it was thus a less intrusive sight from which to carry out observations. Furthermore, the beds on either side of 'Nurses' Station One were often empty as they were always kept on standby for very sick women and emergency referrals. These women were referred in from rural health centre and villages within the National Capital District, Port Moresby or other provinces in Papua New Guinea (PNG). I felt that observing these women would not be representative of all women.

Nurses' Station Two had a reasonable view of both sides of the corridor, however I could not concentrate on observing activities on either side at the same time. My observations were therefore focused only on one side of the corridor. The cubicles have curtains; however they do not pull right across the cubicle to provide total privacy for the birthing woman. This is demonstrated in Figure 3, which shows a photo of the Labour Ward. The doctor in the photograph is in front of Nurses' Station Two.

Figure 3: Cubicles in the Labour Ward at PMGH

3. Obtaining consent for the observations

In order for the observation to be undertaken, consent had to be obtained from both the midwives as well as the women who were in the relevant cubicles. Information about the study was provided to both groups of participants prior to obtaining consent. This initially took place immediately prior to commencement of the observation, as it was impossible to meet the participants before this time. The midwives were provided with verbal and written information about the study [See Appendix 6] and if they agreed to participate, they were given a consent form to sign [See Appendix 7]. The women in labour were given verbal information about the study and asked to provide verbal permission prior to being observed. The reason for not seeking written consent was that it was seen as an inappropriate time given that the woman were in strong labour. The nature of the study as well as purpose of the observation was explained to them and all women agreed to participate, providing verbal consent. The specific activities to be observed at this stage were not revealed to the midwives in order to avoid influencing their behaviour. They knew they were being observed about midwifery practice and support in labour as that was the topic of my study.

4. Undertaking the observations

Developing the observational tool

An observational tool was adapted from research done Gale (2001) who observed the amount of time that midwives spent providing supportive care to birthing women. Her study involved the observation of nurses providing supportive care to the birthing women in a birthing unit of a Canadian teaching hospital in Quebec. The main purpose of Gale's study was to examine the amount of support being provided by nurses to women during childbirth and to examine factors that influenced the provision of

support. Her descriptive study utilised a work sampling technique to determine the amount of time the labour and delivery nurses spent providing supportive care. A total of 12 labour and delivery nurses participated in the study (nurses are the usual providers of care during labour in this hospital in Canada). The nurses were observed for the activity in which they were engaged at the time and this was recorded based on a structured observational checklist. Nurses were unaware of the supportive care focus of the study which was to examine elements of care. Activities were coded and categorised as 'supportive care' (physical care for comfort purposes; emotional support; instructional informational support; and advocacy actions). Analysis of the birthing unit over six non-consecutive day shifts revealed that nurses spent only 12% of their total time providing supportive care to labouring women. Of the supportive care activities, instructional or informational support was the category most frequently observed (70% of the total support provided).

I adapted Gale's (2001) tool to suit the context of my study. I formulated the framework, which included columns and rows using the components of support activities (physical care for comfort purposes; emotional support; instructional, informational support; and advocacy actions). It was formulated in a way that each time a midwife provided the listed type of support activity, it would be ticked off to verify what type of support the women received.

Piloting the observational tool

The observational tool was pilot tested out in a structured role-play at UTS prior to being used in PNG. Student colleagues and midwives engaged in a role-playing activity in a midwifery simulation laboratory at UTS. Prior to the role-play there was a briefing

to the student colleagues and the midwives about what was expected during the session. This was done by my supervisor, who acted on my advice about the context and situation in the labour ward at PMGH. We attempted to simulate the labour ward during the role-play.

The initial structured observation tool I had in place prior to the role-play was a checklist of supportive care activities. One structured observation tool was to be used for three birthing women at a given time. The checklist was to be ticked off each time a particular supportive activity was offered to any of the three birthing women who were being observed. There was also a section for comments at the bottom of the checklist. It did not include any column indicating the amount or length of time support was provided to a woman.

The first role-play simulated the Stage One observation session where there was no support person involved. This is the usual practice at PMGH. There were three cubicles in use for the role-play which were partitioned by curtains for privacy although not fully closed. Again, this is a very similar situation to the Labour Ward in PMGH. Three student colleagues acted as birthing women, with the others acting as doctors, midwives and relatives. Those who were relatives were not allowed into the labour ward and were asked to wait outside as is usual. I positioned myself in front of the three cubicles from where I could observe how the birthing women were being cared for by the midwives and the doctors. I had the structured observation tool and used it to record the care the birthing women were given. The care observed included: physical comfort measures such as, giving sips of water, massaging, touching and holding hands, applying cold compresses, emotional support and informational instruction such as giving

reassurances, coaching with breathing exercises and information giving. During the observation I would shade the relevant square on the tool when the different forms of care were provided. I was particularly observing for the duration of time that the midwife would actually spend with the birthing woman. I measured the time using a wristwatch. After the first session there was a feedback discussion session so my colleagues had the opportunity to either ask me questions or offer some suggestions.

The second role-play simulated the observation session during labour when a support person was present. This would be equivalent to Stage Three of the study. The same process took place again in the same cubicles, however this time the support person was present. I seated myself again at the same site observing the support person. The same structured tool was used again, observing for the same activities as outlined above. Again the activities were being shaded off each time they were provided to the birthing woman. The length of time that each activity was performed by the support person was also recorded and shaded in the appropriate column. After the simulation activity, we had another feedback discussion where suggestions were offered for improvement in my observations and the structured observation tool.

During this session with colleagues in the midwifery simulation laboratory, I also practised how I would carry out raising awareness about my study with pregnant women at the antenatal clinic. While my student colleagues and the midwives were seated on chairs, I gave a talk about the study to my colleagues who were pretending to be the pregnant women in the antenatal clinic at PMGH. The ‘pregnant women’ were advised of the nature of the study and the potential benefits of the study. They were also advised that they were to bring a support person of their choice along if they wished to

participate in the study. They were reminded they would have to abide by the guidelines of the Labour Ward if they were to participate. The 'pregnant women' were encouraged to ask questions if they had any doubt about the study. A few of my colleagues who were participating in the role-play asked questions and I practised explaining appropriately.

At the end of the role play there was another brief discussion session, which enabled student colleagues and midwives to contribute, or ask questions relating to the role-play. The contributions and questions from colleagues and midwives helped me consider the issues in a wider perspective and helped guide the changes to the final structured observation tool that I would use for data collection.

Amendments to the observation tool made after the role-play were the inclusion of boxes identifying time in five-minute blocks against each supportive care activity. The comment section was moved to the end of the structured observation tool. In the amended tool, one structured observation tool was to be used for each birthing woman as it was too difficult to use one tool for three women. The amended structured observation tool was reviewed by my supervisor prior to it being used in PNG. The final version of the observational tool is in Appendices 10 and 11.

Using the observational tool

In PNG, I observed midwives attending women in labour for two weeks during the month of June, 2009. The midwives had been allocated to women according to the normal duty allocation processes; usually one midwife was responsible for six or seven women at a time. At times, when there were only three midwives on a shift, one

midwife was responsible for eight, nine or ten birthing women at a time. This is commonly the situation on a daily basis. The observation was undertaken using the structured observation tool. This process will now be discussed in more detail.

Sample

Women admitted to the Labour Ward at PMGH during the observation period were the main sample for this stage of the study. I also included the midwives and others who were rostered to work during this time and providing care to the women I was observing. The women were those who were allocated to the three cubicles that were the study site.

Data collection

The structured observation tool was used to collect the data. The observed support activities were: physical comfort, emotional support, instructional information and advocacy. Snapshot recording was undertaken over a 30 minute period for each woman. The rest of the time was spent making field notes about the support activity provided to the women. The length of time was also slotted under these supportive activities marked in five minutes blocks up to thirty minutes. The length of time a midwife spent with the birthing women providing any one of the supportive activities was shaded in the appropriate column.

Table 4 identifies the observation schedule, which was convened over fifteen days. It outlines the time of observation and the number of women who were observed.

Table 4: Record of observational activity – Stage One

Day	Morning h/m	Afternoon h/m	Number of women observed
1	3.30	3.15	3
2	3.30	4.15	3
3	2.00	3.00	2
4	3.00	0.30	3
5	-	1.45	3
6	-	4.45	3
7	-	3.30	3
8	-	3.15	2
9	3.00	-	2
10	-	2.45	2
11	-	2.0	1
12	-	3.5	3
13	-	3.25	3
14	3.15	-	3
15	4.00	-	3
Total hours of observation		57	
Total number of women observed			39

Data analysis

All data for Stage One were entered into an Excel spreadsheet. The care received in minutes was all summed and divided by the total number of minutes observed for all the women observed. Each of the four supportive care activities were calculated based on the proportion of the total care spent on each supportive care activity and this was expressed as a percentage of the total time.

Stage Two: Information sharing, exploration and engagement

Aim

The aim of Stage Two was to explore the issues associated with undertaking the proposed change with midwives and managers through a series of meetings and to engage senior midwives as champions.

Methods

The methods used in Stage Two included a series of meetings at which I made field notes. A main meeting was held where the majority of the time was designated for me to talk about the study and answer questions. This meeting was audio-recorded. Questionnaires were distributed to all of those present. Questionnaires were also distributed to members of midwives who were not able to attend the main meeting. There were several meetings conducted for other purposes that served as vehicles to disseminate information about the study and I also engaged with midwives in informal discussions about the project at every opportunity. These other meetings are described later.

The main meeting

The main meeting occurred soon after the Stage One was completed. I distributed a notification for the main meeting in the labour ward, postnatal ward, and antenatal clinic, inviting midwives members to attend in order to learn about the research. These were the wards where participants would be involved in the study. Midwives and community health workers from the wards that were not directly involved in the study – the gynaecology and antenatal ward - were also invited. I invited midwives from these wards because all midwives and community health workers had had experience of working in the labour ward at some stage. I thought that involving all midwives in the meeting, even if they were currently not working in the labour ward, would enable everyone to contribute ideas and discuss the implementation of support in labour. Approximately 30 midwives and community health workers from across the maternity unit attended the main meeting, which was convened in the side room of the labour ward. This room is often held for lectures for obstetricians and midwives.

At the commencement of the meeting, I acknowledged my appreciation of the participants' attendance. I then talked through the stages of the study and outlined these on large sheets of paper. I provided this information in order to give the attendees a clear picture of the study, including the aims and objectives. Although I had prepared PowerPoint slides, I could not use them because of the lack of computer and data projection facilities in the labour ward. I requested permission to audio-tape the meeting proceedings and invited people to fill in the questionnaires that I distributed after the meeting [See Appendix 12].

In the meeting with the maternity unit midwives, the information sheets and consent forms for the study were attached to the questionnaire. Participants in the meeting were invited to sign the consent form and fill in the questionnaires. I explained that if they did not want to participate in the study they could simply return the questionnaires and the consent form to me without filling them in. Of the 30 participants in the meeting, 22 questionnaires were completed (70% response rate).

One of the aims of the main meeting was a request for volunteers as to act as 'champions' in the project. This was an important aspect of the study as I was aware that the support of champions would facilitate the implementation of support in labour in the pilot study and in the long term, particularly if they were viewed as champions and highly regarded by other midwives. Champions and opinion leaders are those who are seen as likeable, trustworthy and influential and are key actors in the diffusion of innovations (Doumitt et al. 2011) and (Flodgen et al. 2011). During the main meeting, potential champions volunteered their services as champions of the project.

I explained the purpose of having champions to the participants in the meeting. I explained that the 'champions' would be those who were prepared to guide and promote the implementation and have ad hoc meetings with me from time to time to assess the progress of the project and address any complaints that might arise from the implementation process of support in labour. I did not want to be viewed as imposing extra tasks on midwives by selecting the champions. I asked for volunteers, to ensure that nothing was imposed on them. The manager of the Labour Ward was the first to volunteer. She suggested that the Labour Ward clerk would be a good champion as well. There were altogether eight midwives, one senior community health worker and one clerk from the Labour Ward and other surrounding wards of the maternity unit who volunteered to be champions. The identification of the ward clerk as a champion was important as she receives women in labour when they come in the Labour Ward and would therefore play a crucial role in recruitment.

Issues identified by midwives in the meeting

The main meeting provided a crucial opportunity to consult with the midwives and community health workers concerning potential guidelines for the implementation of a woman having a support person in labour. I discovered through my informal meetings with the managers of the Maternity Unit and the responses to the questionnaires that a trial of support in labour had been attempted two years previously, but did not go ahead. The reasons put forward were firstly that there were no guidelines in place for having a support person with the birthing woman, secondly that there was no one to coordinate the trial and thirdly that there were constant changes in ward managers. These reasons resulted in support persons walking in and out of the Labour Ward whenever they

chose, creating a lot of frustration for the Labour Ward midwives as well as disruption for other women. As the Labour Ward cubicles are not particularly private, women's privacy was not maintained. There was also a lot of congestion given the limited space in the Labour Ward. The Manager of Labour Ward's view was that the constant changes of midwives in the manager's position as well as in the Labour Ward meant that the introduction of support in labour had never been sustained. When I asked for suggestions and contributions to the formulation of guidelines, the midwives were clear that, drawing on their previous experiences, the development and implementation of guidelines would be important.

During the meeting, the participants discussed the guidelines they felt should be followed by the support person if they were to implement support in labour. The guidelines for the implementation of support in labour were then developed with the participants that is, the midwives and community health workers during the meeting. They contributed 18 components that made up the guidelines. Drawing on my minutes and the audio recording of the meeting I drafted the guidelines and distributed them for critique to those who had volunteered to be champions of the project. I also distributed with the minutes of the meeting to those who had attended as well as to all the Labour Ward midwives who had not attended, with an invitation to comment. I put these documents in an envelope and personally distributed them so that I could engage in conversations. I invited respondents to return their suggestions on the guidelines in hard copy to myself or the Manager of the Labour Ward. Some took up the invitation to contribute their ideas verbally to me prior to my completion of the final draft. I made adjustments to the document based on written and verbal feedback so that a final draft was in place and ready for distribution to the midwives and the support persons within a

week. The initial meeting took about 45 minutes this time frame included the formulation of the guidelines and light refreshments.

Other meetings and engagement with midwives

The research was also discussed at four other meetings after the main meeting two of which I attended. These meetings were the routine meetings for the Maternity Unit. They provided an additional opportunity for me and the Labour Ward Manager as one of the champions of the project, to give information to the midwives regarding the study. These meetings were important for providing information and explaining my role and the purpose of the research.

I ensured that I was aware of weekly activities such as presentations and meetings going on within the maternity unit, including any sensitivities and challenges associated with those meetings. Most importantly, I ensured I worked very closely with the ward managers of the three main wards involved in the study, that is, managers of the labour ward, postnatal ward and antenatal clinic. I also engaged in informal discussions with midwives about the project at every opportunity.

Data collection

The data collection for Stage Two included the field notes that I made after each meeting, both formal and informal, the audio-taping of the main meeting and the questionnaires which were given out during the main meeting. For midwives who did not attend the meeting, I placed questionnaires including the information sheet and the consent form attached in their envelopes and left these in their work pigeon holes with a request to return them within one week. Other forms of data collection included the

guidelines that were formulated through participation [Appendix 10] and the minutes of the main meeting that took place. The questionnaires were undertaken to seek the views of midwives on the introduction of providing support for the birthing women in labour. A copy of the questionnaire is in Appendix 1. The questionnaire was developed by examining the literature from similar studies. The completed questionnaires were collected within a week by myself or were left with the Labour Ward Manager as directed in the instructions for completion.

Analysis of Questionnaires

I undertook a content analysis of the questionnaires. Initially I grouped all the respondents' answers under each of the five questions in the questionnaire. [Appendix 13] I then colour coded the emerging themes, firstly by hand and then on the computer. This process of double colour coding was done to ensure no recurring theme was left out and it informed how I analysed the data. The findings are presented in Chapter 5.

Stage Three: Implementation

Aim

The aim of Stage Three was to recruit women who would like the option of having a support person of their choice in labour; to implement and observe the intervention; and to evaluate the experiences of the women and their support persons.

Methods

The activities undertaken during this stage of the research were:

- Raising pregnant women's awareness of the study in the antenatal clinic

- Recruitment of women in the Labour Ward and distribution of guidelines for the support person
- Observation of support provided by the support person
- Interviews with support persons after the birth
- Interviews with the women after they had given birth

These phases will be described in more details in the next section.

Data Collection

Data were collected via field notes, observation during labour using a structured observational tool [Appendix11], and questionnaires, most of which were completed through interviews with women and their support persons following birth.

1. Raising pregnant women's awareness of the study in the antenatal clinic

The process of raising women's awareness about the study was undertaken over a two-week period from Monday to Thursday - the days when antenatal clinics were conducted. I advised groups of pregnant women who were waiting in the antenatal clinic about the nature and the purpose of the study and invited them to consider whether they would want to have a support person with them in labour.

While the initiative was offered to all women, I made it clear that only those who presented within the time frame given for the study would be able to have their support person with them. Altogether, I spoke with about 200 pregnant women in the two weeks that I attended the antenatal clinic. At the beginning of each clinic there were about 15-20 women sitting on forms in the antenatal clinic. It is standard practice for the women to arrive at the same time and for a prayer to be said before the clinic starts. On each

occasion the Antenatal Clinic Manager (one of the champions of the project) said the prayer and then invited me to talk to the women about the project before any of them started the routine observation carried out in the clinics.

The women were given the opportunity to ask questions. This provoked them to have discussions amongst themselves and with myself and the manager.

While it was initially planned to recruit participants in the antenatal clinic, the Labour Ward Manager and I both agreed that formal recruitment should occur on admission to the Labour Ward. This was a pragmatic decision to avoid confusion that had been experienced by participants in previous studies at PMGH. As much as possible, we wanted to avoid unnecessary additional disturbance of work for midwives and community health workers due to recruitment and the presence of relatives of the woman who were in labour. Only four beds were to be allocated for support in labour in this study and therefore there was a need to avoid recruiting a large number of women, many of whom might be disappointed if they were unable to have a support person with them as planned. Also, on the Labour Ward, those who were going to be able to have a support person with them would be given the opportunity to ask questions so that I would be able to clarify things with them and gain consent at the time.

2. Recruitment of women and distribution of guidelines for the support person

As described in the description of Stage Two of the research, guidelines for support in labour were developed through a process of consultation with maternity midwives. I had also developed consent forms and an information leaflet for participants during ethics submission [Appendices 6, 7, 8 and 9].

Pregnant women in the antenatal clinic were advised of the process that would take place if they came into labour during the period of the study at a time when I was in the Labour Ward. On arrival at the Labour Ward admission reception, they were to advise the ward clerk that they had brought a support person with them. The ward clerk would then give the woman and her partner the guidelines to read if they were literate or advise them of the guidelines if they were unable to read. The guidelines were in English. The ward clerk would advise the support person to wait until one of the four beds allocated for the project was available. Following allocation to one of these beds, the support person would be able to come into the Labour Ward and be with the woman in labour. During the awareness raising sessions in the antenatal clinic, the pregnant women knew that the reality at PMGH is that the labouring woman often sits on a bench in the Labour Ward reception area while she waits for a vacant bed. Only on occasions she will walk straight into the Labour Ward and find a bed available as the ward is usually very full. I constantly would enquire if there were any women who were disappointed that had brought their support person but were unable to come in due to being in non-study beds.

The plan was that, once a woman was allocated to one of the four rooms where support people were allowed entry, I would be advised that there was a woman with a support person in the area allocated to the study. I would then approach and greet them, and talk to them about the research and ask them to sign the consent form. At the same time, I would go over the guidelines again with the woman and her support person. I would also give both of them time to ask questions, and encourage them to ask later if they needed clarification on anything. There was always a chair given for the support person

to sit on although it was not in use a lot of the time as the support person needed to stand in order to support the woman with physical comfort measures such as back massage, and helping the women change position.

3. Observation of support provided by the support person

The intervention of support in labour was implemented over a period of eight weeks. Altogether there were a total of 25 women and 25 support people who participated in this stage of the study. It can be noted that prior to the implementation of the study in Stage One, I was able to observe 39 birthing women. During the actual implementation of the study in Stage Three fewer women actually received support in labour. This issue will be discussed further in the thesis.

I filled in the structured observation tool [Appendix 11] when carrying out observation and also made field notes. While the support person was present I assigned myself to work with the midwife caring for women in the beds that included the study beds. I advised the midwife that I would do simple tasks such as taking observations, not only for the birthing women being studied but also for any other women under the particular midwife's care. This gave me a better opportunity to observe while working, so the support person did not feel intimidated by me sitting all the time observing them.

In my initial plan, I was to be a non-participant observer. This was, however, difficult for me in the real world setting of PMGH. The cubicle is quite small and I felt that the support person would have felt uncomfortable with my direct observation. The Labour Ward is also very busy with few staff and I felt that merely observing the care was inappropriate and I needed to be involved and assist. I therefore decided that maybe I

could accomplish what I really wanted in terms of observation if I participated to a varying degree in the Labour Ward's daily activities. I also thought this would give me rich information to contribute to my observation data. Interestingly, this is confirmed by Hunt (2002): 'Some even argue that it is only when the researcher becomes participant that rich data can emerge.'[p. 40] I therefore assisted with the work while I kept my eyes and ears open to the activities carried out by the support person, only taking minutes off to record what I needed to chart in the structured observation tool and to make field notes. I would make time to converse with the support person to see how they were feeling and to find out how they were experiencing the process of being a support person. This practise did impact on the completion of the observational tool. This is because I was never far from the study beds.

I closely observed if the woman and her support person were conversing, whether she/he was rubbing the woman's back, giving sips of water, or accompanying her to the bathroom. Though the initial proposal was for a female support person, I could not refuse women who had wanted to have their husbands in the labour ward as support persons. Initially, the first two husbands were allowed in with their wives by midwives on duty when I was still making my way to the Labour Ward to observe.

I was able to observe all the listed activities in the structured observation tool while doing minor tasks assisting the midwife assigned for the study beds. On some occasions I would be observing two women with their support persons, with one pair on each side of the corridor. This was due to the fact I was actually walking around and not just sitting in one particular place at the midwives desk (as I was when undertaking observations in Stage One).

Through the process of implementation of support in labour, there was never a chance for the 'champions' of the study to meet as a group. This was due to the fact they all worked on different shifts or in different areas. I would talk to them each time I would meet up with them individually. I would update them on the progress of the study and discuss a few issues affecting the study. They would make suggestions and give me information, which I would need for the ongoing implementation and evaluation of support in labour.

During observation sessions, the Labour Ward Manager would allow women with support persons to beds that were not identified for the study. This was if there was an unwell woman in labour and if the study beds were used by women who were not involved in the study. I would then do the same thing, assist the midwife and observe the care given. I would take time to stand opposite the cubicles to fill in my structured observation tool and to write field notes.

4. Interviews with the support persons after the birth

After the women had given birth, I conducted interviews with both the women and their support persons using structured questionnaires. The support persons were interviewed soon after the birth as there was an urgency to carry out this task before they left the Labour Ward.

The interviews with the support persons used the structured questionnaire [Appendix 15]. I realised that I could assist with filling in of the questionnaire for the support person, particularly if they were in a hurry to go home. Interviewing them while filling

in the questionnaire enabled me to probe further if I needed to; this was in instances when I sensed the support person had more to express than the questionnaire was able to illicit. Some did not want to fill in the questionnaire on their own and others may have been unable to by themselves due to literacy problems. In total, 23 of the 25 support people were interviewed and either they or I completed the questionnaire. Refer to Table 5 for the interview strategy.

The support person remained with the woman until she gave birth and many assisted with breastfeeding or anything the woman needed immediately after birth. I would ask the support person to wait in the reception area for me to undertake their interview. The interviews were conducted at a location in the reception area out of everyone's sight. I ensured I followed up after the support person's exit from the labour ward in order to carry out the interview. I missed three of the participants as they had to wait for more than ten to fifteen minutes. They may have been excited about going home to notify the relatives of the birth or to bring food back for the woman. It was difficult to make contact with them once they had left, unless the woman had a contact number for them. Not everyone owns a mobile phone, which made phone contact difficult.

5. Interviews with the women after they had given birth

There were 25 women altogether who participated in the interview and questionnaires. The table below explains the data collection approach that is, whether they were interviewed or filled in questionnaires. Data were collected on each woman about 30 minutes to an hour after she had given birth. The interviews used the structured questionnaire. The questions focused on the women's experience of having the support person with them, what they thought about the idea, and how they would have liked to

be cared for if they were to be looked after by a midwife [See Appendix 14]. I was very much aware of the women's physical and emotional circumstances. I did not want to intrude if they looked very exhausted and tired, however I always managed to interview them at some stage. Only three women filled in their questionnaires alone and I interviewed the remaining twenty two, (two by mobile phone and the remaining twenty face to face and completed the questionnaire with them, filling in the details of their responses.

Table 5: Interview strategies for women who received supportive care

Method of data collection of data collection	**Number of birthing women**	Number of support persons
Face to face	20	17
Interview by mobile phone	2	3
Self filled questionnaires	3	3
Not interviewed	0	2
Total	25	25

There was also an unexpected challenge that arose at this time in the research process. There were renovations taking place in the postnatal ward, and so women were likely to be discharged a couple of hours after giving birth rather than going to the postnatal ward. This made me all the more determined to be very diligent and careful to find women and reach them before they went home. There were instances when the woman had been discharged before I was able to engage with her in the completion of the questionnaire. Because the women had consented to participate in the study, I was able to follow up by phone and interview them from my work office if they had a number attached to their birth register record. In this way I was able to do five mobile phone interviews.

Analysis of Interviews

The analysis process performed for this stage was the same as that completed in Stage Two. This included a content analysis of the questionnaires. Initially I grouped all the respondents' answers under each of the seven questions in the questionnaire [See Appendix 14]. I then colour coded the emerging themes, firstly by hand and then by computer. This process of double colour coding was done to ensure no recurring theme was omitted. The findings are presented in Chapter 5.

Stage Four: Post Implementation

Aim

The aim of Stage Four of the study was to evaluate the intervention of providing support in labour by a person of the woman's choice by seeking the views of the midwives.

Method

Questionnaires [See Appendix 13] were distributed to all the midwives who worked in the Labour Ward after the implementation of Stage Three of the study.

Data Collection

I put the questionnaires into envelopes which were then sealed and hand delivered to the midwives. The completed questionnaires were returned to me in the same envelopes either by the Labour Ward Manager or the midwives themselves. A record was kept of the number of questionnaires distributed as well as those that were returned to me.

Data Analysis

The analysis process performed for this stage was the same as that completed for Stages Two and Stages Three. I undertook a content analysis of the questionnaires. Respondents' answers were grouped under each of the five questions in the questionnaire and colour coded I double coded the data again to ensure no recurring theme were omitted. The findings are presented in Chapter 5.

Summary

This chapter has outlined the four different stages of the study, including the aims, methods, data collection techniques and data analysis processes. The next chapter will present the findings of the study.

CHAPTER 5: FINDINGS OF THE STUDY

Introduction

This chapter presents the findings of the four stages of the study. The results will be presented in sequence, presenting results from each stage in turn.

Findings from Stage One: Pre-Implementation

The aim of Stage One was to observe current practice in the Labour Ward at PMGH and to assess the support and challenges ahead for the study. Field notes that I made following meetings and during observation informed this stage of the research and my analysis of the data.

Observation before the introduction of providing support in labour

As identified in Table 4, I spent a total of 57 hours observing 39 women in labour. Three women were usually observed at one time. The women were in beds next to each other in the cubicles assigned to the study. As described earlier, a structured data collection tool was used to collect the observation data [See Appendix 10].

During the 30 minute snapshot of time observed for each woman, the midwives spent most of their time giving instructions and undertaking clinical tasks rather than providing supportive care. This was classified as instructional information in the observation tool. Though 'instructional information' was the category, my field notes confirmed my observation that instructions were not associated with giving the woman information per se about her labour but were given in order to carry out routine procedures. These procedures included the baseline observations and vaginal

examinations associated with admission to the Labour Ward; subsequent routine observations (hourly); vaginal examinations (four hourly when in established labour); inserting and managing intravenous infusions and continuous electronic fetal monitoring if the women was induced; attending women when she was giving birth; and carrying out orders made by the obstetricians. The least observed activity based on the observation tool was advocacy. The midwives were also observed to provide minimal emotional and physical support.

At any one time there would also be two CHWs working on the Labour Ward. Community Health Workers did not provide emotional and physical support for the labouring woman but were engaged in the tasks assigned to their role. These included transferring postnatal women into the postnatal ward, washing and remaking the beds, cutting up new stock of gauze, large combine and wool, mopping the floor if the cleaner was not around as well as other tasks as per their job duty statement. These were not meant to be providing labour support even though there were often few midwives available on the ward.

My observations highlighted issues that were raised by staff throughout the study as potential challenges to both providing and introducing support in labour. The midwives were extremely busy due to understaffing of the Labour Ward. They rushed from one cubicle to another in order to carry out routine and emergency clinical tasks and the curtains in front of the cubicles were left open in order for them to be able to assess at a glance how a woman's labour was progressing. They had no time to offer women emotional or physical support and women laboured alone with minimal contact with staff unless there were complications, a routine procedure was being carried out, or they

were giving birth. The environment was not conducive in any way to protecting women's privacy, with cramped cubicles and open curtains across the front [See Picture in Figure 2 in Chapter 4]. Often there were not enough cubicles and women were labouring in the corridors and waiting areas.

My observation included noting the environment in the waiting area outside the Labour Ward. The waiting area was where a labouring woman waited for a bed to be allocated in the Labour Ward. The woman usually waited with a member of her family. When she went into the Labour Ward, her family had to wait outside. At the entrance to the Labour Ward was a sign in red writing, which read, 'No Visitors Allowed Inside'. Family members congregated in the waiting room anticipating being told that the woman had given birth so that they could visit her on the postnatal ward with food they had prepared or provide a change of clothing for the woman and baby.

In summary, women laboured alone in the Labour Ward with their family waiting outside. The midwives were very busy and unable to provide social or emotional support. Community Health Workers were also not in a position to provide support in labour.

Findings from Stage Two: Information sharing, exploration and engagement

The aim of Stage Two was to explore the issues associated with undertaking the proposed change to support in labour with midwives and managers and to engage with some senior midwives as change champions. Stage Two utilised a series of meetings both formal and informal and questionnaires were distributed to midwives during the main meeting. The issues identified by staff in the main meeting and the process

undertaken to recruit change champions are described in Chapter Four (Methods). The section below reports on the findings from the questionnaires [See Appendix 13] that were completed by the midwives.

Findings from questionnaires

Thirty questionnaires were distributed with 22 responses (response rate 73%). As identified in Table 6, 16 (72%) of the 22 midwives who responded thought providing support in labour by a person of the birthing women's choice was a 'good idea'.

Table 6: Midwives' views about the introduction of support in labour by a support person of the woman's choice

Midwives' views towards support in labour	Number
Totally supportive	16
Totally opposed	2
Supportive but with reservations	4
Total	22

Midwives' perspectives identified in the questionnaires

The main reason for supporting the idea of introducing a support person of the woman's choice was that the Labour Ward was recognised to be one of the busiest ward in the PMGH Maternity Unit and that midwives had no time to provide emotional and physical support. The midwives suggested that, if a woman's support person were able to be there to provide her with support in labour that would provide her with the care that she was not currently able to receive from midwives, who were already overloaded with work.

Benefits for the midwife

The midwives felt that support in labour, provided by a person of the woman's choice, would ease their burden of work, especially as there was always a shortage of midwives in the Labour Ward as well as a large number of women with severe health problems:. Midwives wrote comments like:

> *"It is good for Port Moresby General Hospital's Labour Ward because it is always busy, there is poor midwives' attendance, the workload is always heavy, and therefore birthing women are not given the best of care" (MW 1).*
>
> *"It will ease some burden off the midwives [so that they can give] the basic care and most coaching will come from the support person. The midwives can then concentrate on the very sick birthing women" (MW 15).*

Benefits for labouring women

Almost all the midwives (n=21) who responded felt that support for labouring women would be good for the mother and her baby. In particular, the midwives felt that having a support person would assist the woman to be calm. They were sympathetic to the needs of the woman and recognised that a support person would be able to provide the physical and emotional supportive care that they were unable to provide because of their workload, for example:

> *"At least somebody she knows is right there with her and doing all the things that the mother needs like personal hygiene, assurance, massaging her back, giving sips of water and providing tender loving care" (MW 4).*

"Introducing a support person in labour would be a great help to the birthing women because the number of midwives in the Labour Ward is less than the number of birthing women each shift" (MW 8).

"I will be very delighted if we make it work as it will take anxiety off the birthing women as well as over worked birth attendants. It will be a relief if we can make it work" (MW 18).

Previous attempts to implement support in labour

In the questionnaire midwives were asked why support in labour had not been previously introduced at PMGH (at the time of designing the questionnaire I was unaware of previous attempts). Some responses indicated that support in labour had been tried previously but had failed - this was also identified in the main meeting (see Chapter 4). Midwives suggested that the main reasons for the failure were a lack of proper co-ordination, a lack of leadership (a continuous change of midwives in charge) and no support from policy directives or the Department of Health: 'There was never any emphasis from the National Department of Health'. Previous attempts had failed because the hospital policy did not allow support people into the Labour Ward, a 'rule' that was reinforced in the sign at the entrance to the Labour Ward stating that no visitors are allowed. It was not clear who was responsible for making this rule or this sign and so a lack of clarity about who could actually change this policy.

The two midwives who did not agree with the idea of implementing support in labour by a person of the woman's choice made it clear that they based their opinions on the previous unsuccessful attempts to introduce such an initiative. These experiences influenced them to believe that providing support in labour would cause a lot of

problems, mainly due to the lack of space in the Labour Ward for an extra person to be present. They were also concerned about the presence of relatives, writing that:

> *"They would also make things difficult as they would come inside the Labour Ward unnecessarily".*

In commenting on why she thought support in labour had not been implemented previously at PMGH maternity unit, one midwife referred to a time when midwives were able to give support writing: 'The birth rate was not high and so help was not needed at that time'. Another midwife suggested that support in labour was not considered important, as it is not a concept that she thought was employed in traditional birthing settings.

Limitations in the design of the Labour Ward

The midwives recognised that the small cubicles and the layout of the Labour Ward could create problems with the implementation of the intervention. They identified that the way the Labour Ward is designed meant that there was little space to accommodate a support person in each cubicle. The curtains at the front of each cubicle are often not drawn across and this results in a potential lack of privacy for both the woman and her support person:

> *"In Papua New Guinea we do not have the facility and resources to cater or care for our mothers, because the aim here is to provide adequate privacy for the birthing women, since we do not have self-contained rooms" (MW 17).*

The high birth rate at PMGH maternity unit (over 12,000 births per year) means that there is not the capacity for all women to give birth in the cubicles, women labouring

and giving birth in corridors and spaces outside of the cubicles. This was highlighted by some as an additional concern in relation to having support people in the Labour Ward:

> *"In fact the Labour Ward [outside of the cubicles] has always been occupied by labouring mothers as there are not enough beds for most of them. That is why some of them give birth on the floor and along the corridors. This is why support persons are not allowed into the Labour Ward" (MW 3).*

Guidelines for support in labour

Midwives were asked to consider the guidelines that would be required if they were to facilitate an initiative to introduce a system where support person were allowed into the Labour Ward. As identified in Chapter 4, this was discussed in the main meeting and suggestions made during the meeting led to guidelines being drafted. Approximately half of the midwives who completed the questionnaires were not at the meeting and so would not have been party to those discussions. Generally, the suggestions for the guidelines that would be required mirrored those discussed in the main meeting. There was unanimous agreement that there should be only one support person at a time for each woman in the Labour Ward. Midwives also felt strongly that the support person should be with the birthing women at all times and not walk around the limited space in the Labour Ward. They stated that they would need to abide by the instructions of the midwives, including being asked to leave if this was requested. Several midwives wrote that the support person must have good communication skills and be experienced (there was no elaboration on the definition of 'experienced'). There was a range of attributes that support people should have according to the midwives, as seen in this example:

"The support person must know what to do, needs to be presentable and neat in attire, must speak either English or Pidgin, must know when to communicate with midwives and should be in the Labour Ward till delivery" (MW 14).

Other suggestions for what should be in the guidelines included a list of restrictions and 'rules', again, prompted by concerns about privacy for labouring women. The following quotation is a typical example of what the majority of midwives wrote:

"The support person must be with the support person full time and her movement inside the Labour Ward must be restricted in order to maintain privacy to other birthing women. The support person must be in the Labour Ward only from 7am to 6pm and this is to avoid overcrowding at night" (MW 17).

Agreement to continue with the initiative

With two exceptions, all the midwives agreed that this study should go ahead. They recognised that even though similar initiatives had previously failed, it was '*worth trying again'*. The midwives thought that in order to be successful this time, an awareness raising process in the antenatal clinic would be necessary to ensure that women were aware of the initiative and that support people would be prepared well in advance. All midwives agreed that the support person needed to be someone close and familiar to the labouring woman, someone she would choose who would be in a position to provide support, comfort and care during labour.

There was general agreement that, in the long term, in order for the implementation of support in labour to work well, the Labour Ward would have to go through major

renovations. It would need to have individual, enclosed rooms and larger spaces to accommodate support people so that privacy could be provided to the birthing women.

One midwife, who has a lot of experience in community development initiatives, highlighted the need for more education of midwives at every level and for the initiative to be driven by the Department of Health writing:

> *"Do more research on it and more presentations since it is a new concept. The emphasis must be through Department of Health, so it is taught in nursing [and midwifery] schools and this will have more weight on the implementation component. Village birth attendants should also be taught about the concept and trained at the same time. They should be provided with incentives after signatures from hospitals or health centre. The DOH has lots of unused funds, which can be utilised on such areas" (MW 12).*

Overall, midwives were positive about support in labour, particularly if guidelines were followed and there was adequate preparation during the woman's pregnancy, for example:

> *"I totally agree with positive outcomes of having support persons with the mother in labour. I also would like to point out that the situation will work well if support persons are well prepared in advance, instead of at the time of giving birth so as to avoid inconvenience on the support person and the birth attendant [midwife]. We the midwives do not have the luxury of time to explain and prepare the support person so they [will] abide by the conditions" (MW 18).*

"Well it is a brilliant idea, since we lack many positive services that should have been done to our birthing women. Especially things like giving sips of water, rubbing their back, being with them all through labour and giving advice" (MW 17).

Findings from Stage Three: Implementation

The aim of this stage was to recruit women who would like the option of having a support person of their choice in labour, to implement and observe the intervention and to evaluate the experiences of the women and their support persons.

The awareness raising and recruitment process is described in Chapter 4. During a two-month period I observed 25 women receiving support from a person of their choice during labour. The fact that I was only able to observe 25 women over this period of time is indicative of the difficulties I experienced in this stage of the research process. The four beds assigned to the study were usually already allocated to women who had not been briefed about the possibility of having a support person with them, or women who had complications or women who did not wish to participate in the study.

The ward clerk told me that there were several occasions when she allowed women and their support persons into the Labour Ward when I was not present in the maternity unit. These women were part of approximately 200 who had learnt about the study in the antenatal clinic and were keen to participate (See Chapter 4). On these occasions the support people were asked to leave by the midwives. There were also several occasions when I was in another part of the Labour Ward or maternity unit when midwives asked support people to leave. On no occasion were support people allowed to stay with the

labouring women unless I was present. Many women I spoke to on the Labour Ward were disappointed that, on admission, they had not been allowed to have their support person with them during labour.

Observation of support provided in labour by support persons

Support was provided mainly by women's mothers or other close female relatives, with four women choosing their husbands to be their supporters [See Table 7].

Table 7: Identity of Support Persons

Identity of Support Person	Number
Mother	10
Mother in law	4
Husband	4
Friend	2
Grandmother	1
Sister in law	1
First wife	1
Aunt	1
Sister	1
Total	25

As described in Chapter 4, I observed support provided by women's support persons while carrying out simple tasks to help the midwives. My role was one of being a participant observer and I recorded the support being given at regular intervals in the structured observation tool [See Appendix 10] and in field notes. I had developed the original tool for observing the support given by the woman's chosen supporter with

non-participatory observation in mind. Although the tool was able to record the type of activities I observed, this was more difficult to complete in the same way as I had used it in Stage One.

I was no longer able to fill it in over a defined snapshot of time for each woman. I recorded the activities that I observed support people providing for the women in labour in field notes and on the structured observation tool. These included the following:

- Back massage
- Giving sips of water
- Wiping the woman's face
- Words of encouragement
- Changes in positions for comfort
- Holding hands, touching
- Walking in the corridor
- Reassurance and keeping company

Women's views of having support in labour

This section will present qualitative data outlining quotations of views from 25 women after they received support from the support person. As described in Chapter 4, I interviewed the women and completed questionnaires that recorded what the women said to me.

'It was a very good idea'

All women who participated in the study reported that having a support person in labour was a positive experience and they felt good about it. One woman said:

"I feel that it is a very good idea, to have a support person as they assist to prepare you for labour and to be at ease" (BW 1).

Another woman expressed her understanding of how unusual it was to be able to have a support person in labour:

"I felt very privileged since at PMGH, no support person is allowed in during labour, this is good" (BW 21).

Almost half of the women (n=11) reported that having a support person during labour provided much needed comfort, assisted with their level of confidence and reduced fear. Some examples of how they expressed their appreciation can be seen in the following quotations:

"With my Mum around me, I felt secure, comfortable and confident" (BW 18).

"I was happy for my Mum to be with me and I was not frightened at all" (BW 23).

"From the past four deliveries I have had here at PMGH, this is the first of its kind where my support person was with me and it was of great relief" (BW 3).

Women also reported that they felt they could communicate effectively with their support person. They felt free to communicate their needs to their support person and to express how they wanted to be cared for or supported. One woman linked this directly to having a positive birth experience: "*I felt very comfortable to talk to her, which made me have a good delivery".*

Women were asked if they thought support in labour should be continued at PMGH. All women said that it was a system they wanted to be continued.

Choice of birth supporter

When asked who they would choose as their support person in their next labour most indicated their mother (11), followed by mother-in-law (5), aunt, grandmother, and friend (4), husband (4) and sister (1). In almost each case their choice of preference was the same except one who did not have her mother but an aunt and she wished her mother was with her.

Women were asked why they would choose relatives as their support person. One woman had this to say: '*Because my Mum is the closest person to me*.' Another identified her mother's experience and understanding as important: '*She has experience and she understands and has a lot of patience with me*'.

While women who had their mothers with them talked about the comfort they experienced, this was a factor that one woman described in relation to her grandmother: *'[It was comforting] because, I live with my grandmother and I am so close to her*'. Women who had their husband as a support person were more likely to express the importance of sharing the experience as being important to them: '*So he can share part in the labour with me.*'

Women's views about the role of midwives in providing support

Women were asked about the care they would like to have from midwives. They all stated that they wanted to be cared for in a similar manner to how they were cared for by their relatives:

> *"She [the midwife] should care for me just like how she would care for her daughter or a relative" (BW 23).*

Women stated that midwives should engage with labouring women in a caring and understanding way and several linked this to increasing the chances of having a straightforward birth:

> *"Midwives should have patience and understanding that each mother is different. That should help make her so easier and we may have an easy delivery" (BW 1).*

> *"Midwives should be polite, more calm, not put tense on mothers, show more caring then harsh, because unnecessary stress can give high blood pressure" (BW 4).*

What mattered to women

Women were asked about the aspects of support in labour that were important to them. They reported that having the freedom to communicate how they wanted to be cared for was important and that this was made possible when they had a support person caring for them who was a close relative and spoke the same language. One woman had this to say: "*I was able to talk freely and I was able to ask for attention often*." Another one said, "*The communication was effective and my mum understood me better*."

Having a support person to care for them enabled women to express their individual preferences for support throughout labour. They felt the freedom to express the magnitude of the pain they were experiencing and share this with their carer. For some this included asking for physical support and comforts, as a woman who was having her first child and was being cared for by her sister explained: *"I just wanted her to rub my back instead of talking to me."*

Women were asked to give their overall feeling about having had a support person with them during labour. All women expressed satisfaction with their labour and birth and related this to having had their support persons with them during this period. They all felt having a support person present provided them with strength and the confidence: "*I felt so confident and I was not scared at all. I felt I had more strength*.' One woman linked feeling confident to overcoming fear and having a safe birth:

> *"I was very scared at first but knowing that I had the option of having a support person really brought confidence to me that I will have a safe delivery. I fully support and think that introducing the support person is very encouraging for us young mothers" (BW 1).*

Support people's experience of providing support in labour

This section will present qualitative data outlining quotations of views from the 17 people who I was able to interview who had provided their relative with support in labour. As identified in Chapter 4 there were few occasions where it was not possible for me to reach the support people after the woman had given birth.

'An opportunity of a lifetime'

As identified in Table 7 over half of the support people were the women's mothers. This group were very positive about being given the opportunity to be with their daughters in the Labour Ward to offer support. These mothers wanted their daughters to give birth in the formal health settings but also wanted to be there with them. They understood that they had an important role to play and felt that it was a very special experience to be beside their daughters during labour. As one woman expressed it: *'[It was} an opportunity of a lifetime'* and women's mothers spoke of their joy at being able to be present and give their daughters '*courage'* and '*peace'*:

> *"It is good to be with my child, it comes from the heart to be with my child as I felt the pain she went through. It is best for mothers to be with their daughters as it gave them courage and peace" (SP24).*
>
> *"I had to be there for her, and seeing me there gave her peace. It was a joy to see my grandchild" (SP 18).*
>
> *"I felt proud to walk into the Labour Ward with my daughter and be able to look after her myself" (SP 1).*

A mother-in-law expressed similar sentiments:

> *"I felt so happy to have gone into the Labour Ward with her and witness her delivery, as she is more like a daughter to me" (SP 16).*

Support people's views on the notion of support in labour

The supporters were asked if they thought every birthing woman who came into the Labour Ward should have a support person of her choice. There was unanimous support

expressed for this idea, many recognising that the midwives are too busy to provide the role:

> *"The hospital does not have enough midwives to provide basic care to the birthing women and therefore the support person can provide basic care" (SP 1).*
>
> *"Because there aren't enough midwives to take care of the mothers in labour ... the support person is able to rub the mother's back and when the mother sees the support person, she draws her strength from her" (SP 20).*
>
> *"Because the people in there [midwives] are always busy and they do not attend to the mothers most of the time. Because of that they become very rude to the mothers" (SP 12).*

Some support persons recognised that support could assist with building women's strength in their ability to cope with pain in labour:

> *"Because it is a painful process they need to have someone to offer comfort and talk to them" (SP 2).*
>
> *"They feel so much pain and they need someone to be with them all the time" (SP 17).*
>
> *"I was able to rub her back, encouraged her to be strong and so the pain was not too big for her" (SP 5).*

Support people's view of their role

As identified in the observational research I carried out, the women's immediate needs during labour were provided by the support person. They performed things such as rubbing the woman's back, giving sips of water and communicating and listening to her.

Being able to perform these tasks meant a lot to the support people: "*I encouraged her to breathe in and out, rubbed her back, and assisted her in and out of bed".*

Some support people identified that verbal communication was not always necessary. One support person said: "*My sister did not want me to talk too much to her, she just wanted me to keep on rubbing her back".* The support people felt that they could assist the woman as she could feel at ease to ask for comfort measures because of their close relationship:

> *"We could relate well with each other communication was no barrier at all" (SP 21).*
>
> *"We were able to talk freely and she did not hesitate to ask me to keep on rubbing her back" (SP 17)*
>
> *"I was explaining and reassuring so she did not have to think too much" (SP 19).*

Some support people identified that the woman could express her needs in a language that both could understand well. In a culture of more than 800 languages, many birthing woman cannot speak either English or Pidgin. In such cases this meant the support person and woman were able to communicate in their own language:

> *"Because we know each other well and are both very close, we were able to relate well with each other in our language" (SP 9).*

A husband saw the benefit of his role in helping the midwives to communicate effectively with his wife:

"Things done on my wife were adding pain but my encouragement helped as she trusted me. The midwives and the doctors' interactions with her were acceptable because they could get to her conveniently" (SP 22).

Overall, the support people all expressed satisfaction with their role in supporting labouring women and felt the opportunity should be continued. They identified benefits for both the midwife and the birthing women but also for themselves. They were also pleased to have been involved in the study, as it enabled them to be with their relative in the Labour Ward and expressed this in a variety of ways as the following quotations testify:

"It was good to support a woman in labour because she can feel the tender loving care you give to her when you rub her back, help give water to drink. She felt so secure and felt confident too and knew I was not going to scream at her" (SP1).

"Sometimes woman go into the Labour Ward with different kinds of thoughts and they end up dying, especially those that have family problems. With someone there to assist was very nice and the birthing woman was very happy because there is a family member to assist at all times" (SP 3).

"I was honoured to be there and my in-law grabbed me and asked me not to leave her and she was glad indeed to have me there" (SP 11).

"My daughter felt comfortable and it is a good thing to let mothers or relatives to come in to the Labour Ward" (SP 25).

Findings from Stage Four – Post Implementation

The aim of Stage Four was to evaluate the implementation of the intervention. As identified in Chapter 4, 22 questionnaires were distributed to Labour Ward midwives after the implementation of providing support in labour by the support person of the women's choice. Eleven midwives completed the questionnaire, a response rate of 50%.

Midwives' views of support in labour following the initiative

The majority of midwives thought the intervention of women having a support person in labour was valuable as it addressed the midwives' workload:

It is great for PMGH, labour ward is always busy, there is poor midwives attendance, the work load is always heavy and birthing women are not given the best of care (MW 1).

The midwives identified that when they were busy the support person could attend to minor tasks. Some said the support people were even able to alert them if the woman needed something or if there was a problem needing attention. Five of the midwives said they were able to concentrate on other things knowing there was a support person with the woman in labour:

> *"As there were still more mothers without a support person, so I was concentrating more on them. If all had a support person, it would have been greatly helpful" (MW 2).*

Two midwives had an opposing view, stating that they kept on worrying about the women in the study bed with the support person in case something went wrong.

When asked if they noticed any difference in the women who were provided with support, the majority said that the women were calmer, more relaxed and quiet. They were not demanding and they coped very well with pain. One midwife thought that having a support people resulted in the birthing woman not "*working hard enough*" in terms of following instructions and pushing harder. She thought that her authority was in jeopardy by having a support person present saying: "*The birthing women were uncooperative and relying too much on the support person".*

When midwives were asked to describe the care given to the birthing women by the support persons, most said they thought the birthing woman felt she was important and being cared for and loved, also that the environment surrounding the birthing woman was much cleaner. By this they meant that at least the support persons were there to immediately throw tissues, or vomitus or any rubbish away, which would normally take time for the cleaner to come and dispose of. There were, however, some negative responses from a few midwives, who admitted to feeling intimidated by the presence of the support people:

> *"It makes no difference, the support person was observing what the midwives were doing and it was disturbing" (MW 4).*
>
> *"[I felt intimidated] but it was helpful, so I have to accept the presence of the support person" (MW 2).*

One midwife identified that the attitude of the support person played a major role in whether she was comfortable with their presence or not and another expressed concern about support people being present during an emergency, suggesting that they might be a hindrance to effective responses.

Midwives' overall impressions of the initiative

Asked about their overall impression of the initiative to provide support in labour, nine midwives said they thought it was a good idea to introduce support in labour as it is rewarding for both the birthing women and their babies. They also said they thought all women should have a support person of their choice to care for them in labour. Concerns were expressed by some though about the design of the labour ward and the lack of privacy for labouring women. This included worries that support people might 'peep' into other women's cubicles if they were not obeying 'the rules'. Midwives did say that such concerns might be resolved if future renovations and extensions to the Labour Ward allowed for privacy to be maintained:

> *"My overall impression is, it is a good idea to introduce the system in the Labour Ward. But maybe extend the building and allow more space for the mothers who may need support in labour" (MW 1).*

Following the study, about half of the midwives said they would welcome the introduction of support in labour completely, the other half suggested certain situations would have to be attended to prior to the introduction of support in labour being implemented fully. These considerations included the following provisos:

> *"Extensions to the labour ward so that birthing woman can be given total privacy".*
>
> *"The introduction of policies and guidelines well in advance of labour in the antenatal clinic".*
>
> *"Making sure that all staff (midwives, doctors, community health workers, clerks domestics and kitchen maids) are also introduced to the guidelines of providing support in labour".*

Summary

This chapter has summarised the findings of the study. It has explored the perceptions of midwives prior to the study and afterwards. It has also explored the views of women who received support in labour from a person of their choice and the views of the people who provided that support.

The next chapter will discuss the findings, explore why support in labour was not fully accepted and implemented by participating midwives in the Labour Ward and make recommendations for future initiatives to provide women who labour in PMGH maternity unit with a support person of their choice.

CHAPTER 6: DISCUSSION AND CONCLUSION

Introduction

This chapter discusses the major findings of this thesis in relation to the study, which was to explore the implementation of the provision of support in labour by a support person of the woman's choice in the Labour Ward of Port Moresby General Hospital (PMGH). My study is the first on this topic to be carried out in Papua New Guinea and, as shown in Chapter 3, one of the few studies in developing countries to look at the perspectives of women, their supporters and staff on the introduction of support in labour.

I undertook this study after many years of observing women labouring alone in this facility and was motivated by my understanding that this practice was inhumane and not based on evidence. I was, however, mindful of the challenges midwives face in the Labour Ward, which is always severely understaffed. With more than 10,000 women giving birth each year, midwives are unable to provide social or emotional support to labouring women. As well as providing full clinical care they are expected to provide clinical supervision to nursing, midwifery and medical students. As a result, women are labouring and often giving birth alone while their family members wait outside, a situation that is discussed in this chapter in relation to the findings of Stage One, the pre-implementation phase of the study.

As detailed in previous chapters, the other stages of the research involved engaging with staff in preparation for the intervention of enabling women to have a support person of their choice in labour (Stage Two) and the collection of observational and qualitative

data during the implementation and post-implementation phases of the study (Stages Three and Four). A summary of the findings that will be addressed in this chapter is presented in Table 8:

Table 8: Summary of Findings

Stage of research	Methods	Summary of Findings
Stage One: Pre-Implementation	Observation.; Field notes	All women laboured alone. Midwives and Community Health Workers were very busy and were not able to provide emotional or physical support.
Stage Two: Information Sharing and Engagement	Meetings with staff; Questionnaires (midwives]	The majority of midwives were supportive. The midwives identified benefits for women and staff, but there were challenges including previous failed attempts to introduce support in labour, physical and environmental barriers and restrictive policies.
Stage Three: Implementation	Recruitment; Observation; Questionnaires completed at interviews (women and supporters)	I was only able to observe 25 women receiving support in labour over the 2 month period. A number of barriers were identified. The types of support given by supporters were identified. Women and supporters were highly appreciative of being able to have, or provide, support in labour.
Stage Four: Post Implementation	Questionnaires (midwives)	The majority of midwives were in favour of support in labour. There were a number of concerns expressed including the lack of privacy, the need to change the restrictive policies, and the importance of guidelines.

Theoretical underpinnings of this discussion

Despite there being a sound body of evidence to encourage the intervention, I faced many challenges when trying to implement support in labour at PMGH. Many of the midwives were very resistant to change and this led to considerable hurdles that ultimately meant the study was more limited than initially planned.

The findings of this study therefore need to be understood in terms of the factors that inhibited the implementation of the research. With this in mind, I have drawn on the work of Rogers (2003) and Greenhalgh, Robert, Macfarlane, Bate and Kyriakidou (2004) in discussing these inhibitory factors and providing insights into how future innovations might be more successful. I will explore these issues in relation to some of the factors that were highlighted in the extensive literature review, a meta-narrative, carried out by Greenhalgh and colleagues (2004) addressing the question: How can we spread and sustain innovations in health service delivery and organization? This ‘eta-narrative review identified 495 sources derived from 13 different research areas that explored the introduction of innovations in health service settings. Consideration of this theory has enabled me to explore my findings in relation to evidence about effective practice innovation. In particular, I address the critical role of context and social systems and the complexities associated with introducing change, both locally and in more general terms.

The lack of support for labouring women at PMGH

Stage One of the study confirmed the fact that women are not allowed to bring a support person with them into the Labour Ward. Other units of Port Moresby General Hospital

allow patients to have a guardian or relative to assist health care workers care and provide support. This has never been the case for the Labour Ward at this hospital.

Many government-run hospitals in developing countries do not allow women to have a support person with them in labour. As explained in earlier chapters, at PMGH and in all government hospitals and some health centres in Papua New Guinea, the policy is that woman are not able to have a support person in the Labour Ward and companions have to wait outside. This policy has been in place since the colonial administration and continues to be observed at the time of writing. As in PMGH, in most labour wards across the country, there are large signs stating that no visitors are allowed inside the birthing facility and this policy is strictly enforced by the staff

As these policies have been in place for many decades, the midwives and other staff in the labour wards have never known anything different. For them, labour is something that women cope with alone. In fact, many of the female staff would have experienced these circumstances themselves if they had given birth in a formal health facility. It is, therefore, not surprising if members of staff are unable to conceptualise any other way of providing care during labour and birth.

It seems highly likely that the hospital's policies have influenced not only the hospital staff but also the women and their support people. Women are used to the policy of labouring and giving birth alone and most of the women currently giving birth in Papua New Guinea would not think that they could have support in labour if they were in a formal health facility. It is also likely that their mothers, many of whom sit outside

waiting for their daughters or daughters-in-law to give birth, had the same experience themselves.

The observations that I made identified a lack of emotional and physical support that women received from midwives and community health workers. There were clearly not enough midwives to provide any real level of support with only two to four midwives employed per shift. At the time the research was undertaken, Port Moresby General Hospital catered for 10,000 births per year. Similar size hospitals in Australia or other developed countries would have at least 15 midwives rostered on each shift to cater for this number of births (personal communication).

Interestingly, even in countries where staffing levels are appropriate, social support in labour is often not a large part of the role of the midwife or obstetric nurse. For example, a study by Gale (2001) in Canada found that nurses on the labour ward spent only about 12% of their total time providing supportive care to labouring women. Another study in Thailand suggested that nurses may sometimes give low priority to the provision of support to an individual woman because they see their other responsibilities, including clinical tasks and paperwork, as more important (Yuenyong, Jirapaet & O' Brian 2008). These two studies provide examples of how, in different settings, midwives or obstetric nurses are too busy to provide support for individual birthing woman because they have other tasks that they are required to attend to as part of their role and these are given higher priority. Such findings highlight the need to enable women to bring their own companion into the labour ward environment.

Dissonance between the social systems of hospitals and village communities

The social systems of PMGH hospital are in discordance with those of the women who access maternity services. Traditionally, support in labour is the norm in village settings and is provided by family or local women. As in many other developing countries, when childbirth shifted from the village setting to the hospital, many traditional practices were lost or subsumed by technological interventions and women suffered a loss of companionship during labour (Essex and Pickett, 2008). The challenge in the formal health care system lies in translating what is seen as traditional into an alien environment that has its own rules and politics.

Initiatives to enable support in labour in other developing countries

The innovation itself, 'providing support in labour to woman by a person of the birthing woman's choice' is not new. Support in labour occurs in most developed countries and increasingly in developing countries. However, it is dependent on having supportive hospital policies to enable support to occur.

Changing hospital policy is not easy as policies often dictate and pervade the organisational culture of the hospital (Greenhalgh et al 2004). There are a number of studies that have examined the impact of hospital policy on support in labour. For example, a study in Zambia by Maimbolwa, Sikazwe, Yamba, Diwan, & Ranjo-Avidson (2001b) found that all staff cited hospital policy as the principal reason for prohibiting companions for remaining with labouring women in the hospital setting. Equally, in Malawi, another developing country, despite human resource problems, policies do not permit the presence of a support person during labour in hospital settings. Reasons cited for this include: having a hospital policy that does not allow

visitors in restricted areas (labour areas are classified as restricted); inadequate space in the delivery rooms; perceived risk of infections; and concerns that a companion may use traditional medicine (Banda 2008). Similarly, the labour companions of women in Botswana have to wait outside until after birth because of restrictive hospital policies (Madi et al. 1999).

Engagement and information sharing

Accurate and timely information about the potential impact of an implementation process and the widespread involvement of staff at all levels through formal facilitation initiatives increase the chance of successful implementation (Greenhalgh et al, 2004). With this in mind I engaged with staff in Stage Two of the study in a process that included sharing the evidence about support in labour, paying particular attention to discussing research projects in similar settings and the adaptations that would be necessary in the context of PMGH (Kitson et al. 2008).

Communication as a key to engagement

When I reflect on Stage Two of the study and my attempts to raise awareness about the benefits of support in labour, I am aware that my role as a communicator would have been crucial to the process of encouraging and motivating others to share my vision for change (Kotter, 1996). According to Rogers (2003) effective interpersonal communication and information exchange are the most effective tools in forming and changing attitudes toward a new idea, and thus in influencing the decision to adopt or reject a new idea. I was aware of the importance of engaging effectively with key stakeholders (Kitson et al. 2008) and my aim was to develop a climate in which the staff would be motivated to spread information through networking with peers at every level

of the hierarchy that exists in PMGH maternity unit. It is hard to gauge how successful this process was, but with hindsight, a process of developing such a profound system change would benefit from a much longer time frame with myself as the lead researcher permanently insitu in the maternity unit to address both formal and informal concerns with Labour Ward staff. A longer time frame would also have allowed me more time for face-to-face engagement at the top level with managers who hold powerful and influential positions.

Developing appropriate guidelines

There is currently no national policy imperative or directive that can help bring about changes to enable labour support in PNG. It was therefore essential to develop guidelines for the implementation, a process the midwives were keen to engage in with me during Stage Two of the study. Understandably, their focus was on laying down operational and organisational features of guidelines rather than a process of bringing together a multi-professional group to identify evidence of benefits and harms of the intervention as a starting point for developing guidelines as is the approach in Western countries (NHMRC 2000).

In Kenya, a study was carried out to address the fact that international guidelines developed for certain practices are rarely applicable in low-income settings. The experiences of health workers expected to implement guidelines during an intervention study in Kenyan hospitals was documented (Nzinga et al. 2009). A simple interview guide was developed based on an uncomplicated characterisation of the intervention and informed by major theories on barriers to uptake of guidelines. In-depth interviews, non-participatory observation and informal discussions were then used to explore

perceived barriers to guideline introduction and general improvement in paediatric and newborn care. The study concluded that, while the barriers to uptake were broadly similar to those reported from high income settings, their specific nature often differed (Nzinga et al. 2009). As an example, at an institution level there was a complete lack of systems to introduce or reinforce guidelines, poor teamwork across different cadres of health worker, and failure to confront poor work practice. At an individual level, several factors threatened successful implementation: a lack of interest in the evidence supporting the guidelines; feelings that the guideline eroded professionalism; and expectations that people should be paid to change practice (Nzinga et al. 2009). Consideration of this research may be useful when developing guidelines in the future at PMGH.

Identifying the relative advantage of support in labour

Innovations that have a clear, unambiguous advantage in either effectiveness or cost-effectiveness are more easily adopted and implemented (Greehnhalgh et al, 2004). If potential users see no relative advantage in the innovation, they generally will not consider it further. In relation to my study, the relative advantage of support in labour being adopted was clear, with strong evidence to support its effectiveness (Hodnett and Gates, 2007). Although I had articulated this clearly in formal and informal meetings, it is possible that individual midwives and community health workers were not able to conceptualise how the innovation might be of advantage to them personally.

Previous attempts to introduce support in labour at PMGH

Some staff intimated that they were sceptical due to previous failed attempts to introduce support in labour at PMGH. As described earlier, the initiative was trialled

twice in the previous two years but it failed on both occasions and was not sustained. The reason for the failure was lack of proper coordination because of constant changes to the Labour Ward managers as well as limited enthusiasm from the potential adopters, that is, the staff. One midwife stated that in the previous attempts, the midwives were too busy to oversee the introduction at that time; it was seen as uncontrollable and was therefore stopped. With reference to my study, the staff knew about the innovation but had yet to develop a favourable attitude towards it, a factor that was likely to undermine success (Rogers 2003). This was a major challenge to my study. The early signs of mostly passive resistance that I observed in Stage Two were evidence that the staff did not have a favourable attitude towards the innovation.

Early signs of resistance to change from staff

Before the implementation of support in labour, during Stage Two of the research, the midwives in PMGH seemed to be positive about the initiative. Despite reservations, fuelled by previous unsuccessful attempts in the past, midwives and managers said that it would be a good idea to implement providing support to birthing women in the Labour Ward. They articulated that a support person of the woman's choice would be able to give her the attention that they were unable to provide and that this would ease the burden of their understaffed workloads. In hindsight however, there were early signs of resistance from midwives, managers and some senior doctors, which ultimately meant that support in labour was difficult to implement. The early signs included the lack of attendance at meetings, the silence or refusal to complete questionnaires, the lack of open resistance or questioning and the difficulty in meeting with and persuading some of the medical staff to support the initiative. On reflection, I should have addressed these warning signs as they led to considerable challenges later on.

Champions to drive innovation

The adoption of an innovation by individuals in an organisation is more likely if key individuals in their social networks are willing to support the innovation (Greenhalgh et al, 2004). Champions are often passionate individuals who support a particular change or improvement (Clemmer 2008). In my study, the Labour Ward manager became one of the champions for the introduction of providing support in labour. She was seen to be involved on a daily basis assisting in the implementation of support in labour. Furthermore, she was always communicating with me as the researcher and, from time to time, would give instructions for the use of certain beds for the study. She would give instruction to the midwives and the community health workers on duty on a given shift where support people were present. Her assistance in this regard was highly appreciated.

Had the Labour Ward Manager not taken the lead as a champion of the project, the innovation would have been harder to implement or would have occurred at a much slower pace. She was viewed by staff as a role model and they took direction from her. Furthermore, she provided information and advice to many other individuals in the system. Despite the importance of this role, ultimately the champion did not have the power to implement support in labour. Though the manager was an active supporter, she did not have the support of other champions. It seems likely that she also did not have the support of the midwives and the community health workers and therefore could not be truly effective. According to Kotter (2002; 2006), people with powerful titles, with information and expertise, and with reputation and relationships must have an early

coalition. Only then there will be success. The lack of such collaborative support had serious consequences for this study.

The challenges of implementing support in labour at PMGH

Support in labour was trialled for eight weeks and I was available to assist with the process. The fact that the Maternity Unit was undergoing renovations during the time probably impacted on the study. It may be that midwives felt too much change was happening at once and support in labour was one extra thing that could be abandoned. In addition, this was the third time in the past five years that support in labour had been trialled and it is possible that the staff were weary of such attempts and the extra demands on them.

The small number of women who ultimately had support in labour highlights the resistance by staff to the initiative. As identified in Stage Three of the research, over the eight-week period that support in labour was implemented, only 25 women were able to bring a support person with them. It is estimated that more than 1600 women were provided with care through the Labour Ward during that two-month period. It seems likely that many women arrived with their support person but unless I was on duty and the allocated beds were free, they were not allowed to have the support in labour as promised. The support people had to stay outside the Labour Ward. I do not know how many women had this experience but it is likely to be many.

In considering why this happened I am mindful that staff may have thought it was too hard to organise. Innovations that are perceived by key players as simple to use are

more easily adopted (Greenhalgh et al 2003). Even though there were only four beds allocated to the study, it is possible that the staff perceived that the innovation was complex because they had to make sure these beds were allocated to women enrolled in the study. Difficulties with the logistics may have been used as a more acceptable way of voicing concerns than admitting that they were uncomfortable caring for a woman with a support person present and observing. The complexity for staff would no doubt have included engaging with the support person and I suspect that for some this caused distress and led to their resistance.

Women's perspectives on their experiences of having a support person in labour

My study involved, an eight week trial period where support in labour was implemented on a limited scale. During this period there was overwhelming enthusiasm for support in labour from both the support persons and the birthing women. In interviews, women and their support people identified how positive they were about their experiences. This suggests that women in Papua New Guinea are not different from other women in the world for whom support in labour has been found to have positive social, emotional and clinical benefits (Hodnett et al. 2002). Despite acknowledgement of these benefits, it is clear that considerable efforts need to be made to better understand how innovations like support in labour can be implemented, especially when there is considerable resistance to change and hospital policies and practices do not facilitate such practices.

Challenges

In Stage Four of the research, most midwives identified in the questionnaires that they thought implementing support in labour on a more permanent basis would have some

degree of benefit in terms of addressing their workload and improving the care given to women. Such opinions did not appear to alter their concerns about protecting women's privacy and the need to have strict guidelines that were adhered to. Although only 11 midwives returned questionnaires, their responses suggested mixed feelings and some apprehension; they knew that support in labour would bring about certain changes to their practice and this was challenging for them. Some admitted feeling intimidated about having the support person present and this created a lot of uncertainty about the risks and benefits in their minds. This no doubt had consequences for the ultimate success of the innovation.

Addressing the design of the Labour Ward

A major issue identified by the midwives in both Stage Two and Stage Four was the design of the Labour Ward. Similar to the design of other wards in the hospital, the Labour Ward offers very little or no privacy at all. A curtain is pulled across the enclosure to provide some limited privacy for the birthing woman (although often the curtain is left open so that the staff can 'keep an eye' on what is happening in the cubicle). It is hard to imagine how these circumstances would make a woman feel at ease in labour.

While the design of the environment is not ideal, it is the context that all staff members are familiar with and this therefore is a component of their social system. They are in control in the labour ward and to some extent, this determines how they make decisions and implement policies. The social system of the labour ward is, however, also one that does not embrace change and it is unlikely that staff would have the inclination or

power to influence future planning about the design of the Labour Ward to enhance privacy and support by a person of the woman's choice.

Support in labour challenged the dominant culture of the Labour Ward; by allowing relatives access to scrutinising their practice, the power base of the midwives was potentially threatened. This was insinuated by some of the midwives in Stage Four of the study who thought that their authority was questioned by having a support person present.

The opportunity for staff to observe the innovation

Greenhalgh et al (2004) suggest that if the benefits of an innovation are visible to the intended adopters, it will be adopted more easily. By observing, the potential adopters can see the benefits of the results then they are more likely to adopt it (Rogers 2003). This also gives them the opportunity to discuss the strengths and weaknesses of the innovation amongst themselves. During my study, midwives and community health workers were able to see the implementation, when or while they were on duty. In other words, their focus was more on how they were to perform in view of the support person, than the likely benefits of support to the birthing woman. Discussions centred on the challenges for the organisation rather than the benefits for the women**.**

Reflections and future considerations

Consideration of the social system at PMGH Labour Ward

On reflection, wide spread adoption of support in labour at PMGH will require a much more sustained approach with consideration of the social systems that operate within health service management in PNG, the hospital and the Labour Ward. According to

Rogers (2003), the adoption of innovation is powerfully influenced by the structure and quality of the social system that is in operation. Rogers defines a social system as a complex set of interrelated units – individuals, informed groups, organisations and subsystems - that are engaged in joint problem solving to accomplish a common goal (Rogers 2003). At no stage in my study was there an impression of such a concerted effort towards a common goal.

Members of the social system which I was directly involved with included nursing and medical management and the labour ward staff: midwives; community health workers; obstetricians; obstetric trainees; nurses and midwifery students. These people operate within a strictly hierarchical culture, a dynamic that is evident in most formal health systems (Rogers 2003). At the same time there were also birthing women as well as their support persons. Women's supporters are used to sitting outside the Labour Ward. The hierarchical nature of the formal health system, in this case, the Labour Ward, meant that the supporters were not part of the social system, had no power or authority and therefore were excluded.

The policy of not allowing support people into the Labour Ward has its roots in colonial history but it is a policy that is maintained by the present management of the hospital, who operate in a system with limited resources and restricted capacity to effect major changes to service provision. This leaves individual members of staff often powerless in terms of planning or effecting change. Efforts to develop sustainable change in allowing women to have a support person of their choice with them in labour would need to be

driven by those who hold powerful positions, both in the hospital and in the Department of Health.

The social context of having 'visitors' in the hospital

Throughout my study I heard concerns from hospital managers and midwives in the Labour Ward that if support in labour were allowed they would find it difficult to control the flow of visitors. The social system of the hospital determines that members of staff control the flow of visitors. While visitors are allowed into all other areas in the hospital, the norms are that this is not permitted in the Labour Ward. There is a strong culture within the Maternity Unit that management and staff can operate in a different way from the rest of the hospital. How they execute their normal duties is strongly embedded in this privilege and includes commonly used phrases such as: "This is how we do things here" and "It has always been like this." This ethos means that members of staff have a vested interested in resisting any changes introduced into their current work culture. They are also well aware of whom to take orders from as their superiors in a strict hierarchical order. Such well developed social structures gives individuals in higher ranked positions the right to issue orders that must be carried out to individuals of lower ranks (Rogers 2003).

Reflection on my own role in the study

My role in this social system of the Labour Ward is complex. I did not have a position of power having left the employ of the Department of Health some years previously. I was also not in the role of a university academic as I was on study leave. Therefore, in hindsight, I had limited capacity to influence the social system of a hierarchical hospital system or the decision-making processes related to my study. Greenhalgh et al (2004)

have identified two processes concerning how decisions are made to adopt or reject of innovations in social systems:

- Collective innovation decisions - made by consensus among the members of a system who come together with the intention of making a decision; and,
- Authority innovation decisions - made by one or a relatively few individuals with authority within the system.

The experience in my study was that acceptance and rejection of the innovation were based on both collective and authority decisions. Initially I engaged with staff and asked them to contribute suggestions in the formulation of guidelines; these were drawn up prior to the implementation of the study through a collective process. As the study progressed to implementation, there were times when I suspected that the midwives were not happy with certain issues related to the innovation. Not all of them would speak out and at least half chose to remain silent. It was difficult to determine from their silence if they were supportive or unsupportive. I suspect it was the latter. This may have represented a form of passive resistance that could be seen as a covert form of collective decision making in a group that is not used to having overt power in the workplace. As identified by Sheridan (2010) it is not uncommon when midwives are being asked to change the culture of how they practice for them to avoid communicating their concerns. This may have been exacerbated by them seeing me as an outsider in my role as a researcher, someone who they felt they should not confront with their concerns or objections.

As the study progressed my confidence as a researcher grew. By the time I engaged in Stage 3 of the study I was able to adapt my methods in relation to the circumstances I encountered. I was confident about the need to change from being a non-participant observer to a participant observer as described in Chapter Four. The way in which I engaged with and analysed my data became more reflexive as my confidence grew. This ability to 'work on my feet' and engage sensitively with participants was valuable learning for me and, on reflection, ultimately enriched the quality of the research as a whole.

Reflecting on resistance to change

With the benefit of hindsight I can see that there were many issues associated with the context of my study that presented barriers to the successful implementation of support in labour at PMGH. Underpinning these barriers was a lack of compatibility between the innovation and the organisational norms, values and ways of working in the Labour Ward. Such incompatibility is associated with difficulties in the adoption of new ideas and innovations (Greenhalgh et al, 2004, Rogers, 2003). As previously stated, it is not the norm in the Labour Ward setting to have a support person with the birthing women. This practice is therefore not consistent with the organisational culture and the way in which midwives attend to women on a day-to-day basis. Culture is important in organisations because it can powerfully influence human behaviour and because it is extremely hard to change (Kotter, 1996).

Managing uncertainty and risk

If an innovation carries a high degree of uncertainty of outcome and an individual perceives it as personally or professionally risky, it is less likely to be adopted

(Greenhalgh et al, 2004). The innovation itself, providing support in labour did not carry a high degree of risk for the woman or her support person. The staff, however, may have viewed it as personally and professionally risky, especially as it meant a support person would be observing their activities. When considering uncertainty in the context of PMGH it is important to understand that, although a major hospital, it is located in a developing country, therefore the Labour Ward is not fully equipped to the standard of a maternity unit in a developed country. The staff knew that, at some point in time, they may have to respond to an emergency and may be ill equipped in full view of support persons. They may have held fears this could mean medico-legal issues in the future. It seems that the important people to consider in this context were the staff rather than the women. Systems were in place to potentially protect the organisation and the staff rather than to support the women.

Allowing support people into the Labour Ward also carries a degree of uncertainty as it is never possible to predict whether there will be any untoward events that will be viewed by support people in neighbouring cubicles. The behaviour of the support person also carries a level of uncertainty for the staff, with concerns about violent behaviour a justifiable concern.

In hindsight, maintaining a more open dialogue about the innovation, formally and informally, may have meant that some of these issues could have been explored more fully. It is possible that I under-estimated the level of anxiety that the staff felt in relation to risk and uncertainty. I would have welcomed any suggestions and in a similar

situation in the future would be more proactive in raising discussions about potential fears and uncertainty.

Considerations of the knowledge required for implementing support in labour

It is my view that while the staff understood the tasks involved in allowing support in labour to occur and, to some extent, they comprehended the benefits for women, there was little consensus about what it might involve and leadership and role modeling were limited. Knowledge about the benefits of an innovation is essential but this needs to be more than superficial (Greenhalgh et al, 2004). While the midwives received information about the benefits of support in labour, I do not believe that they actively embraced the knowledge. The organisational culture and experience of the staff, many of whom would never have experienced support in labour, over-rode any benefits from knowledge. While the women themselves may have received information about support in labour from my session in the antenatal clinic, once they arrived in the Labour Ward, this knowledge did not help them to make any demands to have a support person with them. Yet again, the organisational culture and the hierarchical nature of the Labour Ward meant that women could not exercise their knowledge or wishes.

System readiness and support for innovation

Greenhalgh et al's (2004) work has highlighted the importance of ongoing support for the successful diffusion of an innovation. Recurrent training, meetings, assistance and modification are all important elements to ensure that an innovation will be assimilated more easily. There was not time to implement such infrastructure during the implementation phase of my study. Individuals vary in the time it takes them to embrace change, some people requiring many years to adopt an innovation (Rogers 2003). Any

future attempts to introduce support in labour at PMGH should occur over a period of years with appropriate support and leadership. This would enable the organisation to move at an appropriate pace with dedicated time and resources; support and advocacy; time to assess the implications and make adaptations; and the capacity to evaluate the innovation.

It now seems clear that the system antecedents for change in the Labour Ward were not available to implement the innovation. Issues such as the lack of space in the cubicles and the absence of proper enclosures for privacy impinged on the ability of the staff to consider further changes. The lack of staff and the busyness of the Labour Ward also probably contributed to a lack of enthusiasm for support in labour.

It is evident that there was no evidence of system readiness for change in the Labour Ward in relation to support in labour. System readiness includes having an adaptive and flexible organisational structure and processes that support decision making in an organisation to enhance the success of implementation. High-level management support, advocacy of the implementation process, and continued commitment are also important (Greenhalgh et al, 2004).

Sustainability when incorporating evidence in maternity care

The evidence base for support in labour has been well documented in Chapter Four of this thesis. As highlighted in a systematic review of maternity care practices (Sakala & Corry 2008), support in labour is one of a number of low cost, effective practices that can be introduced to improve outcomes for mothers and babies. A study in the Ukraine (Berglund et al. 2009) also demonstrated that improvements in outcomes do not

primarily require expensive technology. The researchers identified that to ensure sustainability it is important to provide, not only evidence based guidelines, but ongoing training to facilitate in-depth understanding and motivation for all staff. Nicholl and Cattell (2010) have also stressed the importance of education when implementing evidence based practice in maternity care, suggesting that to sustain improvements, there needs to be continuing education of clinical staff; dissemination of results; and leadership by a multidisciplinary team with enthusiasm and motivation.

Maternity providers have been recognised as being slow to incorporate evidence into practice (Cochrane 2000; Enkin 1996). Embarking on an evidence based journey to reach higher standards in clinical practice is recognised as a challenging goal, one that also requires identification of potential roadblocks and detours that create barriers and may delay successful practice changes (Purdy & Melwak 2009). Future initiatives at PMGH to implement support in labour should start with a process of identifying barriers to change and potential strategies to overcome these. There is clearly a need for a more systematic approach that the one that I was able to engage in, with long term support and training built into the implementation plan.

Future initiatives to develop evidence-based practice in maternity care at PMGH - including, hopefully, the implementation of support in labour - will be enhanced and sustained by collaborative research with other countries. A shining example of how such collaborative endeavours can benefit developing countries can be seen in some African countries. For example, in South Africa, the concept of evidence based medicine became embedded in South African academic obstetrics at a very early stage in relation to the development of the concept internationally (Daniels, Lewin & Group

2011). The diffusion of this concept into local academic obstetrics was facilitated by: continuous contact and exchange between local academic obstetricians and opinion leaders in international research; and structures promoting evidence-based practice. The growing acceptance of the concept was further stimulated locally through the use of existing professional networks and meetings to share ideas and the contribution of local researchers to building the evidence base for obstetrics locally and internationally. As a testimony to the diffusion of evidence-based medicine, South Africa has strongly evidence-based policies for maternal health (Daniels, Lewin & Group 2011).

A specific example of effective collaborative research with Western countries is a regional study, recently completed in Lesotho, Swaziland, South Africa, and Botswana in collaboration with the University of California, San Francisco on symptom management of HIV/AIDS (Shaibu 2006). Following the study a manual for caregivers of people with HIV/AIDS was developed and this manual is being tested in several countries for relevance and acceptability. This study is an example of how evidence can be contextualised as local researchers facilitate the change process associated with the research findings (Shaibu 2006).

Limitations of the study

I undertook a small descriptive study drawing on qualitative data. At the outset of the study, one of the senior doctors suggested I should do a randomised controlled trial (RCT). I resisted this because I felt that the evidence for support in labour was strong. With the benefit of hindsight, it may have been useful to undertake an RCT as it may have attracted more 'buy in' from key stakeholders in the medical and midwifery

professions, as well as potential funders. An RCT may also have provided a more structured and formalised way to get the evidence into practice.

The study was hampered by a lack of resources, both within the Labour Ward, including time for the staff to attend meetings and personally in terms of communication with my supervisors when I was conducting the study. Communication via e-mail was always a problem, and it was expensive to access internet services at the internet cafes.

There are not enough midwives in the Labour Ward at PMGH and when an opportunity is presented for them to participate in research or any educational sessions they are often disinterested due to the pressures they face in their working lives. Their rosters are inflexible, with no time programmed to attend meetings and any spare time would be used elsewhere attending to their own commitments, rather than returning to their workplace for [unpaid] purposes.

Due to the tight time frame of the study, I undertook the awareness-raising sessions about the study with pregnant women at the antenatal clinic at PMGH. Had I also carried out these sessions at the urban clinics there may have been more women participating in the study. There are, however, ethical issues associated with raising women's hopes and expectations that they may be allowed a support person with them during labour if the chances of this being possible are slim.

Implications for the future

This study described the process of implementing support in labour by a person of the woman's choice at the maternity unit at PMGH. Though the intervention was

implemented it was not fully accepted by midwives in the Labour Ward. Women who were able to access support in labour from a person of their choice were very enthusiastic about their experiences, as were their supporters. It is envisaged by the Ward Manager of the Labour Ward that after the completion of renovations, support in labour will be implemented on one half of the Labour Ward. Further initiatives to implement support in labour need to be pursued with regard to the following recommendations:

1. A time frame of at least two years should allow for ongoing cycles of planning, implementation and evaluation
2. Collaborative efforts by an interdisciplinary team, including members of the hospital management team, are essential on an ongoing basis
3. The team should consider potential barriers to implementation and develop well-coordinated strategies to overcome these in an ongoing process of evaluation and support
4. Any opposing views and difficulties about providing support in labour should be discussed and addressed in regular interdisciplinary meetings
5. Ongoing education and training initiatives, including in service sessions, need to be in place for all staff
6. Networking with international and local professional groups involved in similar projects will assist the process
7. A Journal Club for midwives should be set up so that they are able to meet regularly and contribute to the development of evidence based guidelines in the maternity unit
8. Midwifery and obstetric champions and opinion leaders should be responsible for taking the lead in the implementation of evidence based practice

9. There should be standardised forms for research ethics requests and these should be collectively formulated by NDOH, PMGH and UPNG. This will save time and effort for future research candidates wishing to undertake studies in the health environment.

Conclusion

Support in labour for women attending the Labour Ward at PMGH needs to be pursued. The implementation requires collaborative efforts with well coordinated strategies. Any opposing views and difficulties about providing support in labour should be discussed as a team and addressed using the principles of diffusion of innovation.

The introduction of support in labour needs to involve people from all levels, especially those in leadership positions. It is crucial for management to be involved as this will be a change to the current hospital administration policy of not allowing support in the Labour Ward setting. The education of midwives in evidence based practice is needed. Networking with international and local nursing and midwifery professional groups in similar contexts may enhance and assist in influencing change. The continuous in service education of midwives in the area of clinical leadership, research and management roles is needed to enhances their practice and motivate them to participate in research activities. Strong leadership qualities and mentorship are required to take the lead and expose midwives to research activities.

The study identified that lack of privacy and space were two main reasons why midwives were reluctant to embrace providing support in labour. These conditions must be provided to improve space and offer more privacy in the Labour Ward, prior to them implementing support in labour. The cubicles in the Labour Ward need to be re-

designed in a way that enables privacy. It does not have to be self-contained suites but at least it needs to offer privacy for the birthing women. In addition, it is essential that the cubicles are designed so they provide adequate space to accommodate the support person as well as the staff attending to the birthing woman. The spacing of the cubicles is essential as some woman like to move around the bed instead of lying down during labour.

This study indicated pregnant women and their support persons need to be prepared in the antenatal period if support in labour is to be introduced at the Labour Ward. Early preparation is essential for both the birthing women and the support person. The women must be given the guideline at the antenatal clinic so before she comes into labour, herself, the support person as well as other members of the family are familiar with the guideline for providing support.

Finally, further studies needs to be conducted into the ability of midwives to implement providing support in labour. It is important that future studies are also conducted into the perception of midwives and nurses who work in the Labour Ward setting to ensure that support can be implemented effectively. The midwives also need support and guidance to adopt flexible routines and evidence based practice using the diffusion of innovation key attributes for successful implementation. Other, alternative models of care that focus solely on the birthing women could facilitate a more women centred approach and would eventually bring about change in the organisational culture to improve outcomes and experiences for women.

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APPENDICES

Appendix 1: Ethical approval from the University of Technology, Sydney

30 March 2009

Professor Caroline Homer
Faculty of Nursing, Midwifery and Health
CB10.07.211
UNIVERSITY OF TECHNOLOGY, SYDNEY

Dear Caroline,

UTS HREC 2009-019 – HOMER, Professor Caroline, LEAP, Professor Nicky (for BUASI, Ms Nancy, PhD student) – "Support in labour: Introducing a system to enable support in labour to be provided by a female companion of the women's choice at Port Moresby General Hospital (PMGH) Maternity Unit in Papua New Guinea (PNG)"

Thank you for your response to my email dated 18/02/09. Your response satisfactorily addresses the concerns and questions raised by the Committee, and I am pleased to inform you that ethics clearance is now granted, on provision that approval letters be obtained from the University of Papua New Guinea and the Port Moresby General Hospital and provided to the Ethics Secretariat.

Your clearance number is UTS HREC REF NO. 2009-019A

Please note that the ethical conduct of research is an on-going process. The *National Statement on Ethical Conduct in Research Involving Humans* requires us to obtain a report about the progress of the research, and in particular about any changes to the research which may have ethical implications. This report form must be completed at least annually, and at the end of the project (if it takes more than a year). The Ethics Secretariat will contact you when it is time to complete your first report.

I also refer you to the AVCC guidelines relating to the storage of data, which require that data be kept for a minimum of 5 years after publication of research. However, in NSW, longer retention requirements are required for research on human subjects with potential long-term effects, research with long-term environmental effects, or research considered of national or international significance, importance, or controversy. If the data from this research project falls into one of these categories, contact University Records for advice on long-term retention.

If you have any queries about your ethics clearance, or require any amendments to your research in the future, please do not hesitate to contact the Ethics Secretariat at the Research and Innovation Office, on 02 9514 9772.

Yours sincerely,

Professor Jane Stein-Parbury
Chairperson
UTS Human Research Ethics Committee

Appendix 2: Ethical approval from the Port Moresby General Hospital

THE PORT MORESBY GENERAL HOSPITAL
OFFICE OF THE CHIEF EXECUTIVE OFFICER

Papua New Guinea
Telephone: 324 8200
324 8100
Fax: 325 0342

Private Mail Bag No.1
BOROKO 111, NCD
Papua New Guinea

13th July 2009
Our Ref: 3.12

Ms. Nancy Buasi
School of Medicine & Health Sciences
PO Box 5623
BOROKO NCD

Dear Ms. Buasi

Re: Clearance for Research at PMGH

This is to formally inform you that approval is granted for you to do research at the O&G Clinic at the Port Moresby General Hospital

However, it is our standard practice that we strongly recommend to individuals and organization, that when it comes to dealing with our patients, their rights and confidentiality must be given due attention at all times.

Please speak to the Unit Manager prior to your engagement at the Hospital, this is to allocate a appropriate time to come into the Unit concerned.

Thank you.

Yours sincerely

Production Note:
Signature removed prior to publication.

DR. SIMON METE
Acting Chief Executive Officer

c.c: a/DMS
DNS
Unit 5 Manager
SIC O&G

Appendix 3: Ethical approval from the University of Papua New Guinea

UNIVERSITY OF PAPUA NEW GUINEA
SCHOOL OF MEDICINE AND HEALTH SCIENCES

SCHOOL MISSION
TO ADVANCE KNOWLEDGE AND UNDERSTANDING OF MEDICINE AND HEALTH SCIENCES THROUGH QUALITY TEACHING AND RESEARCH LEADING TO THE ENHANCEMENT OF THE HEALTH STATUS AND WELL-BEING OF PAPUA NEW GUINEA CITIZENS

P O BOX 5623
B OROKO
PAPUA NEW GUINEA

FAX NO (675) 3250569
TEL NO (675) 3112626
(675) 3112304

18 May 2009

Mrs Nancy Olan BUASI
School of Medicine & Health Sciences
P O Box 5623
BOROKO
National Capital District

Dear Mrs Buasi,

Subject: Ethical Clearance for your Pilot Study

The School Research & Ethics Committee at its Meeting No 1/2009 held on Wednesday 29 May 2009 approved and granted Ethical Clearance for your pilot study on ***"The introduction of a System to Eenable Support in Labour provided by a person of the Women's choice at the Port Moresby General Hospital Maternity Unit in PNG".***

You are required to consult Professor Glen Mola of the Division of Obstetrics & Gynaecology about the study as soon as possible.

Please take note that you may be required to provide a copy of this letter to the Port Moresby General Hospital and the Medical Research Council (MRC). Consult your supervisor on this matter where necessary.

Yours Sincerely,

Production Note:
Signature removed prior to publication.

Sir Isi Henao Kevau Kt., CBE
Executive Dean & Professor of Medicine

CC: Assoc Professor L Matainaho, Chair, SREC
Chair, Medical Research Council, NDOH
CEO, PMGH
School Research File

Appendix 4: Information sheet for staff of the Maternity Unit, PMGH.

INFORMATION SHEET (staff)

The Support in Labour Study in PNG

My name is Nancy Buasi and I am a staff of the University of Papua New Guinea. As a staff of the UPNG and a lecturer in midwifery we utilize Port Moresby General Hospital to supervise our students on clinical placements. I am currently a doctoral student at the University of Technology Sydney.

I am conducting a research "To introduce a system to enable support in labour to be provided by a person of the women's choice in Port Moresby General Hospital (PMGH) maternity unit". This study has been approved by the University of Technology Sydney (approval number), the Department of Health through the University of Papua New Guinea and the Port Moresby General Hospital (approval letter dated).

I would kindly welcome your assistance. Initially, the study involves me observing the activities in the labour ward for a period of four hours at a time. I will sit outside the cubicles and will not be involved in any of the care of the women. The purpose of the observation is to work out exactly how much time each staff member is able to spend providing support to the women in labour.

I will also invite you to participate in a series of meetings and groups about support in labour. The purpose of these meetings is to explore the issues and difficulties associated with having support people in the labour ward and to develop ways that the difficulties can be solved.

For a one month period, the study will involve laboring women bring a support person of their choice (another woman) into the labour ward with them. During this pilot period, I will be observing the process and any difficulties that arose in a similar way to the observations I did at the beginning of the study.

After this pilot period, I will also invite you to complete a short questionnaire that asks you what you think about support in labour.

My identity can be confirmed by contacting UTS Human Ethics Committee or School of Medicine and Health Science (UPNG) Research Committee.

You are under no obligation to participate in this research.

Yours sincerely

_____

Nancy Olan Buasi

Research Student, Professional Doctoral Degree in Midwifery, UTS

Appendix 5: Consent form for staff of the Maternity Unit of PMGH

CONSENT FORM (Staff)

The Support in Labour Study in PNG

I _____agree to participate in the research project:‘ To introduce a system to enable support in labour provided by a person of the women’s choice at the Port Moresby General Hospital (PMGH) maternity unit in Papua New Guinea (PNG).

I understand the study is being conducted by Nancy Buasi a staff the University of Papua New Guinea who supervises midwifery students on their clinical placements in the labour ward of Port Moresby General Hospital. She is currently a doctoral student at the University of Technology, Sydney.

I understand that the purpose of this study is to pilot to introduce changes to labour ward by implementing support in labour for a period of one month.

I understand that my participation in this research will involve being observed in the labour ward, being involved in a series of meetings and groups and completing a short questionnaire.

I am aware that I can contact Nancy Buasi if I have any concerns about the research, UTS Research Ethics Committee or School of Medicine and Health Science (UPNG)

Research Committee. I understand I am free to withdraw my participation from this research project at anytime I wish, without consequences, and without giving a reason.

I understand that refusal, involvement or withdrawal from this study will not in any way prejudice my future care, academic progress, employment or relationship.

I agree that the research data gathered from this project may be published in a form that does not identify me in anyway.

I understand I can contact Nancy on phone number 3112626 or e-mail address, Nancy.O.Buasi@student.uts.edu.au her supervisors: Professor Homer on phone number 02 9514 4886 or e-mail address , Caroline.Homer@uts.edu.au and Professor Leap on phone number 02 9514 4886 or e-mail address Nicky.Leap@uts.edu.au

_____ ____/___/___

Signature (participant)

_____ ___/___/___

Signature (researcher)

This study has been approved by the University of Technology, Sydney Human Research Ethics Committee. If you have any complaints or reservations about any aspect of your participation in this research which you cannot resolve with the researcher, you may contact the Ethics Committee through the Research Ethics Officer (ph: +61 2 9514 9772 Research.Ethics@uts.edu.au),. UPNG, Research Chairman, Associate

Professor, Dr Matainaho (ph: 675. 3112626). Any complaint you make will be treated in confidence and investigated fully and you will be informed of the outcome.

Appendix 6: Information sheet for women and their support persons

INFORMATION SHEET (Women & Support Persons)

The Support in Labour Study in PNG

My name is Nancy Buasi and I am a staff of the University of Papua New Guinea. As a staff of the UPNG and a lecturer in midwifery we utilize Port Moresby General Hospital to supervise our students on clinical placements. I am currently a doctoral student at the University of Technology, Sydney.

I am conducting research "To introduce a system to enable support in labour to be provided by a person of the women's choice in Port Moresby General Hospital (PMGH) maternity unit". This study has been approved by the University of Technology Sydney (approval number), the Department of Health through the University of Papua New Guinea and the Port Moresby General Hospital (approval letter dated).

You are invited to bring a female support person with you when you come into labour ward. This support person will be able to stay with you while you are in labour, while you have your baby and after your baby is born.

The support you get while in labour will be observed and after you give birth I will ask your support person some questions about what it was like to be in the labour ward as a support person.

I will visit you the day after you have your baby and ask you some questions about what it was like to have a support person with you in labour.

My identity can be confirmed by contacting UTS Human Ethics Committee or School of Medicine and Health Science (UPNG) Research Committee.

You are under no obligation to participate in this research. Your care at PMGH will not be affected in any way if you do not participate in this study or if you choose to withdraw.

Yours sincerely

_____

Nancy Olan Buasi

Research Student, Professional Doctoral Degree in Midwifery UTS

Appendix 7: Consent form for women and their support persons

CONSENT FORM (Women & Support Persons)

The Support in Labour Study in PNG

I _____agree to participate in the research project: 'To introduce a system to enable support in labour provided by a person of the women's choice at the Port Moresby General Hospital (PMGH) maternity unit in Papua New Guinea (PNG).

The study is being conducted by Nancy Buasi a staff of the University of Papua New Guinea who supervises midwifery students on their clinical placements in the labour ward of Port Moresby General Hospital. She is currently a doctoral student at the University of Technology, Sydney. I understand that the purpose of this study is to introduce changes to labour ward by implementing support in labour for a pilot period of one month. .

I understand that my participation in this research will involve being able to bring a support person (a woman) with me when I come into hospital to have my baby. She will stay with me throughout my labour.

I understand however that if my condition changes during my labour, my support person may be asked to leave.

I understand that I will be observed at a distance to see how the support person is accepted into the labour ward. My support person and I will be asked some questions after the baby is born about support in labour.

I am aware that I can contact Nancy Buasi if I have any concerns about the research, UTS Human Ethics Committee or School of Medicine and Health Science Research Committee (UPNG). I understand I am free to withdraw my participation from this research project at anytime I wish, without consequences, and without giving a reason.

I understand that refusal, involvement or withdrawal from this study will not in any way prejudice my care. I agree that the research data gathered from this project may be published in a form that does not identify me in anyway.

I understand I can contact Nancy on phone number 3112626 or e-mail address, Nancy.O.Buasi@student.uts.edu.au her supervisors: Professor Homer on phone number 02 9514 4886 or e-mail address , Caroline.Homer@uts.edu.au and Professor Leap on phone number 02 9514 4886 or e-mail address Nicky.Leap@uts.edu.au

_____ ____/___/___

Signature (participant)

_____ ___/___/___

Signature (researcher)

This study has been approved by the University of Technology, Sydney Human Research Ethics Committee. If you have any complaints or reservations about any aspect of your participation in this research which you cannot resolve with the researcher, you may contact Ethics
Committee through the Research Ethics Officer (ph: +61 2 9514 9772 Research.Ethics@uts.edu.au),. UPNG, Research Chairman, Associate Professor, Dr Matainaho: (ph: 675. 3112626).

Appendix 8: Information sheet in Pidgin for women and their support persons

TRANSLATED INFORMATION SHEET (Women and Support Persons)
Tok save pepa blong (mama karim wantaim wasmama)

Skul wok blong ‘Bringim wasmama ikam insait long haus karim’

Neim blong mi em Nancy Buasi na mi wok meri blong University of Papua New Guinea tasol long dispala taim mi wok skul sumatin long University of Technology insait yet long Sydney.

Mi wokin skul wok blong mi ‘Long traim long larim wasmama imas kam insait wantaim mama karim long haus karim yet long Port Moresby General Hospital. Dispela skul wok em University of Technology itok orait, Department of Health itok orait natu University of Papua New Guinea tu itokorait pinis long mi ken go het na mekim.

Yu pela yet imas kam wantaim usait wasmama yupela laikim insait long hauskarim. Dispela wasmama embai istap wantaim yu yet inap yu karim na pinis blong en.

Taim wasmama ilukautim yu yet bai mi lukluk na taim yu karim pinis mi bai askim sampla askim long wasmama blong yu.

Bai mi askim yu taim yu silip long ward olmama silip taim karim pinis. Mi bai kam onepala day behain long yu karim pinis. Displa em long askim yu tingim olsem wanem long wasmama isatap wantaim yu long taim blong karim baby.

Tapos yu laik save gut long mi, imo beta yu ken askim UTS Human Ethics Committee or School of Medicine and Health Science (UPNG) Research Committee.

Displa emi laik blong yu, tapso yu ino laikim long stap insite long displa skul wok yu ken tok nogat.

Halivim blong mipla ikam long yu bai ino inap bagarap tapos yu itok nogat long stap insait long displa
skul wok.

Em tasol na tenkiu tru.

_____

Nancy Olan Buasi

Appendix 9: Consent from in Pidgin for women and their support persons

CONSENT FORM (Women and Support Persons)

Tok orait pepa blong (mama karim wantaim wasmama)

Skul wok blong 'Bringim wasmama ikam insait long haus karim'

Mi yet_____ itok orait long stap insait long displa skul wok 'Long traim long larim wasmama imas kam insait wantaim mama karim long haus karim yet long Port Moresby General Hospital.'

Displa skul wok em Nancy Buasi usait emi wok meri blong University of Papua New Guinea tasol long dispala taim emi wok skul sumatin long University of Technology insait yet long Sydney.

Mi save displa skul wok blong em 'Long traim long larim wasmama imas kam insait wantaim mama karim long haus karim yet long Port Moresby General Hospital bai iron long wan mun.

Mi save displa skul wok emi bai larim mi yet long karim wasmama wantaim mi taim mi taim mi ikam insait long karim pikinini long haus karim. Wasmama yet emi bai stap wantaim mi inap mi bai karim pikinini.

Mi save tu olsem tapos sampla hevi ikamap long mi insait long haus karim ol sista bai askim wasmama imas lusim mi igo arasait long haus karim.

Mi save olsem bai skul meri em bai sanap long we liklik na lukluk long hau wasmama ilukautim mi. Taim mi silip insait long haus karim. Behain skul meri yet emi bai askim mitupla wantaim wasmama sampla askim long displa skul wok.

Mi save olsem tapos mi igat askim long displa skul wok mi iken askim Nancy Buasi, na tu University of Technology, Sydney na University of Papua New Guinea.

Mi save tu olsem em displa emi laik blong mi, tapso mi laik lusim skul wok mi iken lusim. Displa tu bai ino inap bagarapim halivim bilong haus sik long mi yet

Mi save tu olsem taim displa skul wok I pinis na taim oli raitim report long en bai ol inoinap kolim neim blong mi yet.

Appendix 10: Measurement tool for pre-observation in labour

Measurement tools for observation of **pre support in labour** to birthing women by midwives, community health workers, and doctors. Key: **M**- midwife, **C**- community health worker, **D**- doctor.

Ward_____ Specific shift_____ Date_____ Time_____

Physical comfort measure	Duration of time with birthing women											
	5	10	15	2	25	30	35	40	45	50	55	60
Using cold face cloth												
Warm compress												
Extra blanket												
Bathing												
Assisting with shower												
Peri care												
Clothes/gown changing												
Giving sips of water/fluids												
Positioning for comfort												
Massage, touch, holding hand, stroking												
Ambulation in & out of bed												
Corridor walk												
Walk to bath/toilet												
Emotional support												
Encouraging, verbalisation of fears												
Concerns & needs												
Reassurance, encouragement & praise												
Keeping company												
Social conversation												
Instruction Information												
Instructing, coaching with breathing, pushing, verbal or non verbal												
suggesting techniques to promote comfort or relaxation												
Explaining, providing information about progress of labour, monitoring procedures, foetal neonatal wellbeing												
Explaining hospital routine, getting information from patient												
Advocacy												
Listening to birthing women's request for pain control												
Negotiating women's wishes to other teams												
Discuss with physician birthing women's wishes												
General comments												

Appendix 11: Measurement tool for post-observation in labour

Measurement tools for observation of **post support in labour** to birthing women by midwives, community health workers, support persons, and doctors.

Key: **M**- midwife, **S,** support person, **C**- community health worker, **D**- doctor.

Ward_____ Specific shift_____ Date_____ Time_____

Physical comfort measure	Duration of time with birthing women											
	5	10	15	20	25	30	35	40	45	50	55	60
Using cold face cloth												
Warm compress												
Extra blanket												
Bathing												
Assisting with shower												
Peri care												
Clothes/gown changing												
Giving sips of water/fluids												
Positioning for comfort												
Massage, touch, holding hand, stroking												
Ambulation in & out of bed												
Corridor walk												
Walk to bath/toilet												
Emotional support												
Encouraging, verbalisation of fears												
Concerns & needs												
Keeping company												
Social conversation												
Instruction Information												
Coaching with breathing , pushing, verbal or non verbal												
Suggesting techniques to promote comfort or relaxation												
Helping new born latch onto breast												
Helping woman how to hold infant												
Explaining hospital routine, getting information from patient												
Maintain communication												
Advocacy												
Listening to birthing women's request for pain control												
Negotiating women's wishes to other teams												
Discuss with physician birthing control women's wishes												
General comments												

Appendix 12: Questionnaires (Stage Two - Staff)

Information, Exploration and Engagement stage (Staff)

These questionnaires will be given out to the staff during the exploration stage meeting which is stage two, and they will be given out by the researcher herself. Filled in questionnaires will then be collected by the researcher. Individual answered questionnaires will be sealed in envelopes to maintain confidentiality.

1 What do you all think if we tried to introduce a support person in to labour ward with the women in labour?

_____

_____

_____

2 Why has the system never been introduced before in labour ward?

_____

_____

_____

3 If we tried to introduce the system of letting a support person with the women in labour into labour ward, what would be the rules to abide by?

_____

_____

_____

_____

_____

_____

4 If it cannot be introduced, can it be trialled?

_____

_____

5 Traditionally support in labour has always been given to women in labour in the village settings and more to that researchers globally on having a support person in place has proven to have positive outcomes?

How can this evidence be implemented and if you can make further comments on what you think about the introduction of the system?

_____

_____

_____

_____

_____

_____

_____

Thank you for participating in this research.

Appendix 13: Questionnaires (Stages 3 and 4 - Staff)

Implementation & Post Implementation, Reflection stage (Staff)

These questionnaires will be given out for Stages Three and Four during the implementation and reflection stages for the staff by the researcher and the filled in questionnaires will again be collected by herself. Individual answered questionnaires will be sealed in envelopes to maintain confidentiality.

1 What do you think about having a support person with the women in labour?

_____

_____

2 Were you able to do other tasks you were not able to do without a support person caring for the women in labour?

If the answer is (yes) outline what tasks were you able to perform?

_____

_____

_____

If the answer is (no) state the reason why?

_____

_____

_____

3 Did you notice any difference with the women in labour being with the support person?

_____

_____

_____

_____

4 How can you describe the care which was given to the woman in labour by the support person?

_____

_____

_____

_____

5 Did you feel intimidated by their presence with the women in labour?

Yes / No

6 What is your overall impression about the support person with the women in labour in labour ward? Also comment on what can be done to allow improvement to the introduction of the system?

_____

_____

_____

Thank you for participating in this research.

Appendix 14: Questionnaires (Stages 3 and 4 - Women)

Implementation & Post Implementation, Reflection stage (Postnatal Women)

These questionnaires will be given to the women a day after she gives birth and is resting in postnatal ward by the researcher herself. If she is illiterate the same questionnaires will be used to interview her. The questionnaires will be collected by the researcher herself. Individual answered questionnaires will be sealed in envelopes to maintain confidentiality.

1 What did you feel about having a support person with you in labour?

_____

_____

_____

2 Do you feel it is a system you want continued in this hospital?

Yes / No

3 Which person would you rather have to look after you in labour when you have your next baby?

_____

_____

4 Please give a reason for your answer to number 3 here.

_____

_____

_____

_____

5 If the midwives are to care for you during labour how would you like them to care for you?

_____

_____

_____

_____

6 While the support person was caring for you were you able to talk freely with her how you wanted to be cared for and supported?

_____

_____

_____

_____

7 Overall describe your feelings about having the support person with you throughout the delivery process, were you scared or did you have confidence?

_____

_____

_____

Thank you for taking part in this research

Appendix 15: Questionnaires (Stages 3 and 4 – Support Person)

Implementation & Post Implementation, Reflection stage (Support Person)

These questionnaires will be used to interview the support person immediately after the women gives birth, as the women is transferred out to postnatal ward. The support person will be interviewed by the researcher herself and the answered questionnaires will be kept in sealed envelopes by the researcher herself to maintain confidentiality.

1 What do you think about coming into labour ward with the woman in labour?

Can you comment a bit more on that?

_____

_____

_____

_____

2 Do you think women who come into labour ward should always have a support person with them and why?

_____

_____

_____

_____

3 Were you able to do minor things the midwives would not do such as rubbing the woman's back and attending to her immediate needs?

_____

_____

_____

_____

_____

4 Were you able to communicate effectively with the woman in labour? If your answer is yes explain how? If you answer is no explain why?

_____

_____

_____

_____

_____

5 What was your overall experience of having been with the woman in labour and express how you thought the woman you cared for felt?

_____

_____

_____

_____

_____

Thank you for taking part in this research

Appendix 16: Questionnaires in Pidgin for postnatal women

UNIVERSITY OF TECHNOLOGY SYDNEY

Translated questionnaires for postnatal women

OL ASKIM BLONG MAMA KARIM PINIS

Q1. Yu tingim olsem wanem long wasmama ilukautim yu long taim yu karim pikinini?

_____
_____
_____
_____

Q2. Yu tingim taim wasmama kam wantaim yu long haus karim emi gutpela?

_____
_____
_____
_____

Q3. Yu tingim bai onepela wasmama bai kam ken wantaim yu taim yuk am bek long karim narapela pikinini?

_____
_____
_____
_____

Q4. Tok save liklik long wanem samting emi gutpela taim wasmama ikam wantaim ol Mama long haus karim.

_____
_____
_____
_____

Q5.Wanem kain ol samting yu laikem ol nurse yet blong haus karim bai mekim long yu taim yu kam long karim pikinini?

_____
_____
_____
_____

Q6. Taim wasmama ilukautim yu, yu pilim belisi long toktok or yu pilim poret?

_____
_____
_____
_____

Q7. Wasmama ilukautim yu long taim yu bel pen inap yu karim pikinini, yu poret or yu belisi tasol?

_____
_____
_____
_____

TANKIU TRU LONG TOKTOK WANTAIM MI.

Appendix 17: Questionnaires in Pidgin to use for support persons

UNIVERSITY OF TECHNOLOGY SYDNEY

Translated questionnaires for support people

OL ASKIM BLONG WASMAMA

Q1-Yu tokaut long tingting blong yu long kam insait long haus karim wantaim mama taim emi laik karim pikinini?

_____
_____
_____
_____

Q2-Yu ting taim mama ikam insait long karim pikinini, emi gutpala samting long wasmama imas bihainim em?

_____
_____
_____
_____

Q3-Yu ting taim yu lukautim mama ikarim sampela liklik lukautim olsem rabim baksait blong Mama karim na toktok log halivim em we nurse ibisi tumas long maikim?

_____
_____
_____
_____

Q4-Yu na mama karim ibin makim sampla gutpla toktok long taim emi woklong pilim pen? Tapos yu tok yes, why nay u tok yes? Tapos yu tok nogat, why nay u tok nogat?

_____
_____
_____
_____

Q5-Yu tingim wanem long lukautim mama karim long haus karim nay u ting mama Yu lukautim emi pilim olsem wanem?

_____
_____
_____
_____
_____

TANKIU TRU LONG TOKTOK WANTAIM MI.

Appendix 18: Greenhalgh's Conceptual Model of Diffusion

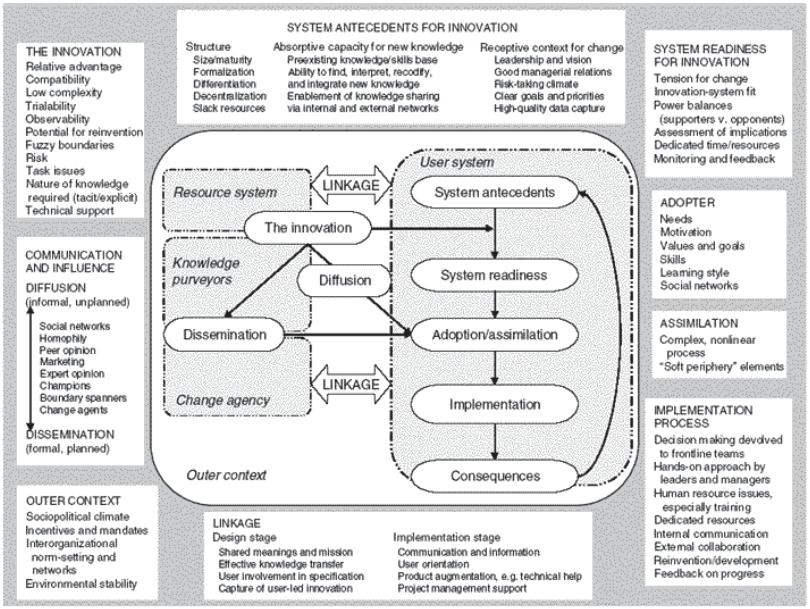

FIGURE 3. Conceptual Model for Considering the Determinants of Diffusion, Dissemination, and Implementation of Innovations in Health Service Delivery and Organization, Based on a Systematic Review of Empirical Research Studies

Appendix 19: Guidelines formulated for support person to use when providing support in labour to birthing women

Guidelines for the Support Persons

1. Only four (4) beds to be used at one time. The beds to be used are beds 1, 2, 13, and 14.
2. If and when these four beds are occupied, no other support person will be allowed in unless one of the five beds becomes available or vacant.
3. In antenatal clinic they may have entered the name of their support person.
4. Support person can be either female or male or a person of the birthing women's choice, with some experience.
   a) a support person to be out of the ward after delivery after refreshments to birthing women or after baby is breastfed.
   b) There is no substitute unless special cases such as PET etc, who would stay time or day.
5. Their roles and responsibilities of care must be explained to them.
   - Assist with food & drinks
   - Assist to toilet
   - Rubbing of back
   - Wiping of face with wet cloth
   - Information and explanation if first time women in labour

   c) Support person not to walk in and out of the ward once they are inside.
   d) Support person does not peep into the next cubicle.
   e) Support persons who become rough will be asked to leave.

f) No mobile phones to be held by the support person

6. Support person will be asked to step aside for ward rounds or further care by the midwives.
7. Support person may be asked to leave if operative delivery is to be performed.
8. Support person will not be allowed if they cannot stand the sight of blood or if fainting occurs in labour ward.
9. Support person will be advised that there is no toilet facility.
10. The implementation of support in labour is for the months for July, August & September. It is up to the Opinion leaders to continue providing support person after the pilot is completed. You may want to refine some aspects of the guideline again in order to implement the support permanently.