A DETERMINATION OF TIME SPENT ON NURSING ACTIVITIES IN A LABOUR WARD IN A MIDWIFE OBSTETRICS UNIT

by

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Declaration

I, Duduzile Florence Ngidi, declare that this dissertation is my own unaided work. It is being submitted for the Master's Degree in Nursing at the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination at any other university.

Signature: …… Date: ……

Place: Johannesburg

Dedication

This dissertation is dedicated to:

My late mother who inspired me to become a nurse, my family, who encouraged me to continue when my mother passed away, my friends who supported me during difficult times, Dr Sue J. Armstrong who is the greatest motivator.

Abstract

Determination of staffing needs is a priority for an organization seeking to provide safe patient care in an environment which is cost conscious. Registered nurses and midwives spend more time with patients than any other single category of health professionals and also provide 24 hour direct patient care. Activity based norms are recognized by the World Health Organization to be the most suitable way of determining staffing needs; establishing of time spent on activities is one of the key factors in determining activity based staffing norms.

This study focuses on ascertaining the timing of activities of midwives during labour in maternity obstetrics units with the possibility of using the information at a later date to determine activity based staffing norms for midwives in the maternity obstetrics units. An adaptation of Hodnett's (1996) five categories of labour support was used as a framework for measuring activities performed by midwives and nurses while supporting women in labour. This model was adapted from the previous work sampling study conducted in Toronto (McNiven and Hodnett, 1992:1).

Purpose of the study

The purpose of the study was to determine the time taken to perform nursing activities during labour in South African Midwife Obstetrics Units (MOUs) to inform the future process of developing nursing norms for labour wards in MOUs in the public sector.

Research design

This was an exploratory observational study using a mixed method design that included both qualitative and quantitative methods. Spot observations studies were conducted during patients' first stage of labour, which constituted the quantitative part of the design, i.e. activities observed and measured during the observation period. Naive sketches were used in the qualitative part of the study. The study was conducted in the six Midwife Obstetrics Units in Ekurhuleni Metropolitan Health District of Gauteng.

Main findings

Activities carried out by midwives in the MOUs were mainly reactive to the physiological processes of labour as they occur. Midwives in MOUs did not display the “soft skills” referred to in Hodnett’s categories of labour support. On the other hand, those skills that they managed to display were not easy to capture because they happen simultaneously with other activities e.g. touching and holding. Most of the categories of labour support were difficult to measure because they occurred very quickly and in “groups/batches.” The activities of midwives when caring for patients in labour were timed, and the calculation of the frequency at which nursing activities was carried out was particularly successful, but the researcher concluded that while the study was useful to provide insights into the quality of care, these results could not be used as a basis for determining activity based norms. This is due to the fact that the midwives did not practice quality care and the observation method was difficult to implement. The tool would need to be simplified and the possible use of technology such as videos should be considered if the study were to be replicated.

Factors that influenced the time spent and the duration of activities relate to communication, relationships, resources and systems failures.

Conclusion

The categories of labour support can be used for improving patient care and, if adapted to the South African setting, could be fit for the purpose of developing activity based norms, but only once midwives are taught and encouraged to implement the “soft skills” in labour which are necessary but seldom practiced.

Key concepts: Maternity obstetrics unit, workload, activity based norms, categories of labour support.

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Chapter 1: Overview of the Study

1.1 Introduction

A workload measurement system is critical for identifying nurse staffing needs for safe patient care and justifying nursing resource allocation in an environment that is cost conscious. While there is an understanding amongst policy makers in South
Africa that this is so, and that Swansburg's (1993:5) assertion that staffing methodology should be an orderly and systematic process based on sound rationale is correct, a decision has not, to date, been taken as to the methodology to be used to do this.

With increasing pressure caused by rising costs in health care and inadequate ratios of registered nurses and midwives for a growing population it is important to understand what the contributions are of the nurse and midwife in order to plan for new models of nursing care in order to provide a sustained nursing service (Dubois et al., 2012).

Nurses and midwives are the foundation of the health services and provide an essential role, being the primary interface between patients and health professionals (Cockerill & O'Brien-Pallas, 2005, 2005). They spend more time with patients than any other single category of health professional, and are also the only group that provides 24 hour direct service to the patients.

The Department of Health has agreed, in principle, that activity based norms should be utilized as advocated by the World Health Organization, but attempts to develop these are in their infancy (Cooke, 2013:1). The Rationale for Rural-Proofing Staffing Norms states that "all health policy planning and implementation at all levels of the health system will reference these staffing norms, either directly or indirectly." One of the key factors in determining activity based norms is the determination of time spent on nursing activities, which can then be used to calculate required numbers of nurses at maternity obstetrics units at district, provincial and national level. While the work to implement the World Health

Organization's Workload Indicators for Staffing Needs (WISN) in South Africa commenced in 2013, they have yet to be implemented, and work done by the Department of health related to their "Ideal Clinic" project (National Department of Health: Ideal Clinic, 2016) indicates that there is a shortage of staff in clinics. It is not clear whether adequate distinction has been made between the activities of the midwife in the clinic and other nurses.

An attempt was made prior to starting work on the WISN norms to use the methodology for determining activity based norms in the private hospital groups in South Africa. Due to the fact that obstetricians deliver the babies in private labour wards, and due to the differing patient profiles in the private sector hospitals, the activity based norms used there were not appropriate. Three years later there are still no activity based norms for nurses and midwives working in the clinics where the majority of patients deliver.

This study will serve to close that gap and assist policy makers to continue with the important work of determining activity based norms for labour wards in Midwife Obstetrics Units in South Africa.

1.2 Statement of the Problem

The Department of Health is currently developing activity based norms for all health services in the country. This is being done due to the lack of such norms for the public sector health services. The maternity units in the clinics have very specific needs that are largely undefined. Without specific information of the activities of the nursing staff in these clinics, staffing requirements and safe staffing levels cannot be determined. This is due to the fact that midwives in public sector clinics deliver babies themselves and do not rely on the obstetricians to do this. Acuity levels of patients at maternity obstetrics units differ from those in the private sector and even in the public hospitals. It is, therefore, important to determine times spent on nursing activities in the midwife obstetrics units so that they can be used in the development of norms.

One of the key factors in determining activity based norms is the determination of time spent on nursing activities, which can then be used to calculate required numbers of nurses at maternity obstetrics units and labour wards in hospitals at provincial and national level. There is, however, no recognized tool in use in South African maternity units for determining the time taken on various activities in the maternity ward, which is a pre-requisite to determine activity based norms. It is, therefore, important to determine whether an existing tool used for this purpose in Canada (Hodnett, 1996) is suitable for determining time spent on nursing activities in a midwife obstetrics unit.

1.3 Research Questions

- What nursing activities are performed in the labour ward of midwife obstetrics units?
- How long does each of the nursing activities take?
- What factors impact on the compliance and duration of the nursing activities that are undertaken?
- Are the categories of labour developed by Hodnett (1996) suitable for timing activities in a labour ward in a midwife obstetrics unit?

1.4 Purpose of the Study

To determine the time taken to perform nursing activities during labour in South African Midwife Obstetrics Units (MOUs), to inform the future process of developing nursing norms for labour wards in the MOUs in the public sector.

1.5 Objectives of the Study

- To determine which activities are carried out in a labour ward of a midwife obstetrics unit in Gauteng.
- To determine the duration of the nursing activities that the midwife engages in while caring for the patient.

- To establish the factors that influence compliance to and duration of nursing activities.
- To determine whether the categories of labour developed by Hodnett (1996) are suitable for timing activities in a labour ward in a midwife obstetric unit with a view to determining suitability for future use.

1.6 Operational Definitions

Activity based staffing norms

Staffing patterns that conform to set guidelines and are performed under acceptable professional standards.

Acuity levels

The measurement of the acuteness of illness; the level of severity of an illness and the intensity of care required to determine the level of care required by the healthcare provider.

Assessment

The evaluation and appraisal of the condition and progress of labour by observation, palpation, auscultation, measuring vital signs and using technology to assess the status of the foetus and the contraction of the uterus, and observation of the total response to the unfolding birth process.

Categories of labour support

These are general categories of support that are common to women in labour, and are reported as helpful during labour.

Ideal Clinic

The Ideal clinic is designed to meet standards set by of the National Health System: good infrastructure, adequate staffing, medication and supplies, good administrative processes, sufficient bulk supplies.

Labour support

The presence and/or support given by a companion/professional/midwife during labour. Supportive activities fall within five categories: emotional support, comfort measures, advocacy, supporting the husband/partner and information/advice (Hodnett, 1996:257).

Midwifery Obstetrics Unit (MOU)

A midwife-led maternity unit that is managed by midwives who are trained in Advanced Midwifery to manage uncomplicated labour and deliveries. The services rendered range from antenatal, through labour and delivery to postnatal services.

Monitoring

The observation of vital indicators of the physiological processes of the body aimed at maintaining normal status by measuring and comparing them with set parameters.

Nursing productivity

The ratio of patient care hours per patient day to salary and benefit costs paid out to staff by the organization (Kohr, Hickey & Curle, 2012).

Spot observation

This method has been used to document labour time by observing activities of individuals who are present at the time of arrival of the observer/researcher in the household, and by conducting interviews with those present and performing the activities. The data are coded and divided into standard activity categories and processed to determine the percentage of time spent on any class of activity by an individual (archive.unu.edu/unupress/unupbooks or class of individuals. /80632e/80632E0f.htm).

Staffing norms

These are standards that guide, control and regulate organizations in determining staffing needs, taking into account the projected workload in clinical areas and other supporting departments of an organization (Currentnursing.com).

Workload analysis

The systematic investigation of (a) work role requirements and (b) the broader context within which work roles are enacted. (Morgeson & Dierdoff, 2011) Traditionally it involves determining the time, effort and resources required to meet operational needs of an organisation.

1.7 Conclusion

In this chapter an overview of the study was provided. The literature pertinent to this study will be reviewed in the next chapter.

Chapter 2: Literature Review

2.1 Introduction

In this chapter the literature pertaining to the research study will be described. Original studies on related topics were reviewed, which provided valuable insight into the topic of the study.

The aspects of the literature reviewed relate to the concept of measurement of health care human resources, the provisioning of health care resources in the South African maternity services, the importance of measuring numbers and activities of health professionals generally, and nurses and midwives particularly; and the various methods that have been employed over the years to measure human resources for health and specific aspects relating to the measurement of care during labour.

2.2 The Concept of Measurement of Health Care Human Resources

Providing health care depends on a variety of factors that are political, economic, demographic and epidemiological in nature. The health services and staff required to match these factors differ from country to country and also within the same country. Some of the features involved are population density, age, sex, mortality, wealth, level of education, geographical features, utilization patterns of health services and the ease of access to these services (Ozcan & Hornby,1999:210-211).

In South Africa attempts are being made to introduce a National health Care Insurance system, the basic principle of which requires universal access which, inevitably, will impact on the number and type of human resources available to provide accessible care. This situation is not unique to South Africa. In the United States of America the implementation of the Affordable Care Act in 2010 has required bold measures to be taken in order to reorganize delivery systems, and, in particular, changes to the healthcare workforce (Pittman & Scully-Russ, 2016).

Many, if not all, countries in the world are experiencing increased demands for health services. The burden of disease is changing but, although there has been a shift from communicable, maternal, neonatal and nutritional causes towards non-communicable diseases, the latter problems are still predominant factors in mortality and morbidity in sub-Saharan Africa (Lozano, Naghavi, Foreman et al., 2012). Simultaneous demand for improved access to healthcare while still making attempts to remove barriers to access (Harris et al., 2014; van Rensburg, 2014) presents further challenges to the provision of quality health care in South Africa.

There is little doubt that, in dealing with the burden of disease and addressing issues of access, time spent with patients in need of care is valuable in terms of patient satisfaction and also patient outcomes. While it is acknowledged that the quality of care rendered during the time nurses spend with patients may vary, if they do not spend time with patients, no care will be rendered. It is thus important to look at, not only time spent, but also the nature of care given while attending to patients.

The purpose of measuring activities of health professionals is part of human resource planning, where attempts are made to assess the demand for health professionals, the available supply of health professionals and then to make an attempt to draw up a plan to meet the demands. Despite Armstrong (2006) stating ten years ago that, in the current climate of complexity, change and uncertainty, human resource planning could, at best, provide a broad indication of numbers, we have continued to use forecasting methods as there does not seem to be an appropriate alternative. Armstrong (2006) did, however, indicate that the importance lay in concentrating on determining the skills that will be needed rather than the numbers per se.

Both Dubois et al. (2014) and The King's Fund report (2011:2) support the notion that measuring numbers per se is not adequate. They state that "staffing is as an essential feature of nursing care organization, (and) is the process of determining the appropriate number, types and mix of nursing resources to meet workload

demands for nursing care at the unit level. It reflects the extent to which the nursing system obtains an adequate supply of staff to achieve its objectives."

Many authors (Djukic et al., 2013; Koy et al., 2015 and Ball et al., 2014) have shown evidence of the relationship between staffing and quality of care, but all indicate that numbers alone do not determine the quality of care. The nature of the working environment, the scope of practice and competency of staff on duty and the acuity level of the patients all impact on the ability of the nursing unit to meet its objective, but, as pointed out earlier, in the shortage of staff these other issues become academic.

Many seminal studies have demonstrated the link between nurse staffing ratios and patient safety by illustrating the increased risk of patient safety events, morbidity and mortality resulting from the increased number of patients in comparison with available staff complement. It must be noted that the nurse-to-patient ratio is only one aspect of the relationship in the equation between nursing workload and patient safety (Patient safety primer, 2016:2).

A study conducted in a Brazilian teaching hospital (Magalhaes et al., 2013) revealed that an increase in patient-to-nurse ratio was associated with a 0.189 increase in the incidence of bed related falls, a 0.157 increase in central line-associated infections, a 0.171 increase in turnover and 0.268 increases in absenteeism. It also demonstrated an inverse association with patient satisfaction in the lower categories of nursing personnel, for an increase patient-to nurse aid/technician ratio, there was a 10.799 decrease in patient satisfaction with the nursing team. The significant association between the workload of nurses and patient satisfaction was also cited in studies done by Hurst (2007) and Jha et al. (2008).

A study by Giammona et al. (2015) also demonstrated that optimal workload distribution reduces stress and burnout levels, increases job satisfaction, and improves retention of staff, and an increase in nursing staff numbers results in a

reduction in adverse events such as medication errors and nosocomial infection and improves the overall outcomes of nursing care.

In an attempt to provide safe care, and in light of the evidence that the staffing ratios impact on levels of patient safety, some countries have established mandatory minimum nurse-patient ratios. The state of California (USA) introduced mandatory minimum nurse-patient ratios with the passing of the California Assembly Bill 394 in 1999 (Tevington, 2011). Whereas the Royal College of Nursing (2012) provided a policy brief that strongly recommended mandatory staffing levels, and provided evidence to justify their stand, the National Health Service in England has not introduced them due, presumably, to economic constraints and the ramifications of introducing norms that would become the legal norms set by the state and having to comply with them. Only two states in Australia, viz. the State of Victoria and New South Wales, have introduced mandatory staffing levels for nursing. According to the Australian Nursing and Midwifery Federation (undated) since their introduction in 2000, outcomes in the public healthcare system in Victoria included: reduced waiting times in Victoria's 87 public hospitals; improved recruitment and retention of nurses and midwives as a result of better, safer working environments; capability to meet demands on hospitals; and improved economic performance of public hospitals. It is interesting to note that, even in the United States and countries that have taken the brave step of declaring mandatory staffing norms, these norms vary despite being based on similar methodologies of measuring nursing activities and acuity levels.

Population-based norms are used in comparing human resources for health between countries and regions but are ineffective in planning for future needs as so many variables are present within countries and regions. The World Health Organization (2016) recognizes in its Global strategy on human resources for health: Workforce (2013) that "the concept of universal health coverage may have different connotations in countries and regions of the world" and sets an objective to "align investment in human resources for health with the current and future needs of the population and of health systems, taking account of labour market dynamics and education policies; to address shortages and improve distribution of

health workers, so as to enable maximum improvements in health outcomes, social welfare, employment creation and economic growth." This indicates the need for each health service to measure their own human resource capacity and needs of the local population. The distribution of health care professionals has been found to be at least as important as the numbers and categories themselves (Nguyen, 2016; Sharma, 2016; Cornetta & Campbell, 2016) irrespective of the countries where the studies were undertaken.

Measuring the activities of health professionals forms the basic human resource function of determining the number of staff available and required for providing accessible quality health care, and for developing training programs which, in turn, will determine the quality of care in the short and long term. This exercise has been made more complex with the increasing tendency towards task-shifting in nursing and midwifery services in East, Central and Southern African countries, which is not always followed or supported with regulatory reform (McCarthy et al., 2013). While task-shifting is becoming wide-spread due to the shortages of trained health professionals and due to the increasing demands on the health care system, the provision of sub-categories of health workers is only one element of providing improved access to health care and improving outcomes. Supervision, support, leadership, good governance and adequate training all play an important role (Cornetto & Campbell, 2016; Dawson et al., 2015 and McCarthy et al. 2013).

2.3 The Provisioning of Health Care Resources in the South African Maternity Services

In South Africa, as in many other parts of Africa, the health care system is nurse based. A failure to measure the requirements for nurses and midwives and to make provision for supplying nurses will, therefore, lead to a failure in the whole health care system. This is particularly so in Gauteng province, where this study took place, where a concerted attempt is being made to introduce the district health care system (Moosa, 2014).

Four categories of nursing staff are recognized by the South African Nursing Council (Act No. 33 of 2005) viz. enrolled nursing auxiliaries (ENA), enrolled

nurses (EN), registered nurses (RN) and registered midwives. Each category of staff has a defined scope of practice laid out in the South African Nursing Council (SANC) regulation (SANC: R2598, 1984). In addition, a qualification known as the Advanced Diploma in Midwifery is approved by the SA Nursing Council. No separate scope of practice exists for graduates of this qualification, but it is generally accepted that midwives practising in midwife obstetrics units, where they have a greater element of autonomy should hold this qualification. It is therefore incumbent upon health planners to have a clear idea of the ratio of each category of nurse needed to serve at each level of care. It will not be possible to plan for the nursing workforce if the evidence-based staffing ratio is not in place (Uys & Klopper, 2013).

In South Africa, the scope of practice for registered midwives sets the scene for the environment in which the nurses and midwives are to practise. It prescribes the equipment and materials, records and activities and limits or extent to which they can practise and function. (SANC: R2598, 1984). Dubois et al. (2012) points out that the scope of practice allows the nurse to practise his/her profession and apply his/her knowledge in full. Measuring the activities of nurse practitioners elevates the scope of practice to a level that is compatible with business practices, because the principles of activity based accounting are applied. It then enables nursing activities to be costed and budgeted for like any items on the budget list.

Historically, the maternity workforce has been characterized by rigid role definitions across professional groups, but a more flexible approach can improve productivity, which would involve allowing midwives to take on new skills (Royal Cornwall Hospitals, 2014:3). This concept can lead to specialization which, in turn, would require a review of workforce planning and requirements. Currently, midwives in the Republic of South Africa follow various paths with some working in fields such as neonatal care, advanced midwifery, foetal medicine, lactation support and midwifery education. The four year curriculum of nurse training (SANC: R425), which results in a qualification in general, psychiatry, community health nursing and midwife, allows role substitution or working across professional divides. It enables professionals to care for patients in totality, meeting patients'

needs that are beyond maternity care. It allows the midwife to multitask and add to the quality of care (NHS Trust, 2014:3).

Currently the ratios of midwife and nurse to population are calculated on an annual basis, as well as the ratios between the various categories of nurse prescribed in the scope of practice. These figures however are based on the number of nurses on the register rather than the number actively working, and give no indication of where they are working except by broad geographic area.

The problems related to relying on population based norms become obvious when reviewing the latest available data from the SA Nursing Council (2015 statistics).

While the population: nurse ratio in the country is 197:1, they vary from 159 to 1 in Kwa Zulu Natal to 313 to 1 in the Northern Cape. Gauteng province has a relatively favourable ratio of 182 to 1 but one needs to bear in mind that Gauteng provides referral services for other provinces and other sub-Saharan African countries. Another factor that impacts on provisioning for maternal health services is the availability of doctors. Obstetricians provide specialist services but in their absence Advanced Midwives are often required to provide services traditionally offered by doctors, or the patients have to be referred to other facilities. While the population based ratios in the country as a whole compare favourably with many other sub-Saharan African countries, Jobson (2015) points out that there are 4200 public health facilities in South Africa, with each clinic on average providing for 13 718 people – a figure that exceeds the recommended guidelines of the World Health Organization of 10 000 per clinic. This further highlights the importance of measuring capacity at a local level, taking into consideration all the issues raised above.

In March 2011, a draft document, known as “Planning for key health professional categories” (NDOH, 2011), emerged as a result of a decision taken by the National Department of Health to highlight the issue of establishing staffing ratios before planning for the workforce could begin. In April of the same year, at the Nursing Summit, the Minister of Health challenged the nurses of South Africa to

present a ratio of registered nurses to other categories of nursing staff to enable the planning of human resources for health for the country.

One of the key deliverables of the National Strategic Plan for Nurse Education, Training & Practice (Strategic plan – nurse education, training & practice 2012/13 – 2016/17): 11, which emerged from the Summit deliberations, related to nursing norms and guidelines as essential aspects for health care planning and safe patient care that would strike a balance between ideal staffing, patient safety feasibility and affordability. The Ministerial Task Team (MTT) recommended a combination of WHO population based norms and activity based workload approaches to be used for determining safe staffing norms for nursing in South Africa (NSPNEP, 2014-17).

2.4 Measuring Activities of Health Professionals

While a common perception amongst nurses is that increasing the number and skills set of nurses will solve all staffing problems, it is not realistic or affordable to simply increase staff numbers due to the ageing population of the nurses and midwives, the current global economic outlook and the complexity of health care services (Royal Cornwall Hospitals, 2014:3). Nursing and maternity services have to focus on enhanced productivity as a route to improved quality of care. The King's Fund report (2011) emphasized the importance of deploying the right staff, for the purpose of doing the right job, timeously in a conducive environment. In order to do this, however, measurement of workload and productivity are required.

Human resource managers in various organizations plan their human resource structures by predicting the number of staff required to render services effectively and efficiently. Planning also involves the determination of the number of employees needed in a unit, how many are needed to complete a task and the tools needed to complete the task (Hutagalung & Gustomo, 2013:2290).

The need for determining workload measurement systems is widely documented. The challenges facing nurses include high acuity levels, competing for scarce

resources with other departments, and meeting the expectations of a highly litigious community. Hoi et al. (2010) described the need for developing a workload system as a critical factor in the process of determining staffing needs.

Dubois et al. (2012) suggest including three dimensions in a model used to measure activities, namely nurse staffing, nurses' scope of practice and the nursing work environment. These concepts are interrelated and influence both nurse outcomes (health and job safety of nurses) and patient outcomes (patient care quality and safety) (Dubois et al., 2012).

A common way of determining the resources required for quality health care is provided by Donabedian (2015) who, in his seminal work, suggests that the elements of structure, process and outcomes are all required in order to provide quality of health care. The structure aspect of Donabedian's model includes the provision of human resources, financial resources and other resources such as equipment. Central to his model is the assumption that, unless structure issues are provided, processes cannot occur and therefore the outcomes will not be met.

It is self-evident, however, that merely having nurses on duty does not translate into care given. It depends on what the nurses do with their time, and how efficient they are in carrying out their tasks that translates into quality of care. The term "workload" is defined by Abbey (2008) as "what a nurse will do in a given situation and how long it takes to do this work." In order to understand the workload, it is important to break the work into activities, or smaller units of work. The combined activities during a shift, or other designated period of time, then make up the workload.

Time and motion studies have been conducted for many reasons in the health care field, including to determine mobility-related nursing care activities (Yoon et al., 2015), weekend work patterns (Richardson, 2016), the activities of unit managers (Armstrong et al., 2015), activities of intensive care nurses (Abbey, 2008), and medication reconciliation (Meguerditchian, 2013). All have aimed at a better understanding of the issues related to time management in an effort to

improve efficiency and quality of care. All have involved a listing of the activities that make up a defined workload, after which observational studies have been done to measure the time taken for each activity, the frequency and, quite often, interruptions that occur during an activity.

To conduct a time and motion study for a defined purpose is in itself complex and time-consuming, and is subject to the possibility of a Hawthorne effect, but to undertake a time and motion study of all the activities carried out by a nurse on a shift and to capture the information is a daunting task. In assessing nursing productivity or workload, it is also essential to consider patient acuity levels, the availability of resources and skills levels (Kohr et al., 2012:421). Nursing workload systems (NWS) are based on these aspects and include case mix, skills mix and expected patient loads, in an attempt to design a system that can be used to determine staffing requirements in a particular unit. The can also be used to determine cost per case and funding requirements (RNAO, 2005:5).

The World Health Organization introduced a method of analysing staff utilization at various levels of the health care system, the Workload Indicators of Staffing Needs (WISN), which can be used with other tools to build more robust human resource systems (WHO: WISN, 2010:iii-iv).

The WISN method calculates the number of health workers per category, based on the workload of the health facility, and assesses staffing based on the gap between current and required numbers of staff and the WISN ratio, which is a measure of workload pressure (McQuide et al., 2013).

A similar approach was used by Daviaud & Subedar (2012) when calculating staffing norms for the Department of Health as part of the initiative to re-engineer primary health care. Their work preceded the work that had commenced using the WISN model but reflected the “average profile of the South African population and its burden of diseases” and took into consideration the Package of service (as defined in primary healthcare policy) offered; the size and demographic structure of the population; the burden of diseases; the normative number of visits by type

of condition; the average time per type of visit per category of staff; scopes of practice; and proportion of patients per type of visit who are referred to a specific category of staff and reaching optimal skill mix. While this work provided a good starting point, it fails to recognize the influence of working conditions, level of supervision, support, leadership, good governance and adequate training considered important by Cornetto & Campbell (2016), Dawson et al. (2015) and McCarthy et al. (2013).

Even more recently, the National Department of Health has brought out norms for "the ideal clinic" based on the WISN model (RSA, 2015). The norms are calculated taking into consideration potential working time, available working time, activity standards (which refer to time necessary for a well-trained, skilled and motivated worker to perform an activity to professional standards in the local circumstances), standard workload (which refers to amount of work within a health service workload component that one health worker can do in a year (if the total working time was to be spent on this activity only), and workload component (which, in turn, is divided into health service activities, support activities, and additional activities). These norms are the most comprehensive available to clinics in South Africa, and include norms for Midwives Obstetric Units that will be used as a comparison for the findings of this study.

2.5 Measuring Labour Support

In pregnancy, a certain amount of anxiety is considered to be normal in anticipation of child birth. If this feeling of anxiety develops into fear of child birth and the pain that is associated with it, the combination of these two factors may result in prolonged duration of active labour, a need for pain relief, a need for a Caesarean section and other negative personal experiences and complications (Sydsjö et al., 2015). Labour support is cardinal in the care of a woman in labour. (McNiven & Hodnett, 1992:4). It is regarded as the most important activity of a midwife or nurse during the intra-partum stage of labour, and providing emotional support, comfort measures, advocacy, supporting the husband/partner and information/advice form the basis of caring for a woman in active labour (Hodnett,

1996). These activities define the workload of the midwives responsible for the care of women in labour.

Concern has been expressed regarding the quality of care of maternity patients in the South African district health care system with indications (Pattinson, 2014) that 60% of births occur in primary health care facilities, and 62% of perinatal deaths and one third of maternal deaths occurring in these facilities, despite the intention that care is provided to low-risk patients in these facilities. One of the difficulties in the inability to control peak demand as well as dealing with variations in birth numbers, heightened patient expectations, social issues and increased prevalence of co-morbidities (Yelland et al., 2013). These issues make it important to measure the activities of midwives and support staff in individual units in an attempt to deal with contextual issues, rather than depending solely on national norms.

Labour support is an important intra-partum nursing function that has important and measurable effects on labour and birth on both mother and child. It the activity that defines maternal care and has an impact on obstetrics and neonatal outcomes. Ellen Hodnett (1996) used the Categories of Labour Support as a model or tool to guide Midwives during the intra-partum period. The purpose of designing the tool was to enable the women to have a memorable child birth experience. The supportive activities linked to labour support were divided into five categories: emotional support, comfort measures, advocacy, supporting the husband/partner and information/advice (Hodnett, 1996:257).

Recently published evidence-based guidelines on labour support (Lee et al., 2016) indicate, among other things, the benefit of delaying admission to the birthing unit until the woman is >4cm dilated, documentation and communication of labour, the benefit of upright positions during labour, allowing low risk women to eat and drink during labour, mechanisms for accessing support from carers as they wish, the importance of one-on-one continuous labour support during active labour, and a choice of analgesia options. This concept of labour support goes far beyond mere instrumental care and authors (WHO, 2016; Aune et al., 2014; Sosa et al., 2011) agree that a large part of the care involves support, companionship, and comfort

measures, which were included in Hodnett's (1996) tool for measuring activities of maternity care in labour. If one is to measure the quality of patient care in labour, it is therefore essential to include these aspects as there is evidence of their importance on outcomes and patient satisfaction. The norms put forward thus far in the work using the WISN model discussed above fail to do this, leaving an important gap in the evidence.

2.6 Conclusion

This literature review has provided evidence of the broad concept of measuring human resources in health care, the issues relating to the provisioning of human resources in maternity services in South Africa, the purpose and importance of measurement and the methods used thus far to try to determine staffing requirements in midwife obstetrics units in South Africa, and briefly examined the concept of labour support, the activities related to which this study aims to measure.

Chapter 3: Research Methodology

3.1 Introduction

An overview of the study as was given in chapter one and a review of the relevant literature was provided in chapter two. This chapter describes the methodology of the study, including the research design, the purpose and objectives of the study and the population being studied. Procedures that involve sampling methods, data collection and data analysis are also discussed.

3.2 Research Design

This was an exploratory observational study. Jolley (2010:67) states that exploratory research is often qualitative and aims to provide new insight into things.

Brink et al. (2012) describe observation as a "technique for collecting descriptive data on behaviour, events and situation". They state that, if the observations are made under precisely defined conditions and in a systematic and objective manner, observational data collection is extremely useful in health sciences as it allows the researcher to observe behaviour as it occurs.

A mixed method design was selected as both qualitative (Objectives 3 & 4) and quantitative (Objectives 1 & 2) methods were needed to fulfil the purpose of the study. Spot observations studies were conducted during patients' first stage of labour, which constituted the quantitative part of the design, i.e. activities observed and measured (timed) during the observation period. Spot observation is a quantitative method that was used to achieve Objectives 1 and 2. This objective assisted the researcher to identify the actual activities that are carried out and the duration it takes to complete them in an MOU. It also revealed the extent to which the categories of labour support are applied in the MOU's in Gauteng. Based on that finding, the researcher was able to establish a baseline for further research and implementation.

Naive sketches were used in the qualitative part of the study. Objectives 3 and 4 assisted the researcher to establish the factors that influence nursing activities and the duration it took to complete them.

The study is also descriptive in nature because it describes the activities carried out during labour support.

3.3 Research Setting

The study was conducted in the Ekurhuleni Metropolitan Health District of Gauteng. There are three tertiary hospitals, one regional hospital and one district hospital as well as six Midwife Obstetrics Units (MOU) in Ekurhuleni. A midwife obstetrics unit provides institution-based maternity services to low risk pregnant women and is operated and managed by midwives. Should a patient develop a complication of pregnancy or labour, she will be transferred to a hospital where obstetricians are available. The nursing activities at an MOU reflect standardized nursing care of labouring women and are sensitive indicators which can be used as a basis of determining staffing norms.

A wide cross section of the community lives in Ekurhuleni and includes formal and informal households and housing as well as many different socio-economic, tribal, cultural and religious groups. Both South African and foreign nationals live in the area. Most of the patients using the services of the midwife obstetric unit are from the lower socio economic group and/or do not have medical insurance.

The Ekurhuleni Health District had a total of 39 739 deliveries in the period April 2011 to March 2012. The district was chosen because it has the highest population in Gauteng. Midwife obstetrics units have been selected as this is where “normal deliveries” take place. Another reason is that the Ekurhuleni district has the highest number of deliveries in Gauteng (Annual Gauteng Department of Health Statistics, 2012-2013). At the time of determining the population and sample size, there were 6 active MOUs with a total of 8425 deliveries during the year in question, or an average of 4 deliveries per day.

During the period of data collection, the staff complement of each MOU was as follows: MOU 1: 15; MOU 2: 16; MOU 3: 21; MOU 4: 20; MOU 5: 17; MOU 6: 2

Data was collected over a period of eight months.

3.4 The Population

The definition by De Vos et al. (2011:223) states that the population sets boundaries on the study units. It refers to individuals in the universe who possess specific characteristics. It further states that it is the totality of persons, events, organization units, case records or other sampling units with which the research problem is concerned.

The population consisted of all women and their attending midwives who had normal vaginal deliveries during the period of the study (N = 23 per day for all clinics). A sample of 36 participants were realized at the end of the study.

3.5 Sample

Sampling is a process of selecting subjects who are representative of the population being studied. As described above, the Ekurhuleni Region was selected as the setting for the study. All six MOUs in this district at the time of commencement of the study were included in the sample i.e. a total sample was used. One additional MOU was commissioned after the sampling process. This MOU was not included.

A consecutive sampling method to select the patients and nurses to be included in the study was used, together with a sampling framework. The sampling frame is a comprehensive list of sampling elements from which the sample is drawn (Brink et al., 2012:132). Sampling elements to be included were: parity of the women i.e. to include both multigravida and primigravida women, the days of the week (must include both weekdays and weekend days and public holidays), and night duty and day duty, i.e. 7 sampling elements.

Inclusion criteria were as follows:

- Women between the gestational ages of 37 and 42 weeks with cervical dilatation of more than 4cm at the time of recruitment
- Uncomplicated pregnancy

One patient representing each of the seven sampling elements at each clinic (6 clinics) was selected for the study which made a total sample size of 42. The midwives and patients were paired thus an initial sample of 42 was chosen for both midwives and patients.

The realized sample was 36. The factors influencing this are discussed in the data collection section.

3.6 Data Collection

3.6.1 Spot Observations

The first part of the data collection consisted of spot observations. This method was described by Rogoff in 1978 and defines a "spot" record as one that captures by observation the activities of all individuals present at the moment of entry into the household (Rogoff, 1978). This method of observation reduced bias as the researcher observed the care of a patient who happened to be in labour at the time the researcher arrived to collect data, or, who arrived at the clinic when the researcher was present. Rogoff (1978) advised that the data collected should be coded into “standard activity categories”. In this study, the standard activity categories were those advocated by Hodnett (1996). Rogoff (1978) then advises that the data should be processed to determine the percentage of time spent on any particular class of category.

Activities of midwives were categorized into seven groups including Hodnett’s (1996) categories of labour support i.e. emotional support, comfort measures, information/advice, advocacy and supporting the partner. Two categories of instrumental care were added to these categories. The one was derived from McNiven & Hodnett (1992) where they described “direct care activities”, which, for

the purpose of this study, are referred to as “Hodnett’s instrumental care”. An additional section, referred to as “other care” was added to the tool prior to commencement of the study to ensure that all basic care required by a labouring women was captured. Initially this section was left open but as data was gathered it became clear that most of the additional factors related to specific nursing procedures done by midwives and included palpation, vaginal examination, catheterization, urinalysis, putting up intravenous infusion, vulval swabbing, and monitoring, which, in turn, included assessment of vital signs (blood pressure, pulse, respiration and temperature), and haemoglobin level of the mother. This differs from “monitoring” in Hodnett’s instrumental care, which includes monitoring of progress of labour viz. monitoring of the foetal heart, (manual and/or cardiotocograph), and contractions. (See Annexure 1).

Whenever possible, prior to the planned visit, telephonic contact was made with the manager to ensure that there would be no difficulty in gaining access and cooperation. On arrival at each clinic, the researcher reported to the facility manager and explained the purpose of her visit. The approval document from the Gauteng Department of Health to conduct the study was shown whenever requested. Over time, staff of all shifts on day and night duty were aware of the study and knew the researcher, which improved cooperation.

The researcher first established if the patient met the criteria for inclusion, i.e. they were in the active phase of labour, and expected to have a normal or uncomplicated delivery. The researcher gave an information sheet (Annexure 2) to the patient to read and answered any questions she had. If the patient agreed verbally, she was given a consent form (Annexure 3) to sign. The midwife caring for the patient was then approached and the same procedure followed, with Annexure 4 and Annexure 5 (the information sheet and consent form respectively) being given to the staff member. Only if both the midwife and the patient consented were they included in the study.

In summary, the following steps were implemented as standard practice for the data collection visits at all MOUs:

1. Greeted staff and patients.
2. Identified all patients who met the criteria: in latent phase of labour and uncomplicated.
3. Established the allocation of staff to patients.
4. Explained the nature of the study to both the responsible midwives and patients.
5. Obtained informed consent from midwives and patients.
6. The researcher commenced with spot observation.
7. Due to the methodology of data collection, the researcher acquainted herself with members of the four shifts, so that the logistics introduction to staff was minimized. This helped to build a rapport between the researcher and the participants.

Observation started with the activity that was being carried out at the time of arrival of the researcher. The sequence of the activities was not a concern for this study and all activities were recorded in terms of the number of seconds taken to complete the activity, however many times that activity occurred. The time spent on activities was recorded on an ongoing basis on the tool (see Annexure 1); for ease of recording sufficient space was left for each activity for multiple recordings. Although labouring patients are cared for by various categories of nurse, this study measured the activities of the midwife as the intention was, at a later date to use data to design norms for this category of staff. The duration of the activity was measured using a stop watch. The total number of seconds spent on each activity were then added together and recorded on the tool and later calculated in terms of percentage of time taken per activity. Many of the activities listed in Hodnett's tool were not carried out and, when this was the case, they were left blank and calculated as a zero.

Data was collected as per the sampling framework that required the researcher to collect data at each of the six MOUs in the study and, at each, collect data to include weekdays, weekends, public holidays, night and day time, and had to include both multiparous and primigravida women. As there was no way of predicting when labouring patients would be admitted, and the average labour

takes several hours, the researcher spent a minimum of 2 hours and a maximum of 3hours and 30 minutes with each patient in MOU's 1 to 5 in order to collect sufficient data. Only one patient was observed at MOU 6. This is explained in chapter 4. Due to the challenges and constraints the size of the realized sample was 36 patients.

3.6.2 Naive Sketches

Once the delivery was complete and the patient was comfortable, the midwife who provided the care was asked to write a narrative. The purpose of these narratives, or naive sketches, was to gain an understanding of the factors that may have influenced the amount of time and the times spent on activities during the labour.
The midwives were specifically asked to answer two questions viz. "What factors do you think influenced nursing activities you gave to the patient?" and "What factors do you think influenced the time taken to complete the nursing care activities?" (See Annexure 6).

3.7 Data Analysis

3.7.1 Spot Observations

The amount of time spent (duration) on each activity in the various categories was totalled and recorded for each patient. The average duration for each activity and category was then calculated, both per clinic and overall from the six MOUs and expressed both as numeric and percentage scores.

Field notes were taken to establish context; this was only possible during times when the patient was not receiving direct care from the midwife as, during those periods, the researcher was fully engaged with timing the activities which quite often happened almost simultaneously and were of very short duration.

3.7.2 Naive Sketches

The data from the naive sketches was subjected to a summative content analysis (Hsieh & Shannon, 2005). In this method of analysis of qualitative data, analysis starts with identifying words in the text with the purpose of understanding what the participants are saying and their contextual use. Hsieh & Shannon (2005) explain

that the words can be identified and simply counted but that, as in the case of this study, a further step was taken whereby the content is interpreted (known as latent content analysis) to try to discover their underlying meaning. As the naive sketches were short, and often annotated, this proved a more useful way of analysing the content of the qualitative data.

3.8 Validity, Reliability and Trustworthiness

3.8.1 Instrument Validity

The categories of care reported on in Hodnett (1996) were originally used in a work sampling study of the activities of labour and delivery nurses by McNiven, Hodnett, and O'Brien-Pallas (1992). Subsequently, the categories have been refined and used to collect data in two studies (Hodnett & Osborn, 1989a and 1989b). The latter study was a randomized control trial. The validity and reliability of the instrument has therefore been tested.

Content validity is an assessment of how well the instrument represents all components of the variable to be measured (Brink et al., 2012); in this case, care in labour, was checked prior to commencement of the research. This was done by comparing Hodnett's categories with documented care in the records of the Gauteng Department of Health. As a result of this process the additional category was added to the instrument, i.e. "other instrumental care".

Face validity was not checked by means of a pilot test as the researcher was the only person capturing the data. Her interpretation of each activity was therefore constant.

3.8.2 Triangulation

Three methods of data collection were used i.e. the spot observations, the naive sketches and the researchers observations of and in the field. While the phenomenon of interest was the time spent on various activities, this assisted in understanding the context of the study and the environment in which the midwives work, which was essential for later use of the results in the study.

3.8.3 Trustworthiness of Qualitative Data

The researcher spent in excess of 160 hours in the field collecting data and in this way, through **prolonged engagement**, developed an in-depth understanding of the phenomenon and the people involved. This also enabled her to build trust and rapport with the participants which was needed to gather rich data (Brink et al., 2012).

Confidence in the truth was also established by means of **persistent observation**, where the researcher looked at the data from all three sources in a critical manner in order to understand the influences and to determine what counts and what does not (Brink et al., 2012). **Thick descriptions** of data were done but as the data was only collected in one health district it cannot be assumed that it is generalizable.

An audit trail was kept of all the data to allow for **confirmability**. All field notes, naive sketches and spot observation data were kept as paper based records so that it is possible to check the source and veracity of the data.

Dependability was assisted by means of the triangulation of the data, i.e. the filed notes, the spot observations and the naive sketches.

3.9 Ethical Considerations

- Permission to use the categories of nursing support was obtained from Ellen Hodnett.
- Permission to undertake study was requested from the University Postgraduate Committee and from the Ethics Committee of the University (Annexure 7), after which permission was requested from, and granted by, the Gauteng Department of Health to conduct the study (Annexure 8).
- Permission to conduct the study was obtained from the Ekurhuleni Health District (Annexure 9).
- An informed consent was obtained from all patients and midwives participating in the study.

- Sensitivity was shown to the physical and psychological status of the labouring women and only those who were not distressed were approached.
- The researcher ensured that she sat in a place where she could observe the activities of labour, she ensured she did not get in the way of patients and midwives and did not comment or interfere with their care.
- In preparing for the study, concern was expressed regarding what the researcher would do if there was an emergency, and it had been agreed she would assist in that case and not use data gathered on that particular patient.

  This was not necessary as no emergencies occurred.
- Anonymity of participants was ensured by allocating a code to each of the activity sheets and the naive sketches and participants in the naive sketches are only referred to by this code in the report.

3.10 Conclusion

The quantitative aspect of the study measured the time taken for various activities in labour and the qualitative aspect identified factors that contribute to the time taken over activities and the nurses' ability to provide care.

In the next chapter, the findings of the study will be discussed.

Chapter 4: Presentation and Discussion of Findings

4.1 Introduction

In this chapter the data analysis and the findings of the study are described. There were four research objectives for this study, namely:

- To determine which activities are carried out in a labour ward of a midwife obstetrics unit in Gauteng.
- To determine the duration of the nursing activities that the midwife engages in while caring for the patient.
- To establish the factors that influence compliance to and duration of nursing activities.
- To determine whether the categories of labour developed by Hodnett (1996) are suitable for timing activities in a labour ward in a midwife obstetrics unit, with a view to determining suitability for future use.

The data relating to the first two objectives will be presented in section 1 of this chapter. Section 2 will provide data from the qualitative aspect of the study viz. the naive sketches, relating to the third objective. Section 3 will deal with the fourth objective relating to the suitability of the tool for timing activities in labour.

4.2 Section 1 – Determination of Type and Duration of Activities

The objectives relating to this section are:

- To determine which activities are carried out in a labour ward of a midwife obstetrics unit in Gauteng.
- To determine the duration of the nursing activities that the midwife engages in while caring for the patient.

In order to provide meaningful data, the findings will be presented as follows:

- Firstly, the data relating to the individual MOUs in the study will be presented. A profile of the MOU will be given, in order to ensure understanding of the context, followed by the findings from the study. These findings will first of all show the time spent on all categories of care. After this each category will be broken down to show the time spent on the sub-categories of care. Each is followed by a brief narrative on the findings in each of the sub-categories per MOU.
- Secondly, findings from the collective data relating to all 6 MOUs will be presented. In this sub-section, the findings will be presented and will be followed by a discussion of those findings. It is only when looking at the data from all 6 MOUs that a picture emerges of activities of care in the region. The sample at individual MOUs does not allow for such discussion.

The categories of care for which the activities were observed were emotional support, comfort measures, information and advice, advocacy, support of the partner and instrumental care. The latter category is reported on in two subsections. The first relates to the instrumental care derived from McNiven & Hodnett's classification (1992) and is referred to in this study as "Hodnett's instrumental care". The second is referred to as "other instrumental care," and provided for the measurement of additional care aspects, which were added by the researcher, during the early stages of data collection, when she realised many aspects were "missing" from the original tool.

As explained in chapter 3, quantitative data was collected by using a stop watch to measure time spent on each activity performed by the participating midwife. The activities were captured on the categories of labour support tool (Annexure 1) using the spot observation method. The duration and frequency of the activities were recorded until the end of the observation period. The end of the observation period was determined by the end of the fourth stage of labour or the transfer of the patient to another facility. There was no sequence in observing the activities, they were recorded randomly as and when they were performed.

The unit of measurement used was minutes and seconds but for reporting purposes, all were converted to seconds and average times calculated.

4.2.1 Results from Individual MOUs

In this section, results will be reported according to how the categories of labour support were carried out in the six MOUs. The results are reported in graphs and the scores are reflected in percentages and the average time taken in seconds (corrected to whole numbers) per category. This will be followed by a report of comparison of each category of labour support per MOU, also in graphical form, given in percentages followed by average time per sub-category.

4.2.1.1 MOU Number one

Short profile

This MOU is situated proximal to Heidelberg Hospital (30km), Far East Rand Hospital (18km) and Pholosong Hospital (11 km). This facility was formerly a district hospital that was downgraded to a Community Health Centre.

The patients are admitted and kept in the admission ward. They are only transferred to the delivery room when they are fully dilated. The midwives' station (duty room) is situated outside of the main ward. While patients were going through the stages of labour, the auxiliary nurses monitored the vital signs and reported only abnormalities to the midwives. The midwives would re-assess the patients at regular intervals (hourly, two hourly or four hourly) or when the patient shouted for help.

By virtue of its infrastructure, the MOU is well placed to render a conducive health service and therefore attracts many patients. It is a very busy and popular facility in the area.

The personnel were friendly and this resonated with the quality of care given. It must be noted that at the time of data collection, this was the only clinic with a multi – racial staffing component. It is important to mention this because the birth process is always influenced by cultural practices and certain rituals.

Understanding rituals during labour is highly useful and creative (Hodnett, 1996:261). It is actually one of the innovations the midwives can invest in to achieve good outcomes.

Overall results

At this MOU, a total of seven patients were observed in labour.

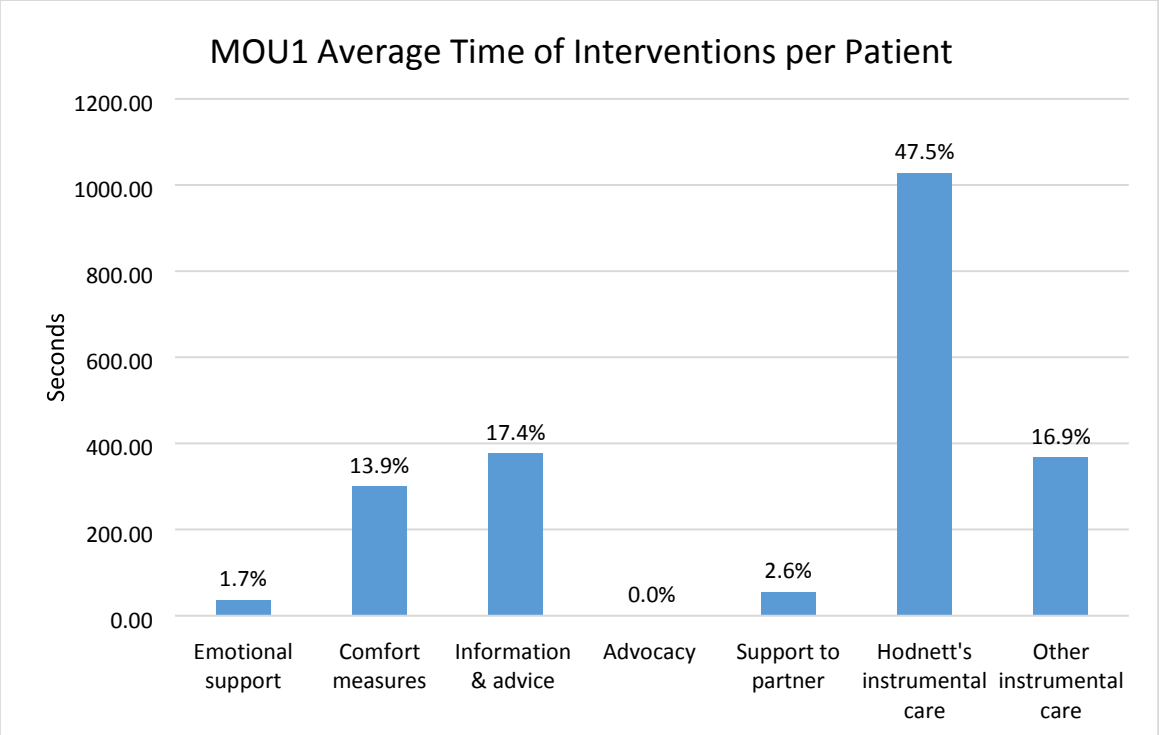

Figure 4.2.1.1.1: MOU No. 1 - Categories of labour support

In terms of the activities undertaken and duration to do them at the MOU, 1.7% (37 seconds) was spent on emotional support, 13.9% (310 seconds) on providing comfort measures, and 17.4% (377 seconds) on providing information. There was no observation of advocacy, 2.6% (55 seconds) was spent on support of the partner, 47.5% (1029 seconds) was spent on the instrumental care aspects in the Hodnett instrument and a further 16.9% (367 seconds) on additional aspects of instrumental care added to the instrument.

Results per Category

A diagrammatic report of each category follows:

a) Emotional support

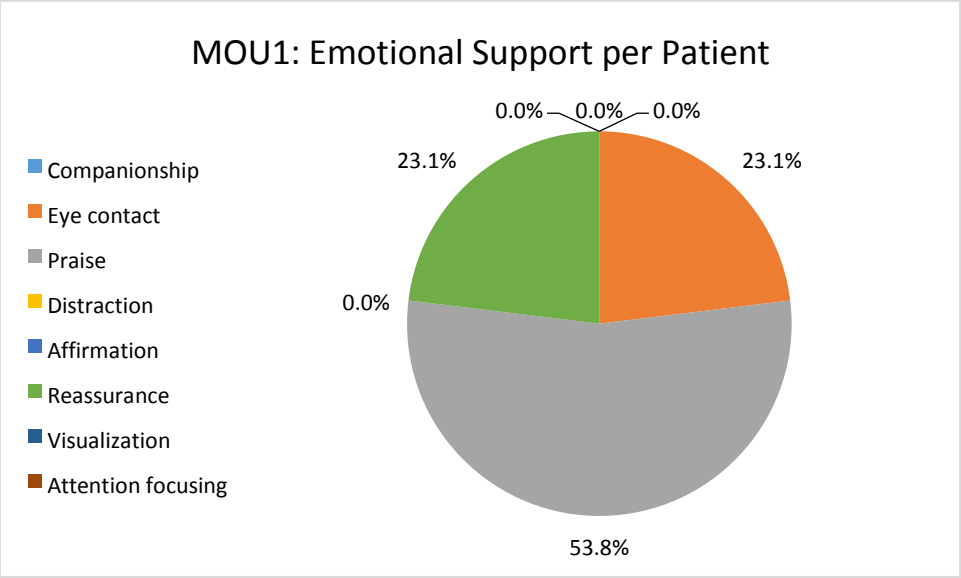

Figure 4.2.1.1.2: MOU No. 1 – Emotional support

As shown in the graph above, the midwife spent time praising, making eye contact and reassuring the patients. However, only an average of 37 seconds was spent on this aspect of care.

b) Comfort measures

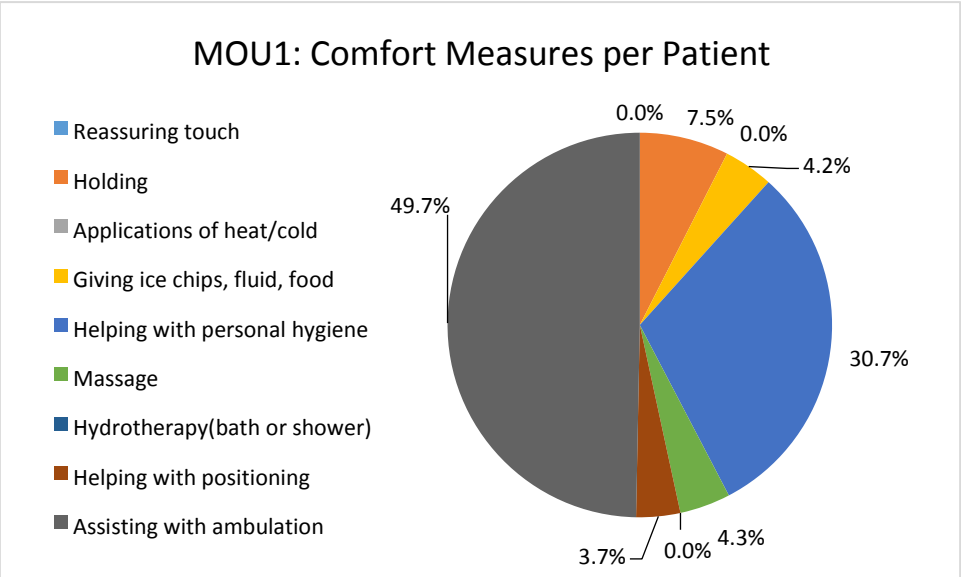

Figure 4.2.1.1.3: MOU No. 1 - Comfort measures

Of the 301 seconds spent on average providing comfort measures for the patients, half the time was spent assisting patients to walk.

c) Information/Advice

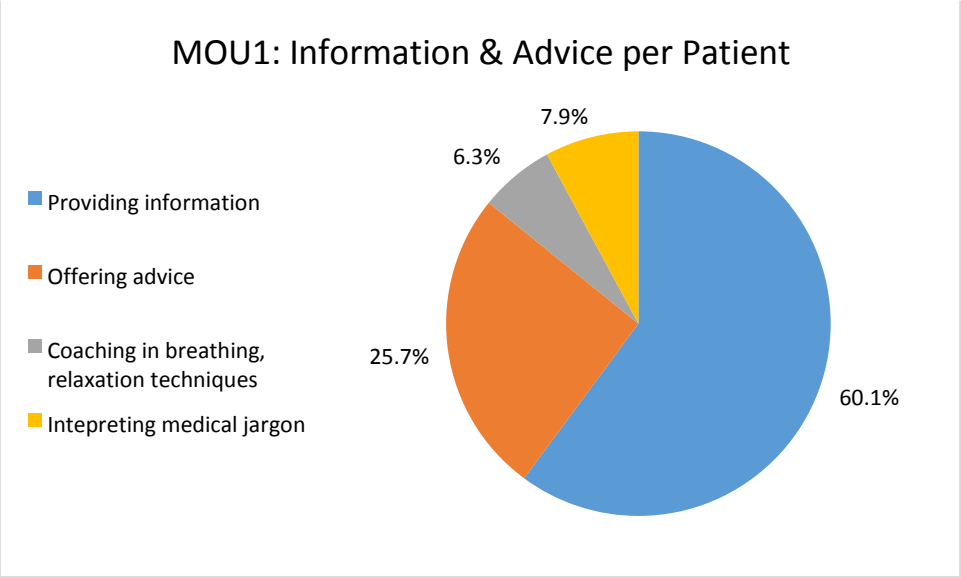

Figure 4.2.1.1.4: MOU No. 1 - Information/Advice

Of the 377 seconds spent on information and advice for the average patient, most was spent on providing the information or 'telling' the patient what was going to happen and what she should do.

d) Supporting the husband/partner

No acts related to advocacy were observed.

e) Supporting the husband/partner

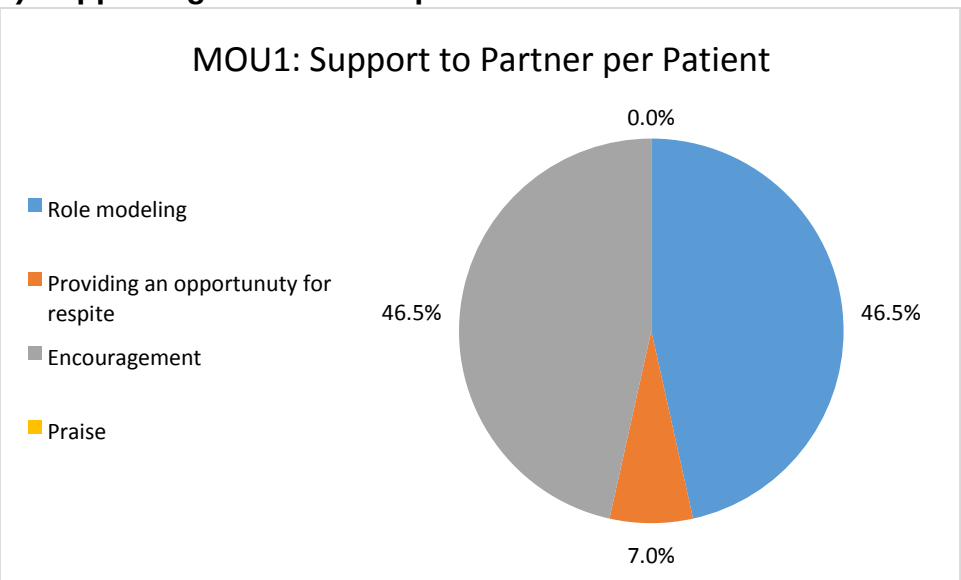

Figure 4.2.1.1.5: MOU No. 1 – Supporting the partner

The results for this category indicate that, on the rare occasions when a partner is present for the labour, he/she receives some attention from the midwife which includes demonstrating how to help care for the labouring woman (role modelling), and encouraging the partner; although in terms of actual time spent on this activity, it only amounts to an average of 55 seconds per patient.

f) Hodnett's instrumental care

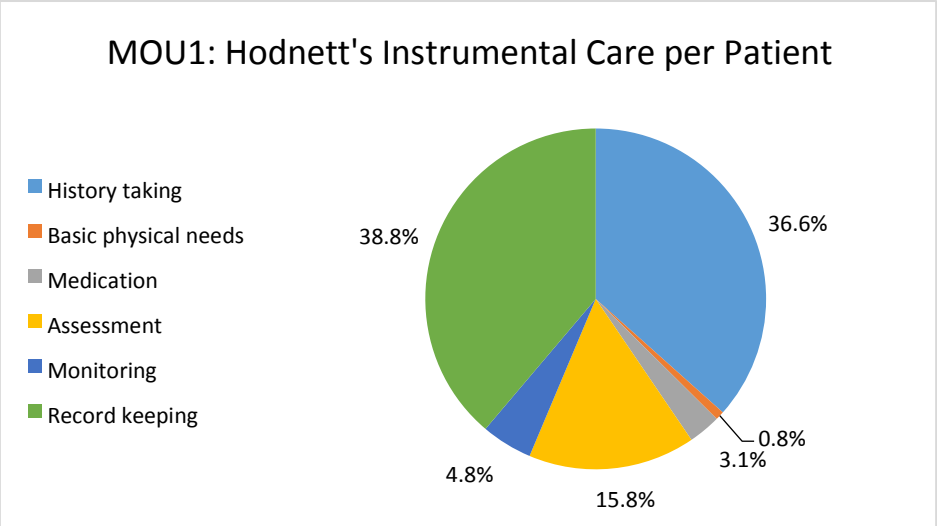

Figure 4.2.1.1.6: MOU No. 1 - Hodnett's Instrumental care

Significantly more time is spent on history taking and record keeping than any of the 'hands on' care in this category. Of note is the fact that only 4.8% of the time was spent on monitoring the patient, which is a crucial role during labour to detect any possible risks to the patient or her unborn child. On the other hand, 38.8% of time is spent on record keeping. This translates into nearly 7 minutes per patient.

g) Other Instrumental care

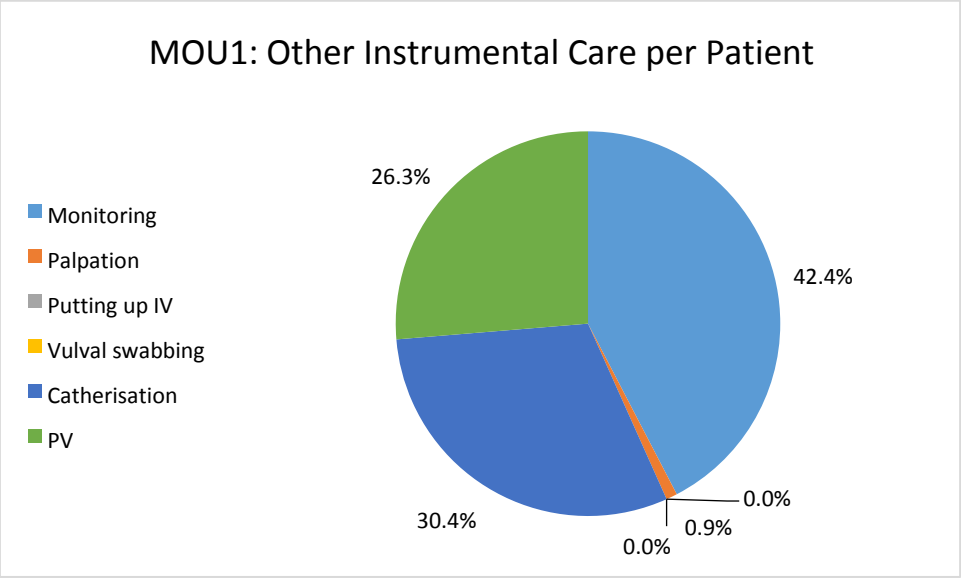

Figure 4.2.1.1.7: MOU No. 1- Other Instrumental care

While 42.4% of the time was spent on monitoring the patients, palpation seldom occurred despite 26.3% of time being spent on examining the patients vaginally. The time spent on catheterisation indicates that it is a fairly common procedure at this MOU.

4.2.1.2 MOU Number Two

Short profile

This MOU is situated on the east side of Ekurhuleni, near Benoni, and has a wide catchment area of both formal and informal settlements surrounding the facility.

The MOU has a very small admission area. The patients are all admitted in one area and distributed according to the condition and the stage of labour. Patients in active stage are kept in the admission/labour ward and those in latent phase are allocated in the side wards. Like all the other MOUs in this study, it operates 24 hours per day. It has a relatively good infrastructure. The actual structure of the unit is small and congested, but it has all the essential characteristics of a maternity unit.

The staff members were friendly and welcoming to both the researcher and to the patients. This is one of the clinics that feed the Far East Rand, Pholosong and

Tambo Memorial Provincial Hospitals if and when the level of care and skills required exceed the clinic's capacity. It is a very busy clinic owing to the fact that it serves the formal and informal settlements of Etwatwa and parts of Daveyton.

Overall results

At this MOU, a total of seven patients were observed in labour.

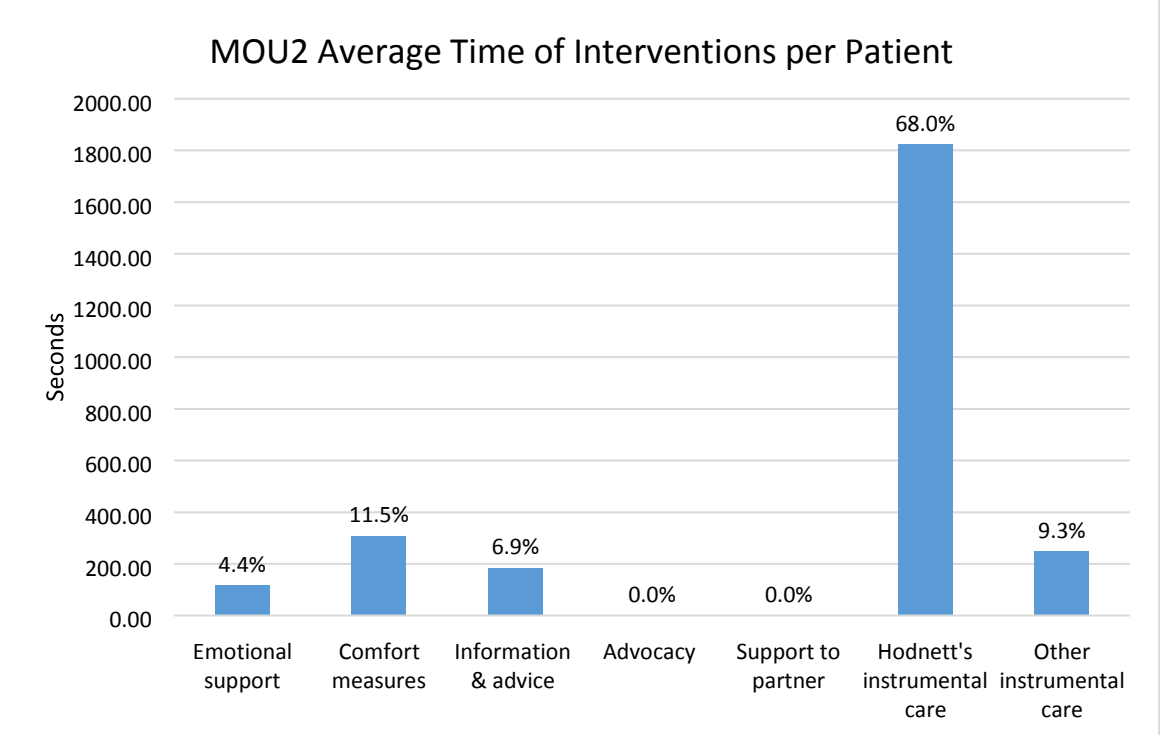

Figure 4.2.1.2.1: MOU No. 2 - Categories of labour support

In terms of the activities undertaken and the time to do them at the MOU, 4.4% (117 seconds) was spent on emotional support, 11.5% (308 seconds) on providing comfort measures, 6.9% (185 seconds) on provision of information and advice, no time on advocacy, no time on support of the partner, 68% (1823 seconds) on the instrumental care aspects in the Hodnett instrument and a further 9.3% (249 seconds) on additional aspects of instrumental care added to the instrument. The performance of the MOU on different categories is illustrated below.

Results per Category

a) Emotional support

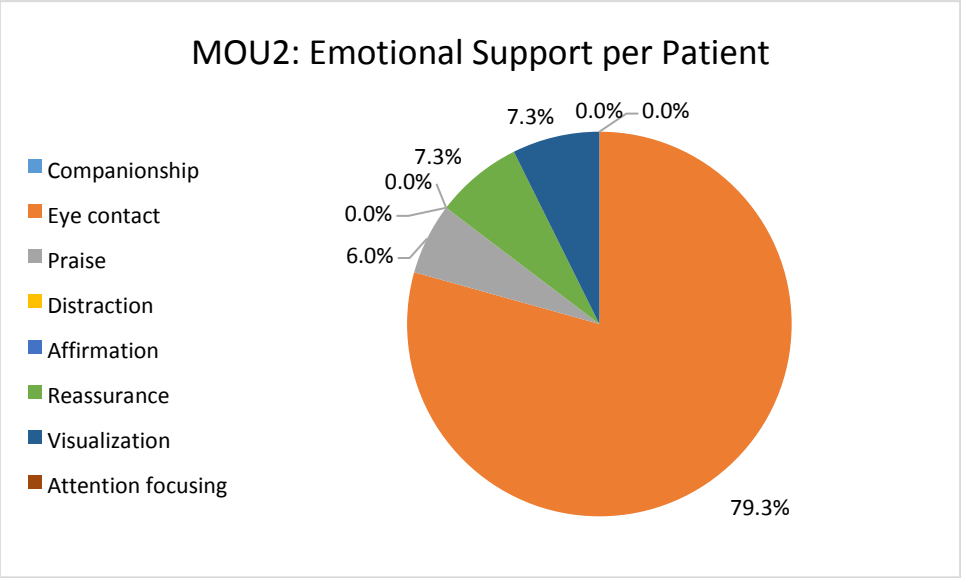

Figure 4.2.1.2.2: MOU No. 2 – Emotional support

Of the average time of 818 seconds spent per patient on emotional support, nearly 80% of the time involved eye contact which is unusual.

b) Comfort measures

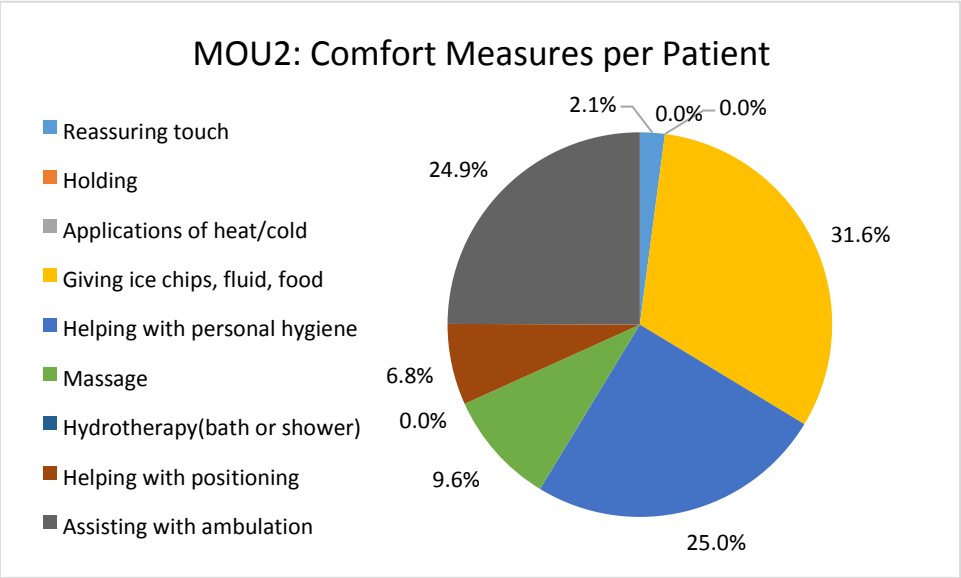

Figure 4.2.1.2.3: MOU No. 2 – Comfort measures

Of the 308 seconds spent on the average patient providing comfort measures, 31.6% of the time was spent in providing fluids and food which is more than the other MOUs in the study.

c) Information/Advice

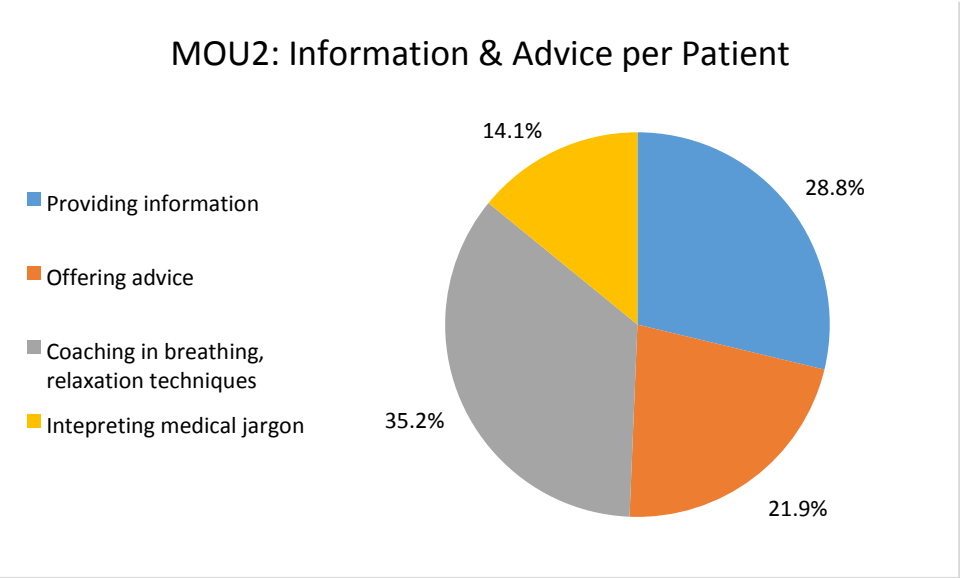

Figure 4.2.1.2.4: MOU No. 2 – Information/Advice

An average of 185 seconds per patient (or approximately 3 minutes) was spent on this aspect of care. Once the total amount of time spent on this aspect is taken into account, the seemingly positive amount of time spent on coaching in breathing and relaxation seems less significant than one would first think.

d) Advocacy

No acts related to advocacy were observed.

e) Support of the partner

No acts pertaining to this category were observed.

f) Hodnett's Instrumental Care

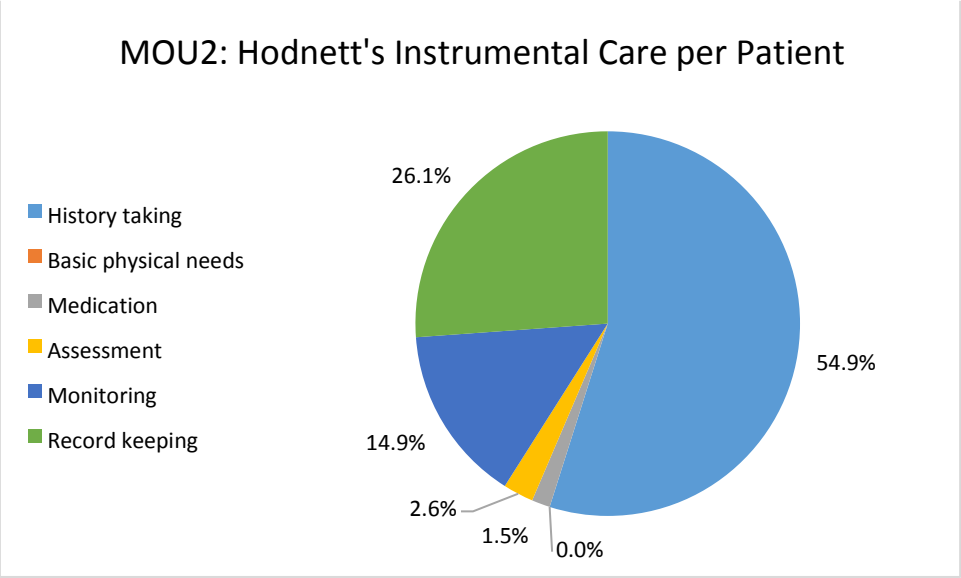

Figure 4.2.1.2.5: MOU No. 2 – Hodnett's Instrumental Care

More than half of the time was spent on history taking and recording of that information, leaving little time for the remaining aspects of care in this category, including providing for the patients' basic needs, for which activity no time was spent.

g) Other Instrumental Care

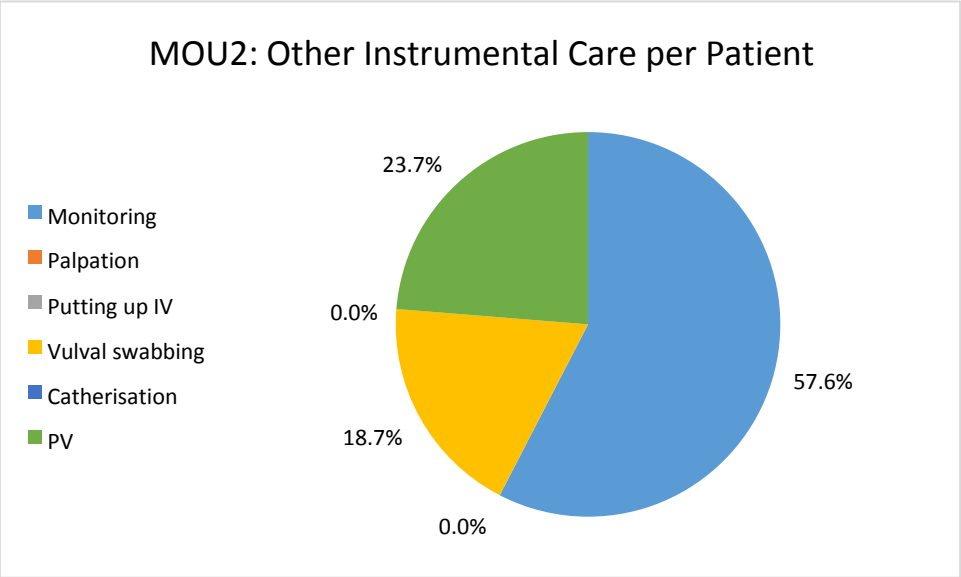

Figure 4.2.1.2.6: MOU No. 2 – Other Instrumental care

Of the time spent on additional aspects of instrumental care, 23.7% was spent on vaginal examinations and no time at all on palpations, which should be a prerequisite for a vaginal examination. In this MOU no patients were catheterised.

4.2.1.3 MOU Number Three

Short profile

This MOU is situated in Vosloorus, within a community rehabilitation and health centre. It provides services to a wide area of formal and informal settlements in the south of Ekurhuleni. The catchment area is densely populated. It is one of the most popular MOUs in the region and has a good reputation amongst the community.

The layout of the MOU complies with the expected standards of a maternity unit in terms of space and patient flow. The help desk is situated at the main entrance of the facility and manned by security personnel who direct patients to the relevant facility.

The nurses' station is situated at the entrance of the MOU where triaging of patients is done on admission. There is an admission/assessment room where all patients are assessed and allocated according to the stage of labour. The structure of the clinic is conducive to quality care and is spacious, with all the features of a maternity unit available: separate pre-admission, first stage, delivery and post-natal wards.

There is a perception that some patients, who have been referred to a nearby provincial hospital for delivery due to at-risk pregnancies, leave their arrival at this MOU until they are in the late active phase of labour to avoid being transferred. This is an indication of the reputation the MOU has for providing good quality care, and having relatively good infrastructure and competent staff. The staff members were friendly and welcoming to both the researcher and to the patients.

Overall results

At this MOU, a total of seven patients were observed in labour.

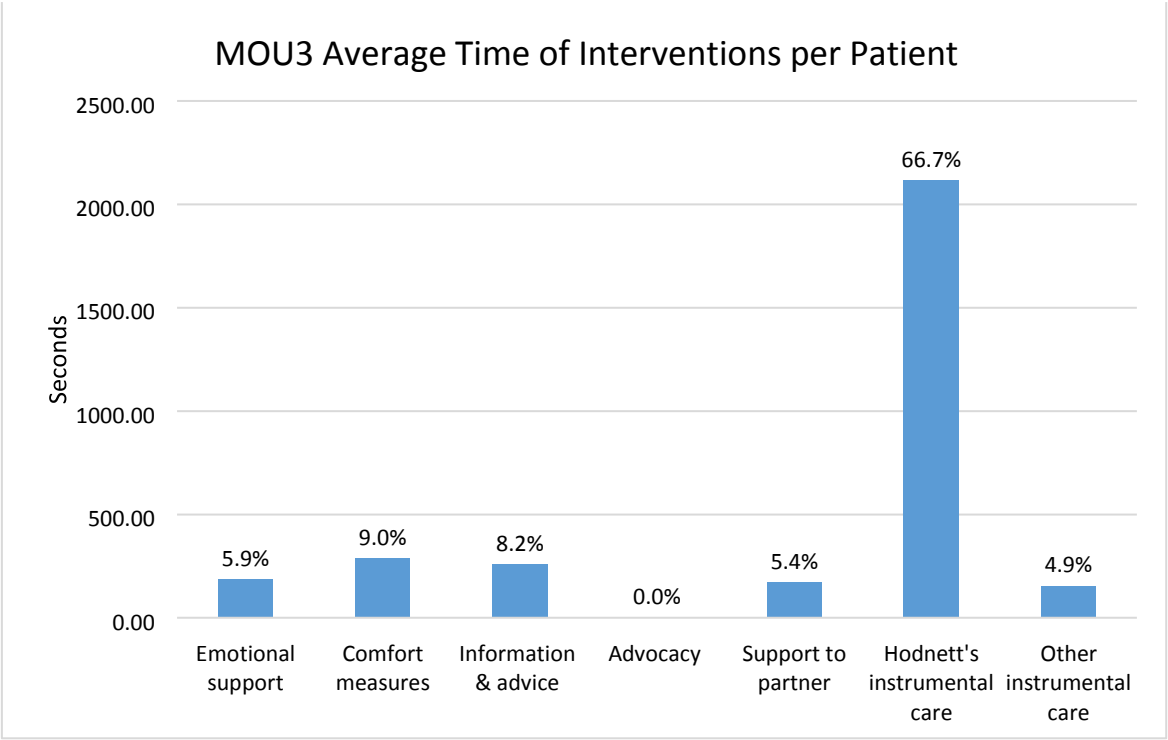

Figure 4.2.1.3.1: MOU No. 3 – Categories of Labour Support

In terms of the activities undertaken and the time to do them at the MOU, 5.9% (186 seconds) was spent on emotional support, 9% (285 seconds) on providing comfort measures, 8.2% (259 seconds) on provision of information and advice, no time on advocacy, 5.4% (172 seconds) on supporting the partner, 66.7% (2114 seconds) on the instrumental care aspects in the Hodnett instrument and a further 4.9% (154 seconds) on additional aspects of instrumental care added to the instrument.

Results per Category

a) Emotional Support

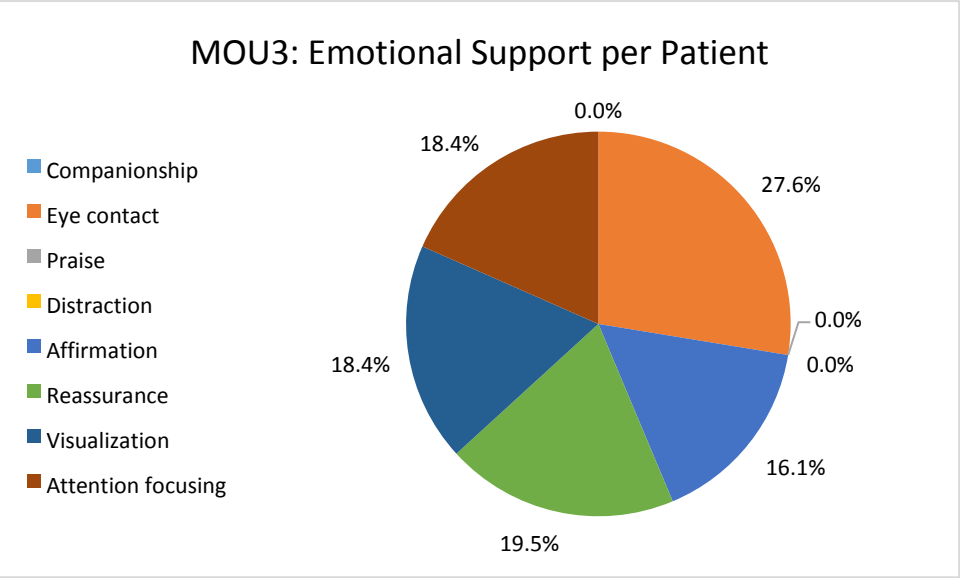

Figure 4.2.1.3.2: MOU No. 3 – Emotional support

Little time (an average of 186 seconds or 5.9% of the total time) was spent on emotional support. What there was showed a balance of measures in this regard.

b) Comfort Measures

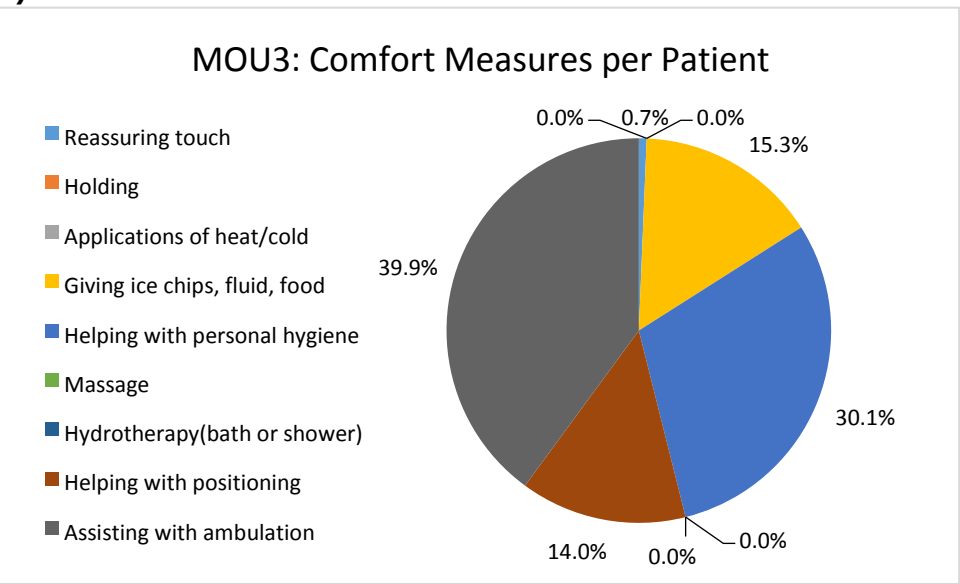

Figure 4.2.1.3.3: MOU No. 3 – Comfort measures

Nine percent (9%) of the time was spent on providing comfort measures and, as with other MOUs, assisting the patients to walk was the activity on which they spent the most time.

c) Information/Advice

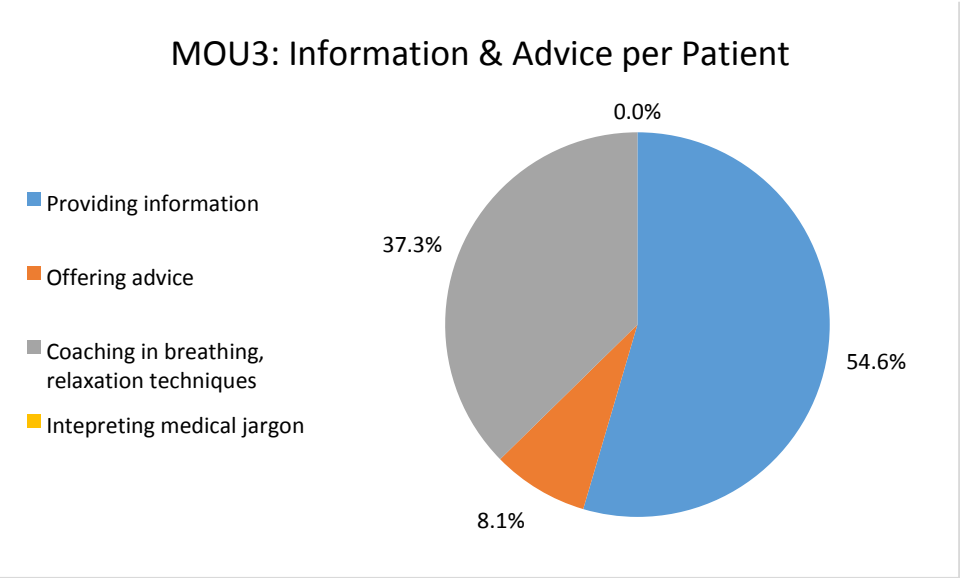

Figure 4.2.1.3.4: MOU No. 3 – Information/Advice

Little time (an average of 259 seconds per patient) was spent on provision of information and advice. More time was spent providing information than advising and coaching the patients.

d) Advocacy

There were no activities observed related to this category.

e) Supporting the husband/partner

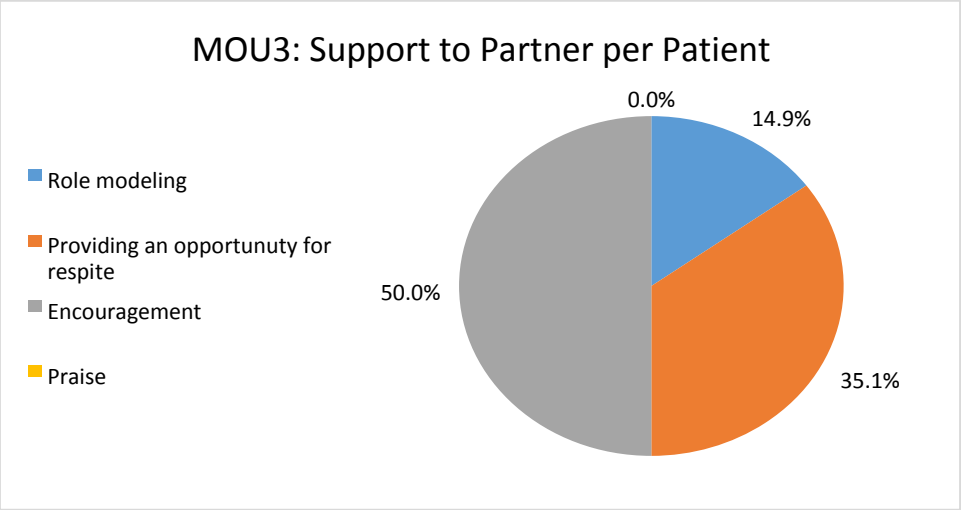

Figure 4.2.1.3.5: MOU No. 3 – Supporting the husband/partner

As with other MOUs, little time (172 seconds per patient) was spent on supporting the partner. The total time spent for the seven patients was 1206 seconds which may have all been spent with one partner as few of the women were supported by partners.

f) Hodnett's Instrumental Care

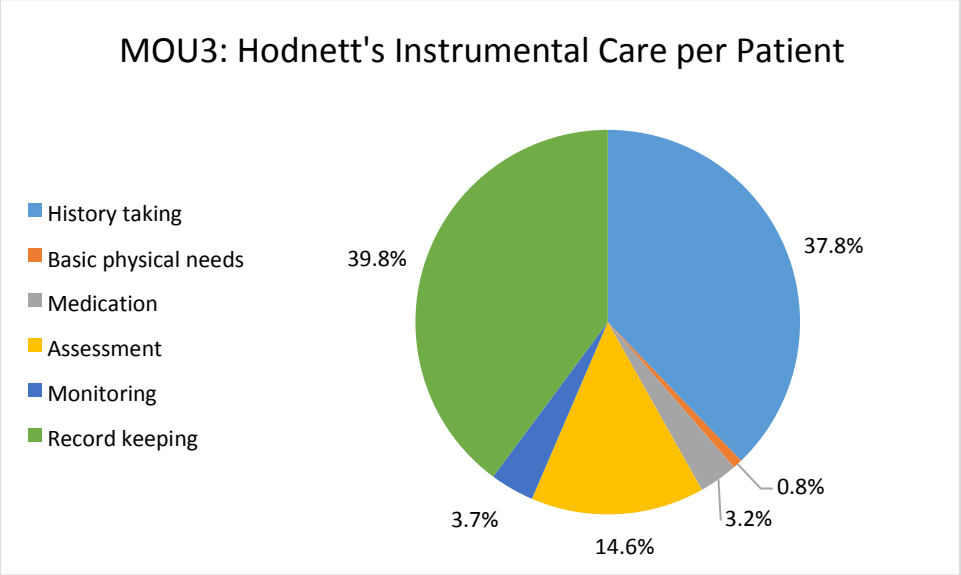

Figure 4.2.1.3.6: MOU No. 3 – Hodnett's Instrumental care

Instrumental care related to Hodnett's tool took up 66.7% (an average of 2113 seconds per patient) of the midwife's time at this MOU. As with other MOUs, record keeping and history taking took up most of the time.

g) Other instrumental care

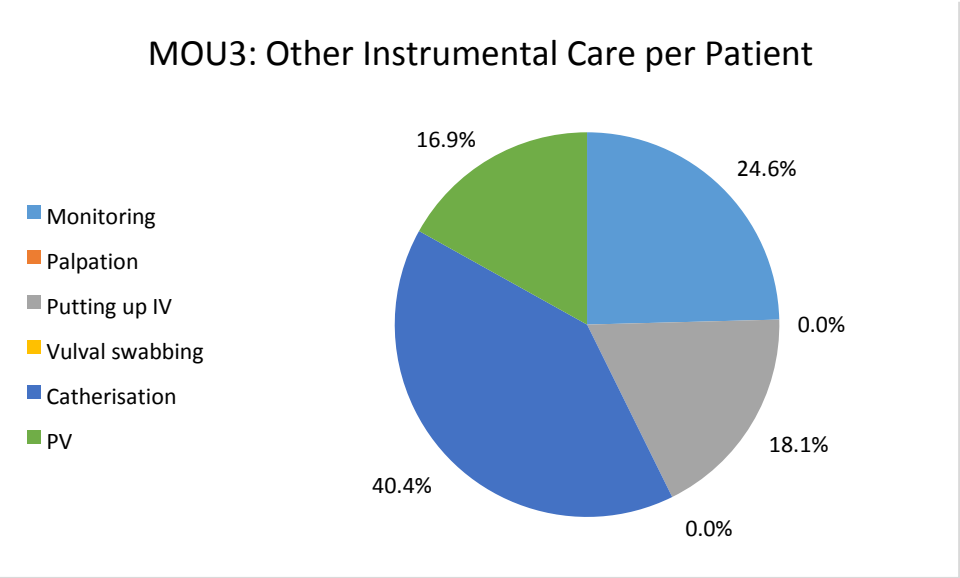

Figure 4.2.1.3.7: MOU No. 3 – Other Instrumental care

A further 155 seconds of time was spent, on average, for each patient on the additional aspects of instrumental care. Catheterisation took up 40.4% of the time despite MOUs catering for uncomplicated labour. It is not clear why this was done.

4.2.1.4 MOU Number Four

Short profile

This MOU is situated in the centre of Katlehong and is said to be one of the busiest of all Community Health Centres (CHCs). It is situated within a community health centre complex, adjacent to a recreational and a business centre. It is a referral centre for the smaller antenatal clinics in the area and refers to Thelle Mogoerane Provincial Hospital. The catchment area covers the east, west and southern areas of Katlehong.

The nurses station is situated at the entrance of the MOU, hence the midwives are able to interact and intervene on admission. The layout complies with the requirements for a maternity facility. The MOU has a relatively good infrastructure. It is structured in four two-bedded cubicles with the nurses' station at the entrance of the unit. One has to take rounds in each of the cubicles to observe patients.

Some of the staff members, although not unfriendly, were uneasy in the presence of the researcher. The patients were given instructions and given no opportunity to interact.

Overall results

At this MOU, a total of seven patients were observed in labour.

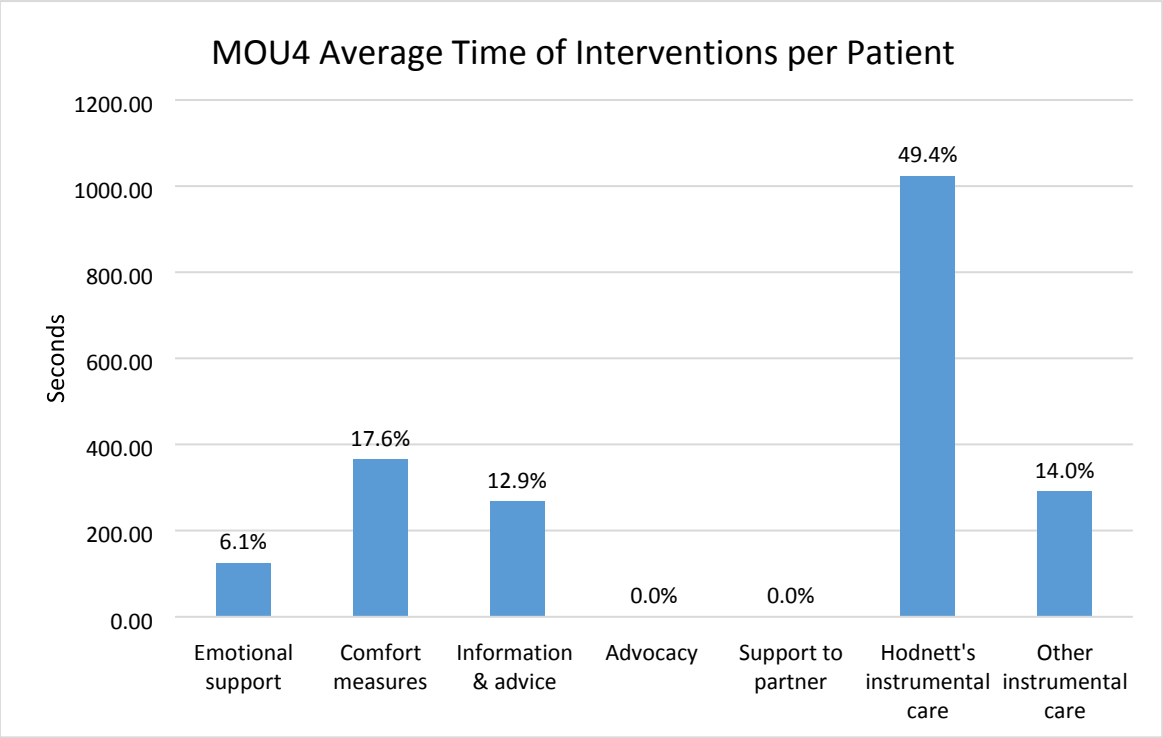

Figure 4.2.1.4.1: MOU No. 4 - Categories of labour support

In terms of the activities undertaken and the time to do them at the MOU, 6.1% (126 seconds) was spent on emotional support, 17.6% (365 seconds) on providing comfort measures, 12.9% (268 seconds) on provision of information and advice, only 0.3% (69 seconds) was spent on Advocacy. No time on support of the

partner, 49.4% (1024 seconds) on the instrumental care aspects in the Hodnett instrument and a further 14% (291 seconds) on additional aspects of instrumental care added to the instrument.

Results per Category

a) Emotional Support

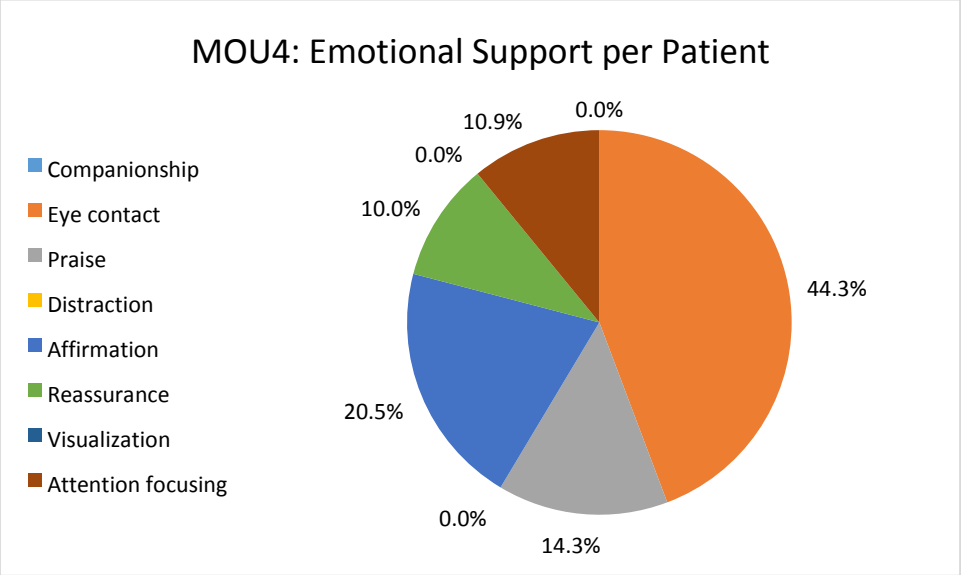

Figure 4.2.1.4.2: MOU No. 4 – Emotional Support

Of the 126 seconds spent, on average, per patient on emotional support, most was on eye contact.

b) Comfort Measures

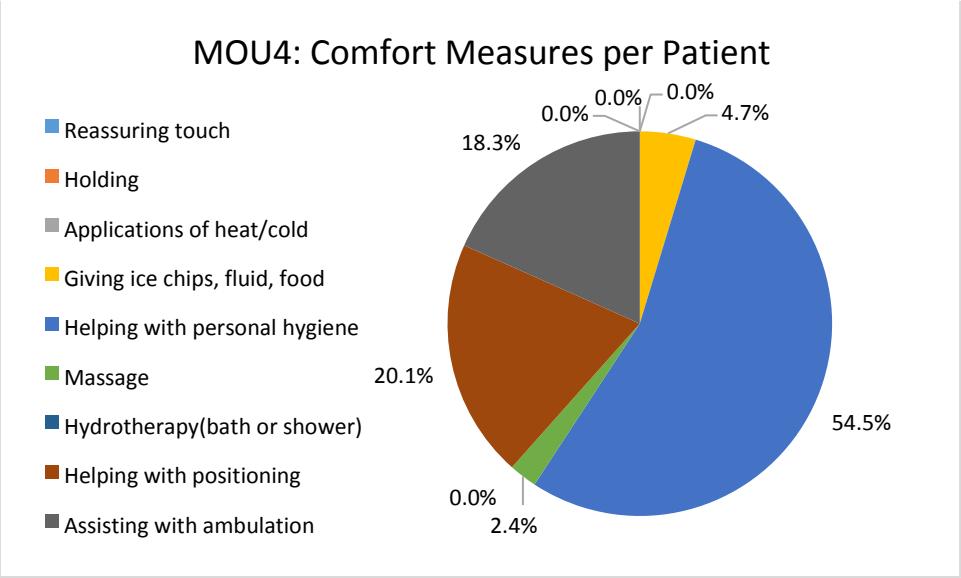

Figure 4.2.1.4.3: MOU No. 4 – Comfort measures

This category's activities were almost entirely related to helping with personal hygiene.

c) Information/Advice

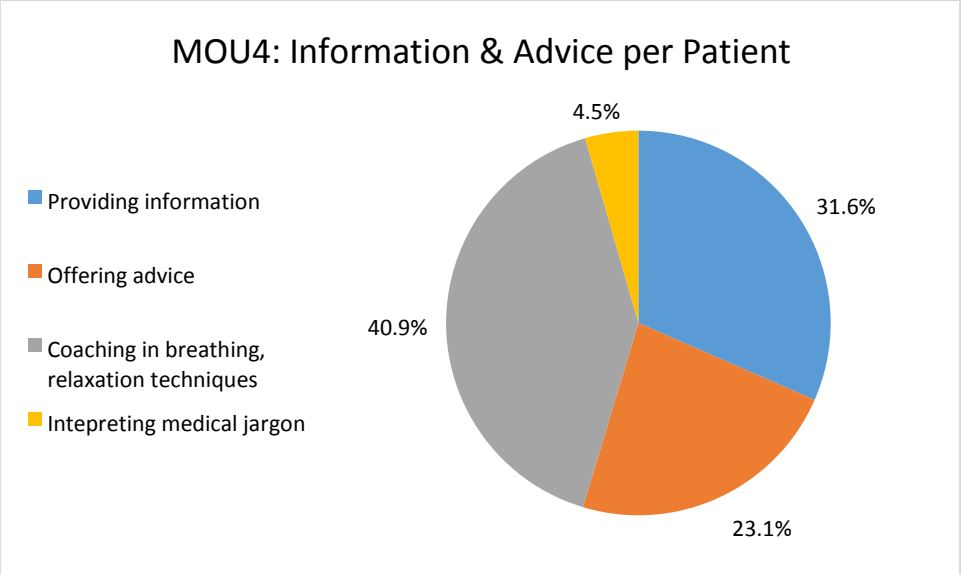

Figure 4.2.1.4.4: MOU No. 4 – Information/Advice

Of the average time of 268 seconds spent on this category of care, most was spent on coaching but some time was spent on both offering advice and providing information.

d) Advocacy

Only 0.3% (69 seconds) on advocacy so a graph has not been provided.

e) Support of the partner

This was not observed at all at this MOU.

f) Hodnett's Instrumental Care

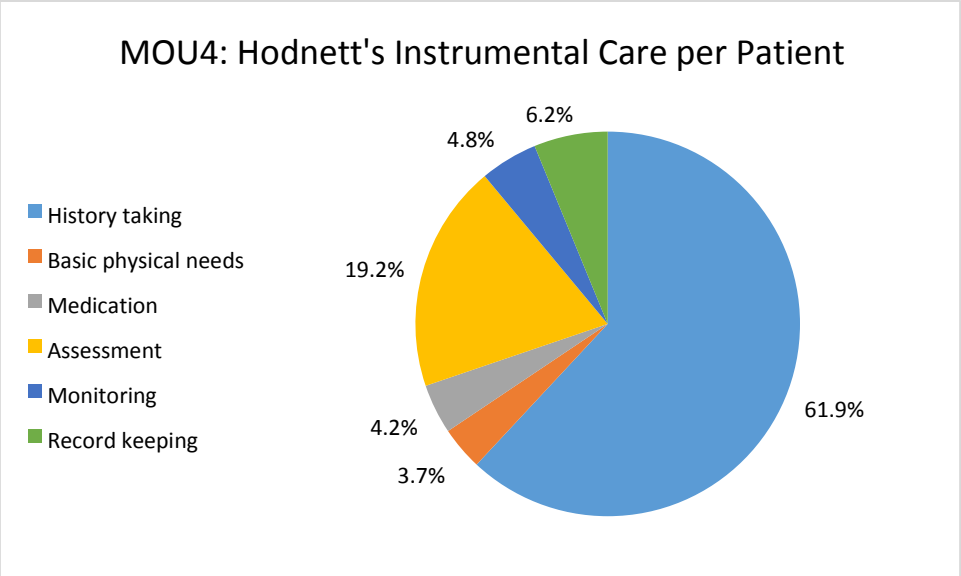

Figure 4.2.1.4.5: MOU No. 4 - Hodnett's Instrumental care

Nearly half (49.4%) of the total time was spent on the category of the instrumental care aspects in the Hodnett instrument. At this MOU, like others, more time is spent on taking the history taking than actually caring for the patient.

g) Other instrumental care

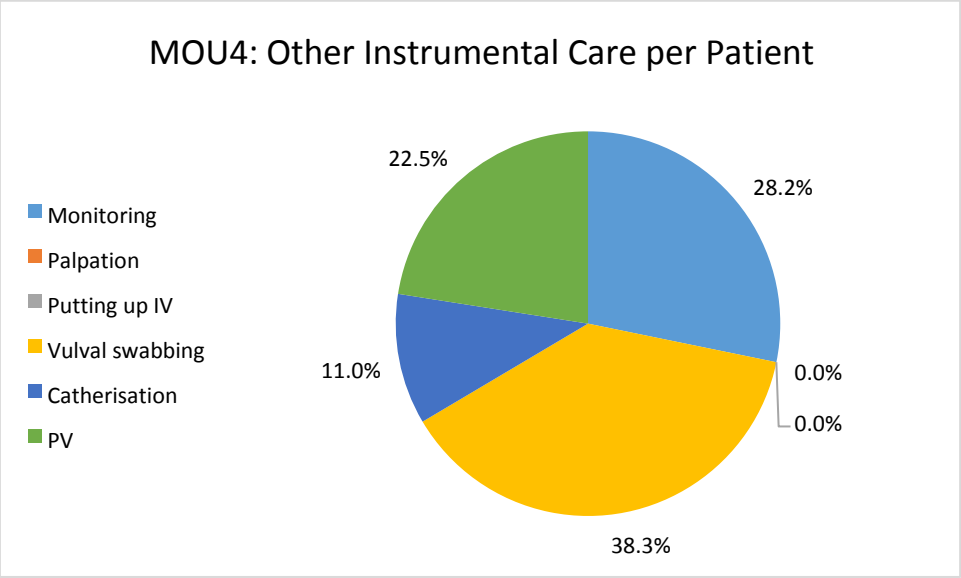

Figure 4.2.1.4.6: MOU No. 4 - Other Instrumental care

Vulval swabbing and catheterisation together took up nearly 50% of the time spent in this category.

4.2.1.5 MOU Number Five

Short profile

The MOU is situated in Thokoza. The MOU renders services to local communities as well as Zimbabweans, Ethiopians and Pakistanis who reside in the catchment area.

At the time of the researcher's data collection, the MOU was operating from two park homes. The space for assessment of patients was limited and the privacy of patients was compromised. There is an existing brick and mortar structure used for primary health care services. The park homes are additional structures solely for provision of maternity services. There is an admission area and a separate delivery room.

The staff members were friendly and welcoming to both the researcher and to the patients.

Overall results

At this MOU, a total of seven patients were observed in labour.

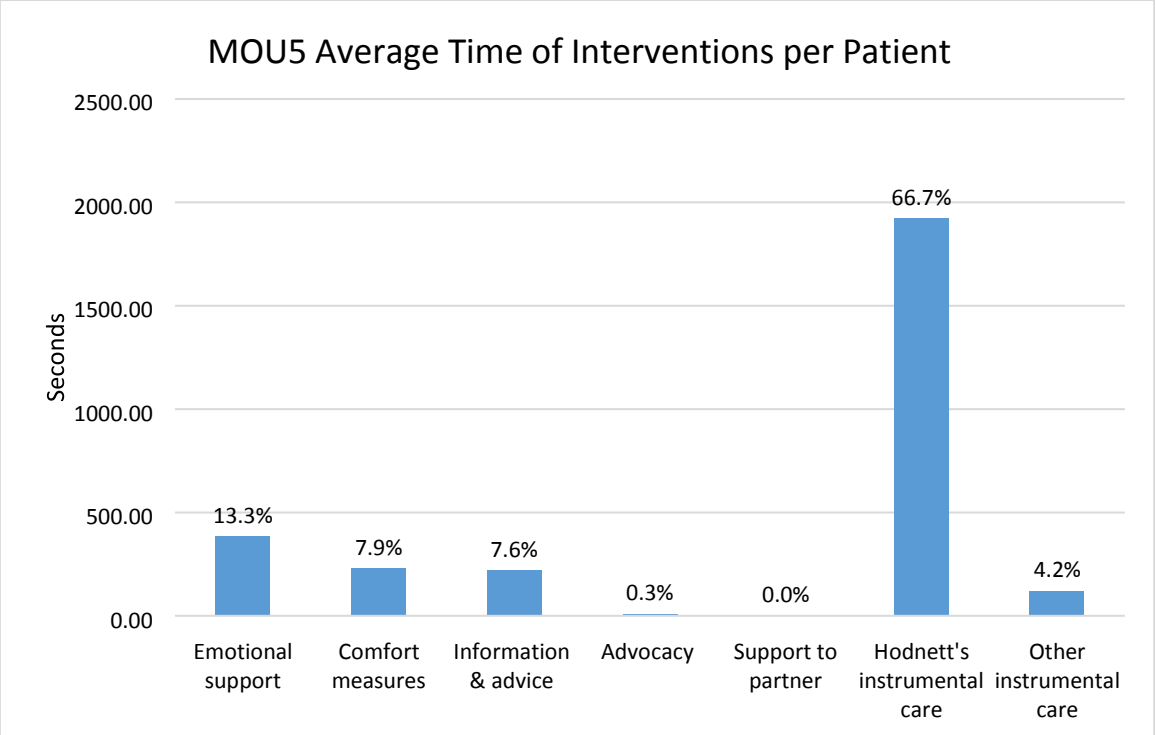

Figure 4.2.1.5.1: MOU No. 5 - Categories of Labour Support

In terms of the activities undertaken and the time to do them at the MOU, 13.3% (383 seconds) was spent on emotional support, 7.9% (228 seconds) on providing comfort measures, 7.6% (219 seconds) on provision of information and advice, 0.3% (9 seconds) on advocacy, no time spent on supporting the husband/partner, 66.7% (1920) on the instrumental care aspects in the Hodnett instrument and a further 4.2% (120 seconds) on additional aspects of instrumental care added to the instrument.

Results per Category

a) Emotional support

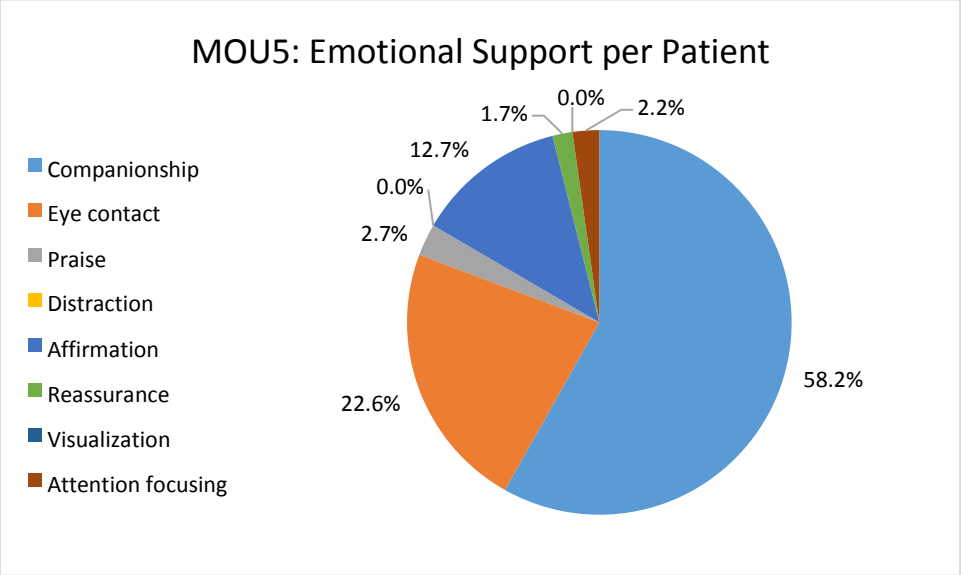

Figure 4.2.1.5.2: MOU No. 5 - Emotional Support

More than half of the short time spent on this category was spent in companionship at this MOU.

b) Comfort measures

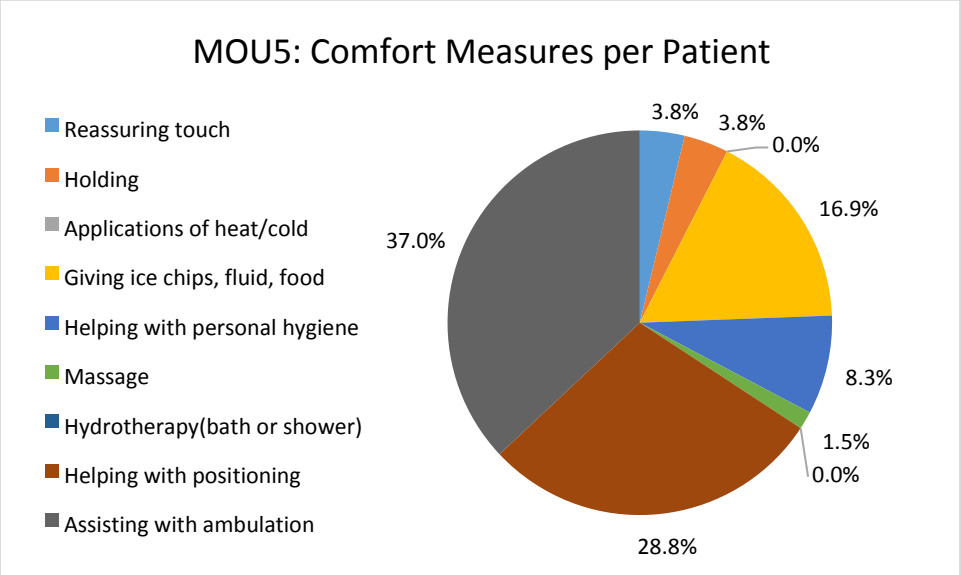

Figure 4.2.1.5.3: MOU No. 5 - Comfort Measures

Again in this MOU, most of the time in this category was spent with assisting the patient to walk.

c) Information/Advice

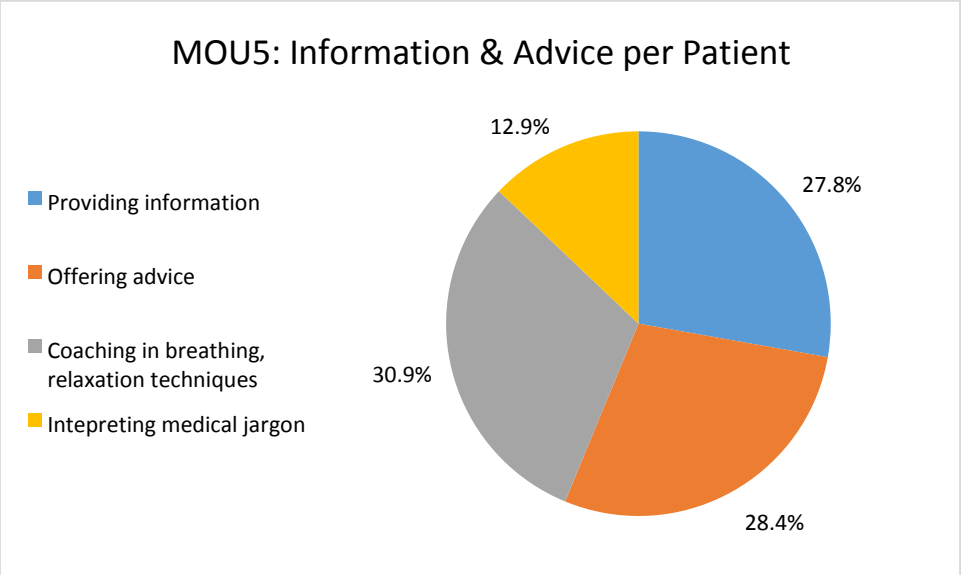

Figure 4.2.1.5.4: MOU No. 5 - Information/Advice

The time in this category was fairly evenly spread between coaching, offering advice and providing information. Little time was spent on interpreting medical jargon.

d) Advocacy

Only an average of 9 seconds or 0.3% of the time was spent on this category of care, so no graph has been provided.

e) Support of partner

No time was spent on supporting the husband/partner.

f) Hodnett's Instrumental Care

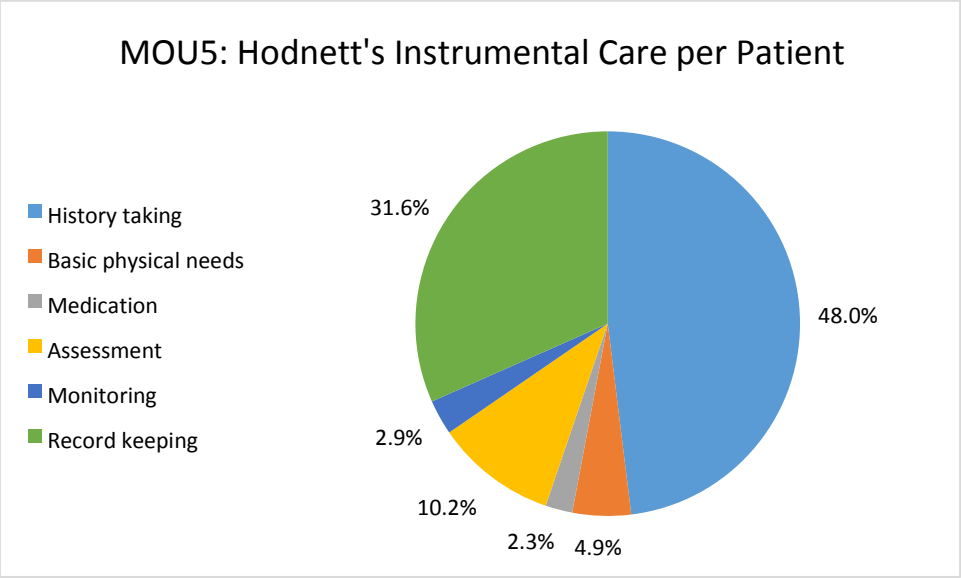

Figure 4.2.1.5.5: MOU No. 5 – Hodnett's Instrumental care

As with other MOUs, a great deal of time was taken up with history taking and with recording the findings.

g) Other Instrumental Care

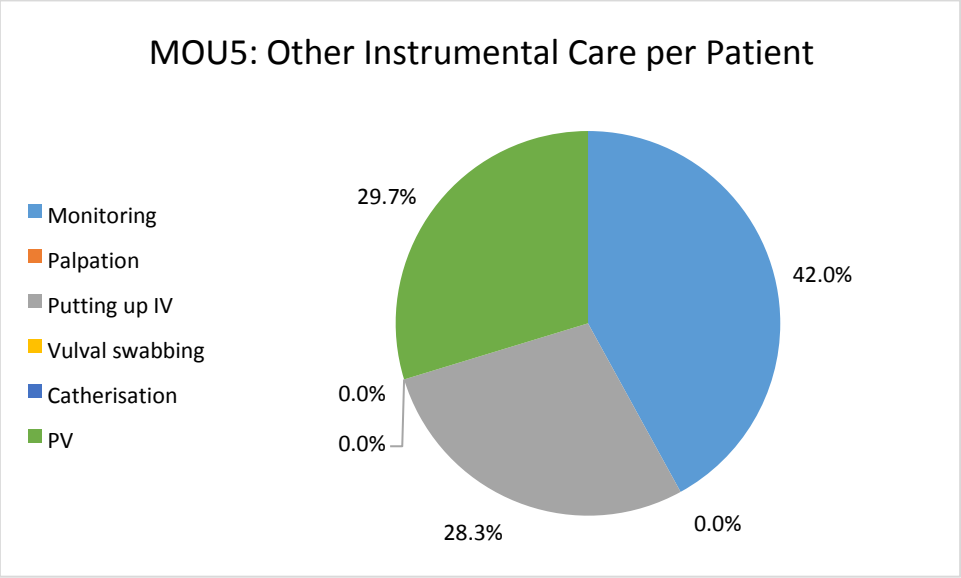

Figure 4.2.1.5.6: MOU No. 5 – Other Instrumental care

The care in this category was evenly spread between monitoring, vaginal examination and putting up intravenous therapy. The latter activity is surprising in an MOU.

4.2.1.6 MOU Number 6

Short profile

This MOU is the oldest health facility in Ekurhuleni. It is situated in the centre of Kwa Thema location, next to the civic centre, and within less than 15 km from Pholosong and Far East Hospitals. It is not well utilized by the community. An informal survey was done by the clinic staff about the low utilization of the clinic, and it was alleged that the numbers started declining when the Far East Rand Hospital and Nokuthela Ngwenya CHC became accessible to all races. Another reason given was the fact that most patients are referred because of the perceived shortage of staff at the MOU.

This MOU has the lowest number of deliveries in Ekurhuleni due to its proximity to Pholosong and Far East Rand Hospital where many patients choose to go instead of delivering in an MOU. It is used as a transit station to the hospital.

It has a structure that complies with maternity facilities that provides a good flow of patients within. There appeared to be a serious shortage of staff and on the several occasions that the researcher visited when there was only one midwife on duty.

The staff members were friendly and welcoming to both the researcher and to the patients. It has the lowest number of deliveries.

Overall results

At this MOU, only one patient was observed in labour, despite numerous return visits to the MOU, due to the low number of deliveries in this MOU. All the following data therefore only refers to one patient, i.e. no average times could be calculated. It should further be noted that this patient came in close to the second stage of labour, leaving little time for many aspects of care normally provided in the first stage of labour.

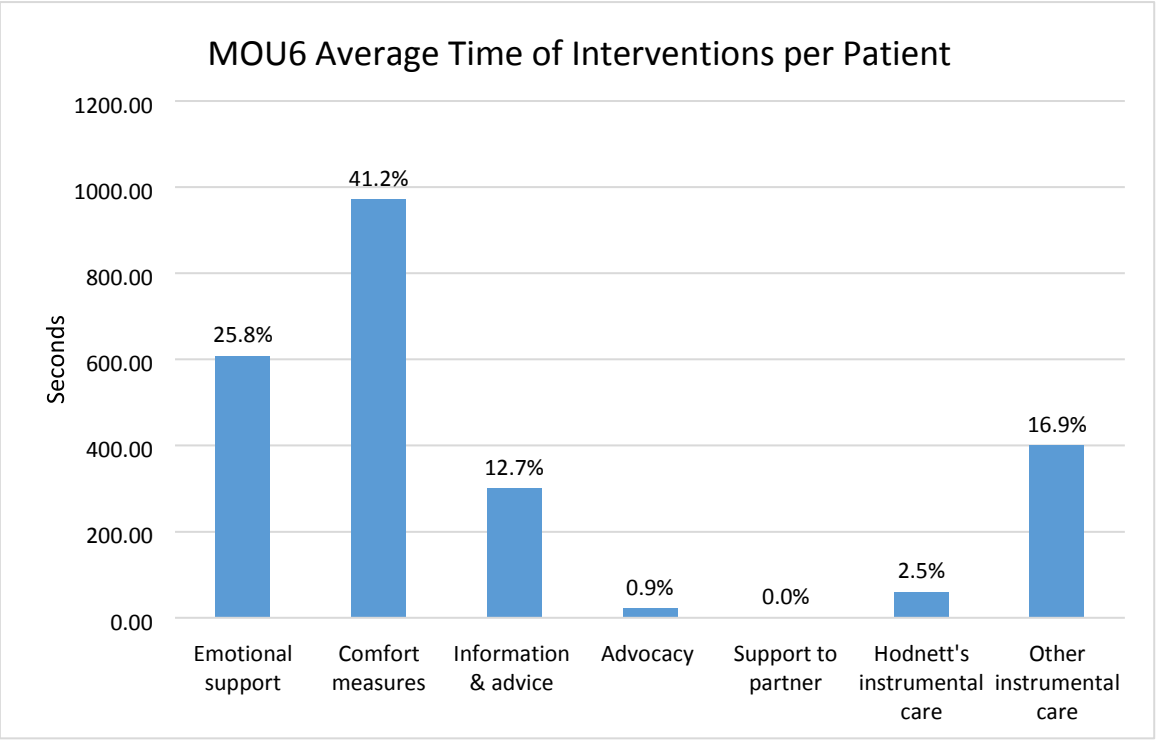

Figure 4.2.1.6.1: MOU No. 6 - Categories of Labour Support

In terms of the activities undertaken and the time to do them at the MOU, 25.8% (608 seconds) was spent on emotional support, 41.2% (972 seconds) on providing comfort measures, 12.7% (300 seconds) on provision of information and advice, 0.9% (21 seconds) on advocacy, no time on support of the partner, 2.5% (60 seconds) on the instrumental care aspects in the Hodnett instrument and a further 16.9% (400 seconds) on additional aspects of instrumental care added to the instrument.

Results per Category

a) Emotional support

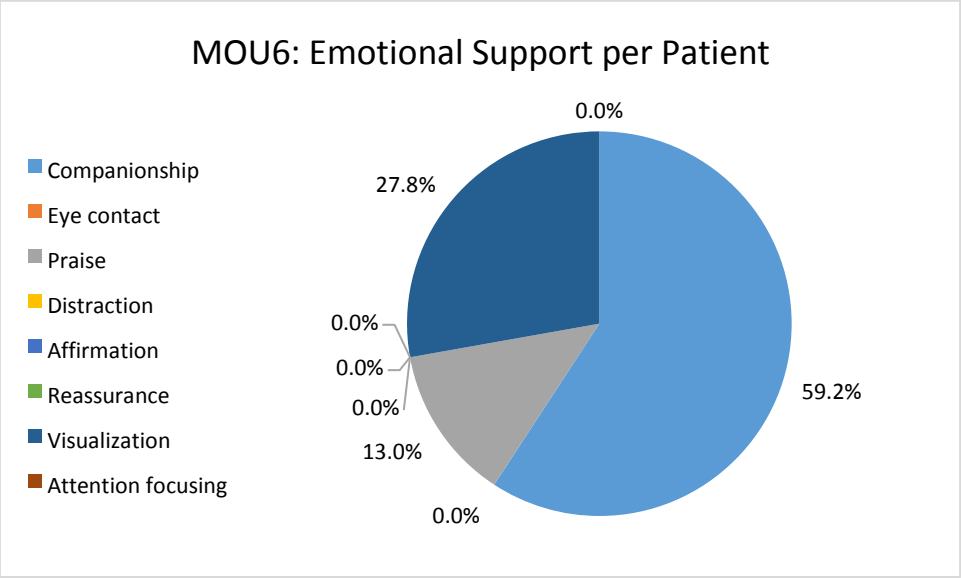

Figure 4.2.1.6.2: MOU No. 6 - Emotional Support

This patient appears to have been given more emotional support than the average patient in most other MOUs. The relatively high percentage of companionship could be because she arrived close to second stage and the midwife remained with her for most of the time from the time she was admitted.

b) Comfort measures

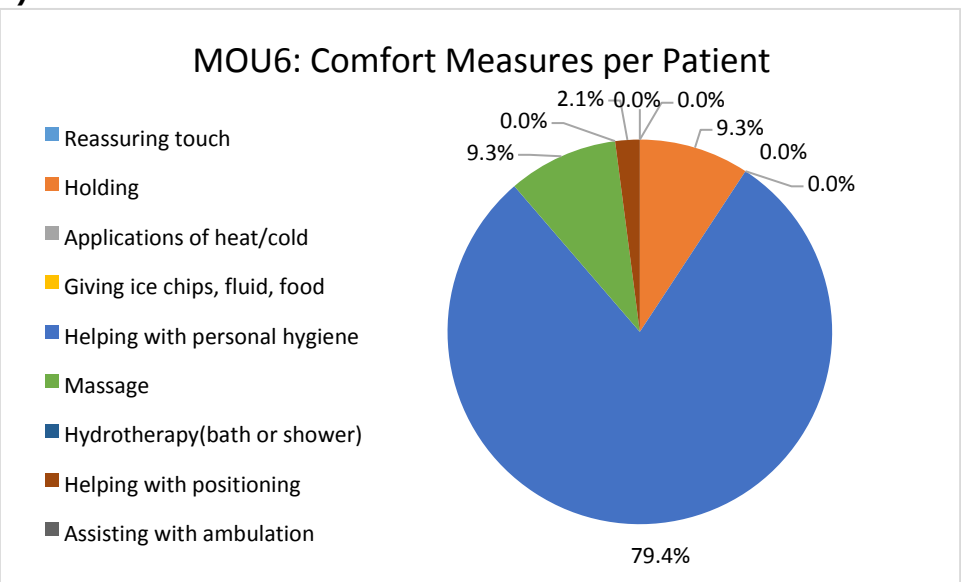

Figure 4.2.1.6.3: MOU No. 6 - Comfort Measures

Of note is that despite this patient being in the MOU for such a short time, she received 972 seconds (41.2%) of care to improve her comfort. Most of this, however, was on assisting her with personal hygiene.

c) Information/Advice

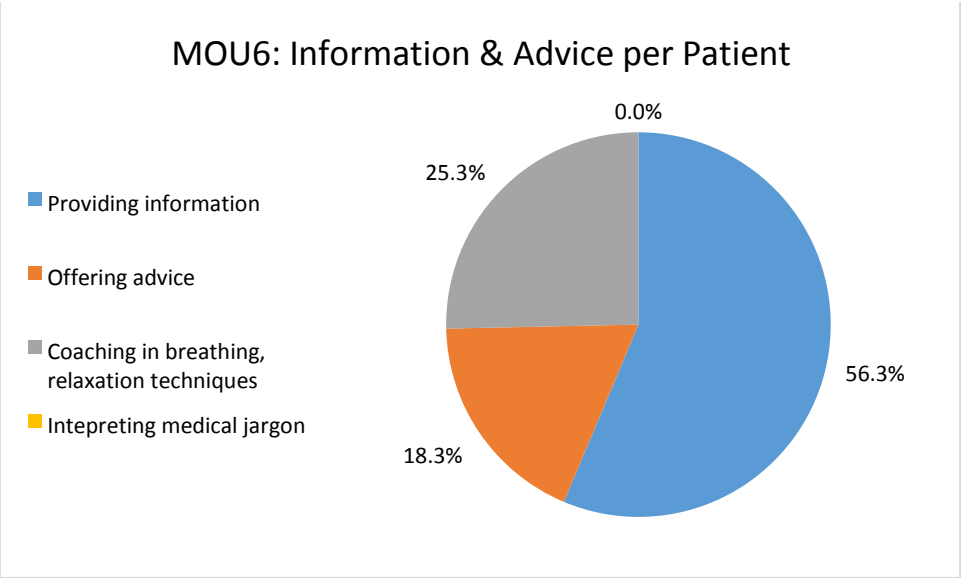

Figure 4.2.1.6.4: MOU No. 6 - Information/Advice

Three hundred (300) seconds (12.7%) of the short time this patient was cared for was spent on the provision of information and advice – most of it in providing information.

d) Advocacy

Only 21 seconds (0.9%) of the time was spent on advocacy so no graph is presented.

e) Support of the partner

No time was spent on support of the partner.

f) Hodnett's Instrumental Care

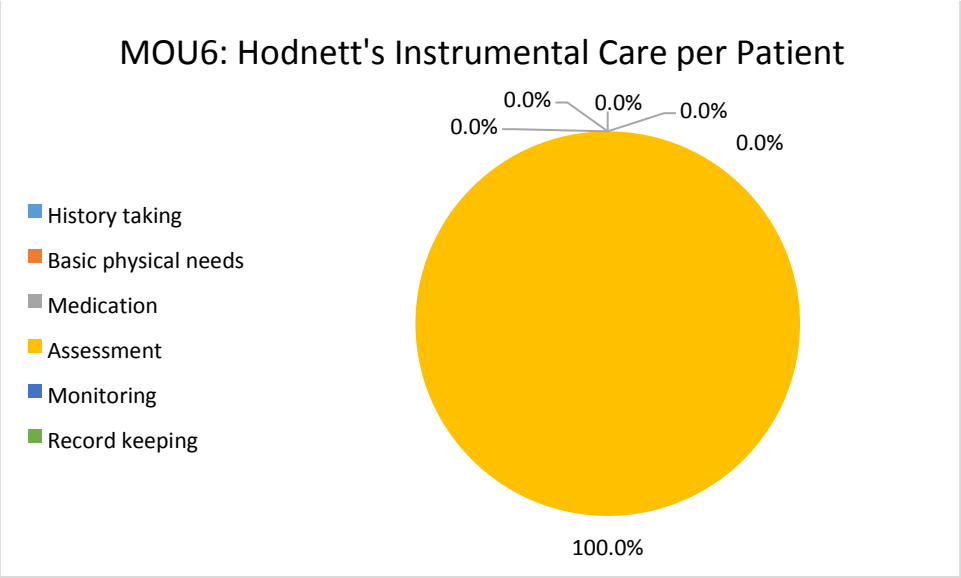

Figure 4.2.1.6.5: MOU No. 6 - Hodnett's Instrumental Care

Sixty seconds (2.5%) was spent on the instrumental care aspects in the Hodnett instrument. The only activity carried out was an assessment. Nothing else was done for this patient. She was, however, only in the MOU for just over 41 minutes which did not leave a lot of time for care.

g) Other Instrumental Care

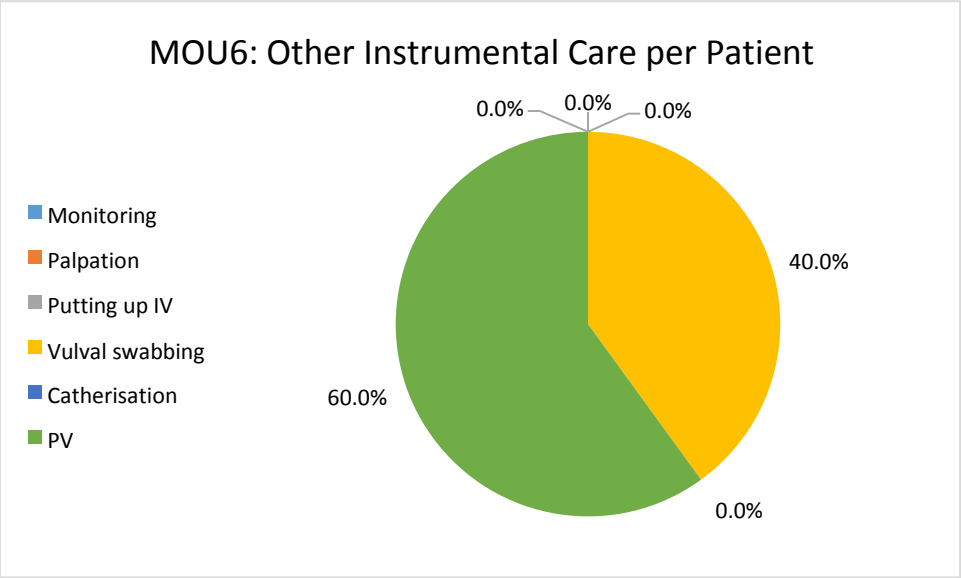

Figure 4.2.1.6.6: MOU No. 6 - Other Instrumental Care

The only activities carried out in this category were vaginal examination and vulval swabbing prior to delivery.

4.2.2 Results per Category of Labour Support for all MOUs

4.2.2.1 Introduction

The data below represents the comparisons between the MOUs per category of care. In this section, the first graph indicates a comparison per category of care across the six MOUs in the form of a stack graph. Following this, each category of care across the six MOUs is discussed, with a graph first of all showing the average score for the category (in the form of an orange line) together with the comparison of scores. This makes it possible to see which of the MOUs spent more or less time than the average on each category of care. After this graph, another graph is shown indicating the comparison in subcategories of care for all six MOUs collectively. This enables the reader to see what aspects of care are done most often.

Each category of labour support is discussed in terms of the rationale for the category of care together with discussion about the implications of the findings per category.

4.2.2.2 Overall Results

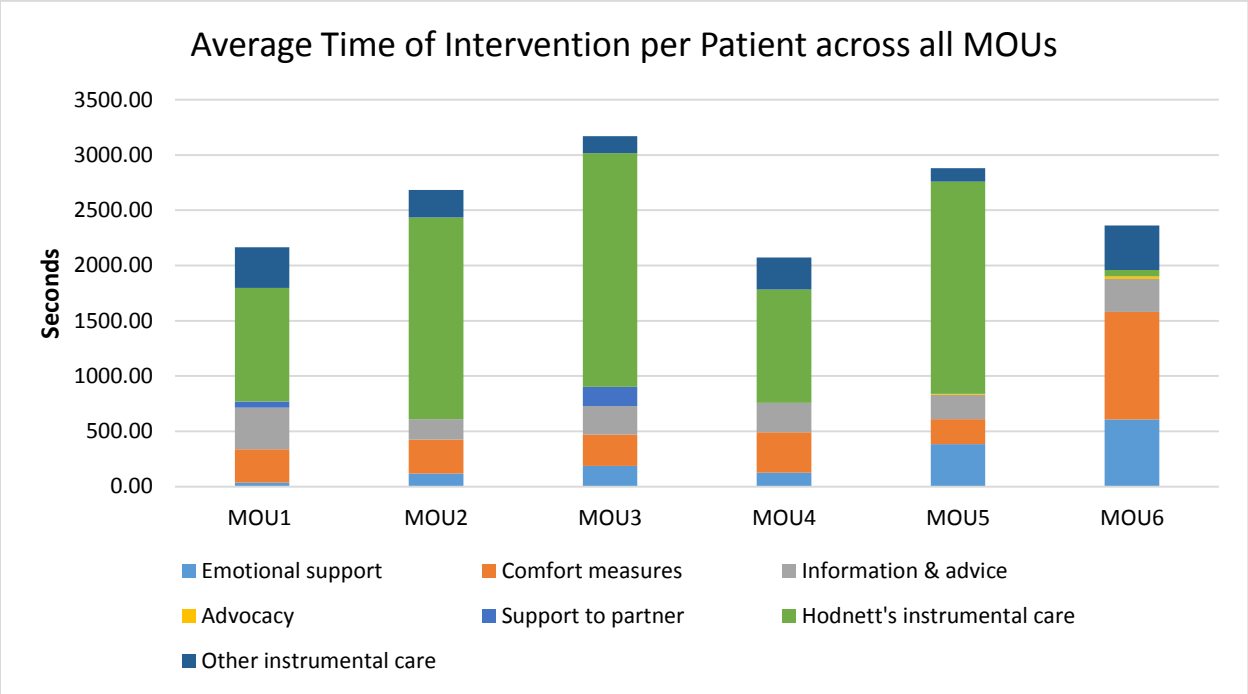

Figure 4.2.2.2.1: Comparison of overall results

The amount of time spent in all MOUs on instrumental care far exceeded any other category of care. Of the six MOUs, MOU6, which had only one patient, was the only one that provided a significant amount of non-instrumental care. This was almost certainly due to the fact that she arrived at the MOU in advanced labour and there was little time for other aspects of care.

Advocacy and partner support are almost completely absent in all MOUs and clearly does not form part of normal practice.

While information and advice and comfort measures are separate categories, the information and advice tended to be given only at the time that the patients were distressed and needing comfort measures.

With regard to the category of “other instrumental care “ (which included monitoring of vital signs, palpation, vaginal examination, catheterisation, putting up an intravenous line, vulval swabbing, urinalysis and taking of the haemoglobin) the midwives tended not to communicate with the patient except to give instructions.

4.2.2.3 Emotional Support in all MOUs

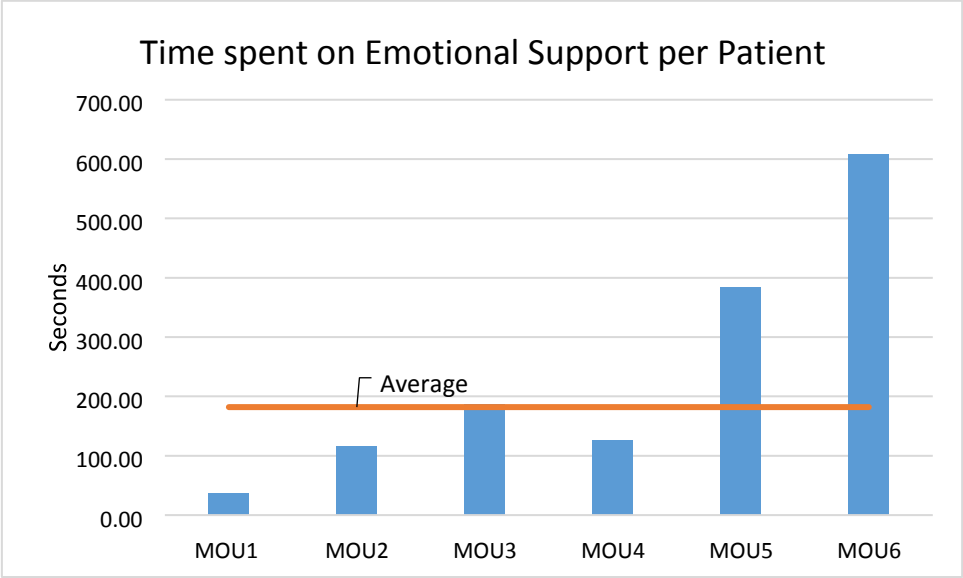

Figure 4.2.2.3.1: Emotional support across all MOUs

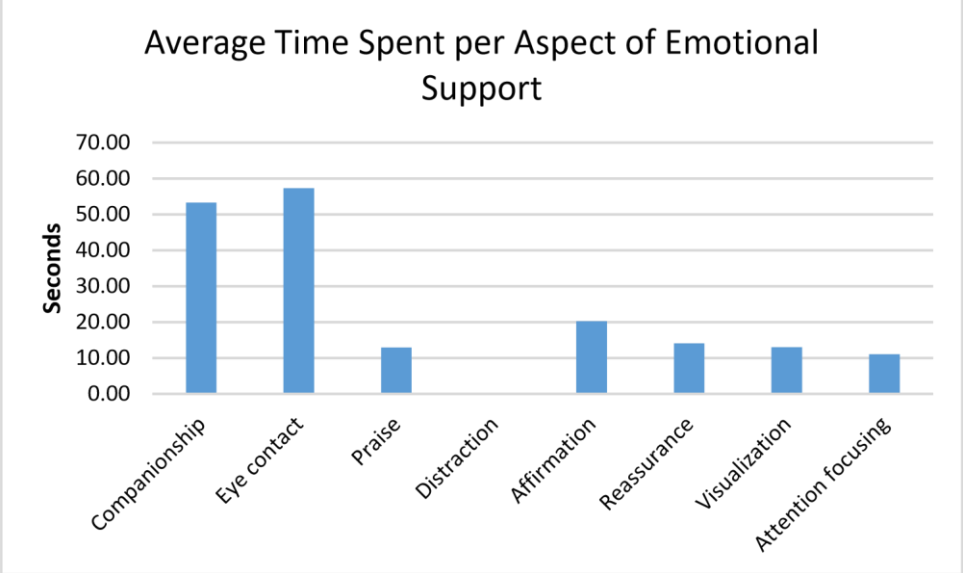

Figure 4.2.2.3.2: Average Time Spent per Aspect of Emotional Support across all MOUs

Hodnett (1996:259) cites information sharing, companionship, distraction, comforting touch and reassurance as some of the helpful forms of labour support in early labour. Although the average duration of delivery of the subjects observed was two hours, all were in active labour and had been admitted a few hours before the researcher's arrival, taking into account that the researcher was conducting a spot observation type of data collection. Emotional support becomes even more important as labour becomes more intense, and one would have expected to see more care in this category being given.

Companionship, which is the building block of trust between the patient and the midwives, did not take place. It was evident during the study that little companionship took place – the midwives seem immune to the patients' distress and do not appear to see companionship as part of their role. As stated previously, midwives did provide accompaniment while the patients were distressed but not at other times. Companionship in the Hodnett et al. (1996) tool has a much broader meaning than this, namely that the midwife should be with the patient. This was not apparent especially when the patients were seen to be 'comfortable'. It must be born in mind that African patients culturally 'suffer in silence' in labour.

Two main themes emerged from a study that was conducted to explore women's experiences of coping with pain during childbirth (Van der Gucht et al., 2015) revealed two themes that significantly influenced the women's ability to cope with pain: firstly, the importance of individualised, continuous support and secondly, an acceptance of pain during childbirth. It was found that the women felt vulnerable during this period and that was the moment when they valued and appreciated the nurse-patient relationship the most. In essence, the pain would be more bearable in the presence of a strong nurse–patient relationship.

Eye contact took up the most time in this category. Eye contact forms the basis of all aspects of care in that it is important to look at the patient. This led the researcher to believe that the midwives were often assessing the patients' needs while making eye contact. For example, this is the most important way of assessing pain, particularly in patients who do not communicate regularly, which is often the case when they are in labour.

While it would seem intuitive to believe that women caring for women during childbirth would provide emotional support, Hodnett et al. (2013) found that in hospitals worldwide, continuous support during labour has become the exception rather than the routine. Jones et al. (2012) point out that psychological factors affect the pain women experience during labour. Lack of emotional support is, therefore, likely to result in a more painful labour. It is likely, therefore, that women

in these MOUs experience labour negatively which can, in turn, affect the relationship with their babies (Davies, 2013).

Distraction was absent in the care given. Distraction would include aspects such as music, television, pictures, visitors or the constant presence of a labour supporter or nurse. All these aspects were missing in the MOUs in the study. The walls are plain and no attempt has been made to provide positive distraction for the patients. This is possibly due to the fact that the MOUs have limited space and there is not even space for an area of relaxation. Distractions were present but were negative in nature, such as other distressed patients in adjacent beds. Only positive distractions were measured so these are not included in the time spent by midwives.

With regard to the categories 'affirmation', praise and 'reassurance', it was difficult to distinguish between the two. While in English, which was the language in which the tool was designed, there are differences in the meaning of these words, the vernacular languages do not allow for these subtleties.

Visualisation techniques in Hodnett's work have a positive connotation. In the MOUs in the study, it tends to be used as a negative tool to gain cooperation from women. For example, women are commonly told to imagine the consequences of engaging in what the midwife sees as harmful behaviour, such as not opening their legs for a vaginal examination or refusing a vaginal examination.

Attention focusing related mainly to midwives non-medical management of pain. For example, when patients complained of pain, midwives would say "delivery is painful and natural, that is the way the head is going to come out so don't focus on the pain but on the baby coming out."

4.2.2.4 Comfort measures in all MOUs

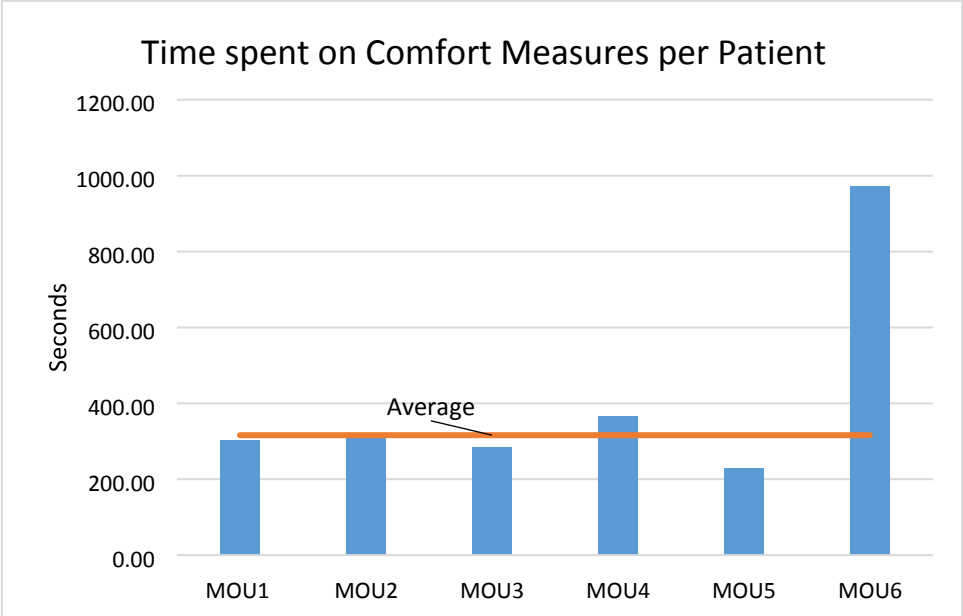

Figure 4.2.2.4.1: Comfort measures across all MOUs

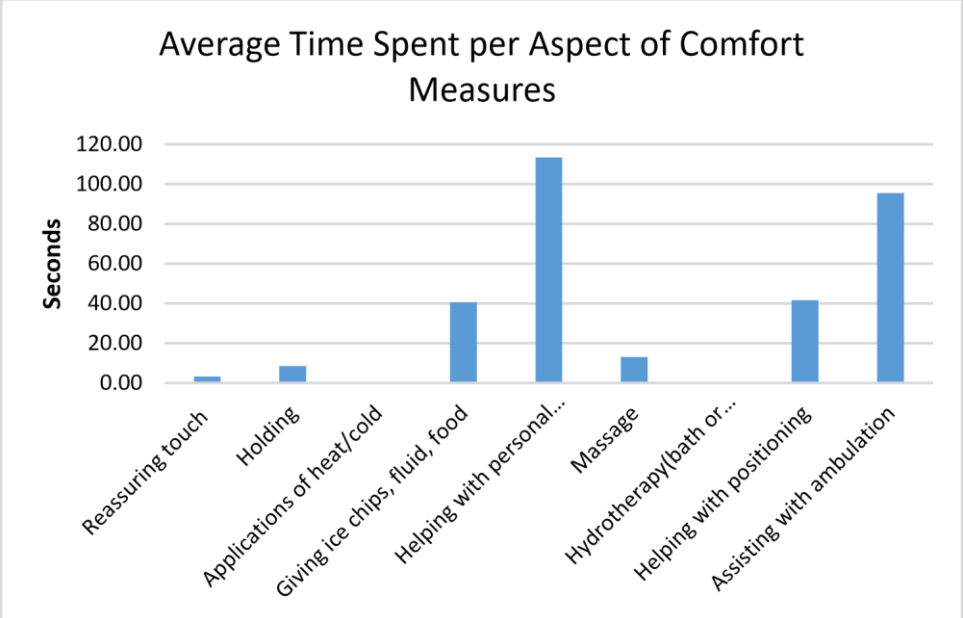

Figure 4.2.2.4.2: Average Time Spent per Aspect of Comfort Measures across all MOUs

Although MOU 4 obtained the highest score (apart from MOU6 which is only based on data from one patient) in providing physical comfort measures the margin among MOUs one, two, three and four is negligible. The average amount of time spent on comfort measures, which are designed to assist labouring women cope with the pain and discomfort of labour, translates into about 5 minutes per

patient. When one considers that the average patient is in labour for about 6 hours, this amount of lack of care is disturbing.

Personal hygiene and vulval swabbing were difficult to distinguish from one another, but personal hygiene in this category referred to the provision of basins to the patients to allow them to wash themselves. Time was therefore spent on this aspect as they did not ever use a bath or a shower and this personal hygiene took place at the bedside. This was done almost entirely by nursing assistants, where they were available, rather than the midwives.

With regard to the provision of ice chips, fluid and food, ice chips were not part of the menu. This activity almost exclusively involved assisting the patient to drink – usually water or cold drink.

Application of heat and cold was missing completely in all the MOUs. It is not a normal practice in South Africa and is certainly not taught as a comfort measure in this country.

Massage was used in most clinics but three of them viz. MOUs 3, 4, and 5 spent so little time on this aspect of care it might as well not have been done. The researcher has the impression that massage is seen as a luxury rather than a necessity.

While a great deal of time was spent on ‘assisting the patients with ambulation’, in reality there was little ‘assistance’ involved. Patient mostly walked on their own and on instruction of the midwife. This involved both being sent out to the toilet and being instructed to walk up and down the passage, in order to enhance progress of labour and encourage descent of the head. This practice is of interest as the same trend is not seen in care of labouring patients in hospital.

‘Assisting with positioning’ in this context related mainly to instructing the patient to change position rather than assisting them as such, as they were all able to help themselves. Most of this activity occurred immediately prior to the second stage of

labour, when the midwife wanted to get the patient into a suitable position for delivery.

The little time spent on both touching and holding related to nursing care that was being given such as monitoring the blood pressure, rather than therapeutic touch, which was absent in all clinics.

The literature (Madden et al., 2011; Lawrence, 2013; Miller et al., 2016) makes it clear that comfort measures and support in labour are closely related, although they are separated into two separate sections in the Hodnett tool. Madden et al. (2011) conducted a study on preferences for various comfort measures in labour and found that patients prefer a support person, showering, massage, heatpacks, baths, epidurals, nitrous oxide, hypnosis, epidurals and pethidine, in that order. Given that only a support person and massage are potentially available to women in labour in the MOUs, it leaves them very little choice, and one has to conclude that they therefore are not afforded adequate comfort measures in the MOUs.

Lawrence et al. (2014), however, state that maternal positioning and mobility are very important methods of providing comfort, and this method was well used in the MOUs. Another study by Martin & Martin (2013) concluded that the relationship between mobility in labour and the length of labour were ambiguous and suggested that women be allowed to follow their instincts in this regard.

4.2.2.5 Information/Advice

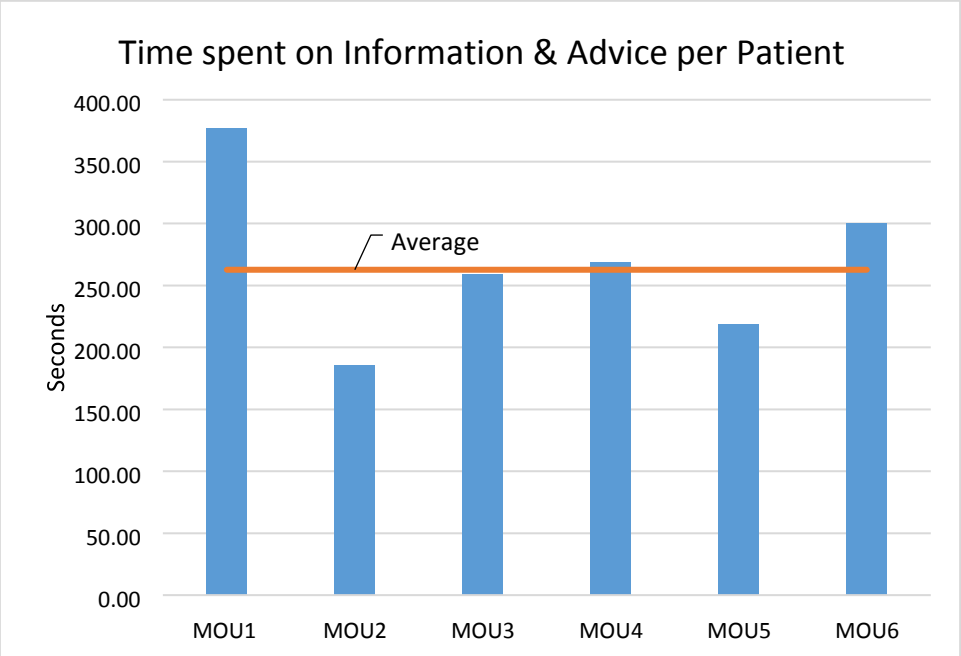

Figure 4.2.2.5.1: Information/Advice across all MOUs

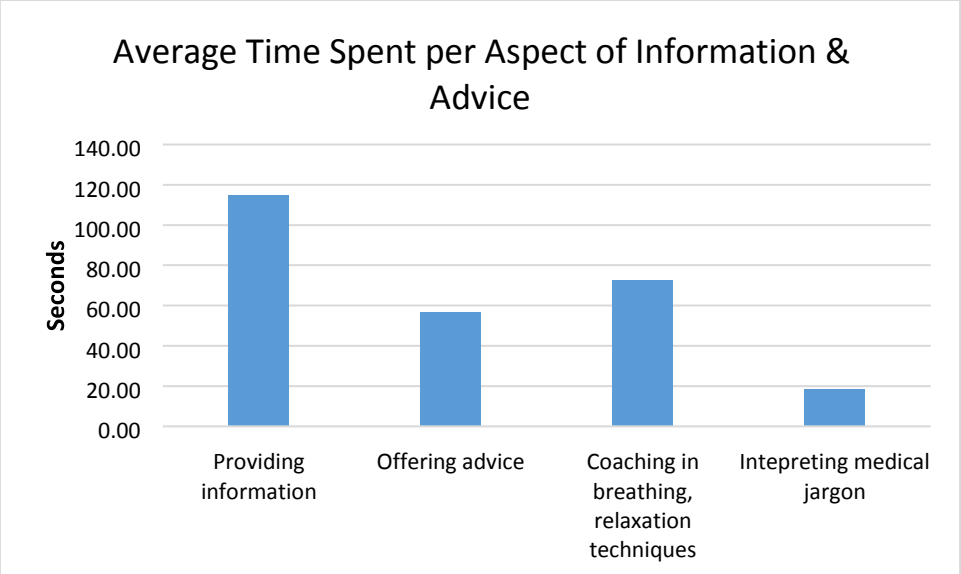

Figure 4.2.2.5.2: Average Time Spent per Aspect of Information & Advice across all MOUs

Information and advice in all of the six clinics was mainly in a one way direction from health care provider to the recipient of care. A study similar to this one, conducted by McNiven, Hodnett, & O'Brien-Pallas (1992), showed that information giving obtained the highest score. It is well documented that some women in labour prefer nurses to be intuitive and provide the support that is expected of

them (JOGNN: 749). It is evident from this study and that of McNiven, Hodnett, & O'Brien-Pallas (1992) that this is not a strength among midwives.

The scores for interpreting medical jargon were low. It must, however, be remembered that this study was conducted in communities where English is not a common medium of communication. Medical terms are, therefore, not often used as the vernacular is spoken by midwives and patients alike.

It was difficult to distinguish between offering advice and giving information. In this study, 'offering advice' was interpreted as giving helpful tips to the labouring women to enhance the process of labour, such as walking around. It also included the time the midwives took to help patients with breathing and relaxation techniques.
'Providing information' started at the time of admission and included giving information on the progress of labour and even related to orientation to the ward and the explanations of procedures that were done.

'Coaching' in the study referred to the actual implementation of the theory the patients had been given, both in ante-natal clinic and on admission, to reinforce the breathing and relaxation techniques.

Midwives have traditionally believed that breathing techniques are useful to facilitate labour, thinking based on the work of Grantly Dick-Read (1942). These techniques have been practiced all over the world, but recently Boaviagem et al. (2017) showed, in a randomised control trial, that the use of breathing techniques during the first stage of labour were not effective to control anxiety, pain, fatigue and maternal satisfaction. This would lead one to suspect that the little time that is spent on this activity is not helpful, but it is counter-intuitive to believe this.

An observation was made during data collection that patients presenting to the clinic for labour were expected to know how to respond and behave towards the unfolding process of labour. This is an assumption and expectation by midwives that patients have attended an ante-natal clinic (ANC). When patients arrive for

admission, they are expected to react and respond automatically according to what they were taught at the ANC. For instance, during a contraction, the midwife will instruct the patient to perform patterned breathing and relaxation exercises: '"hema" (breath in and out), were you not taught at ANC?' The researcher cannot recall a single moment during a patient's admission, irrespective of the stage of labour, where a patient was oriented or reminded of what to expect and how to react and respond when active labour set in. The patients were greeted, the process of admission started, routine history taken, valuables taken care of and bed allocated. On many occasions that is as far as the communication went.

Hanada et al. (2015) suggest that in cases where women are asked to stay at home in early labour, they may become anxious and need the advice of a midwife and therefore seek reassurance and information. They further suggest that if the women have insufficient knowledge about labour, due to early arrival at the hospital, their length of stay will increase with concomitant increase in poor outcomes of labour. As reported in the next section of this study, midwives in the MOU believe that the ante-natal clinics do not prepare patients for labour, but their failure to provide further information will certainly not assist in improving the quality of care.

Although no abusive behaviour was observed during this study (possibly due to the presence of the researcher), Chokwe & Wright (2013) indicated, in another South African study, that communication with patients in labour is poor, and often abusive, both in the manner of addressing patients and the content of what was said.

4.2.2.6 Advocacy

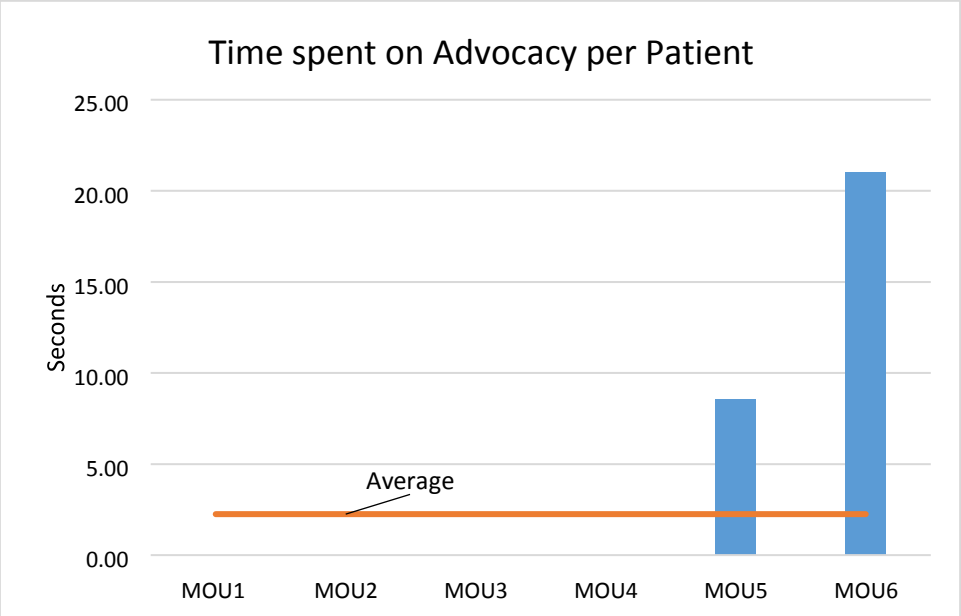

Figure 4.2.2.6.1: Advocacy across all MOUs

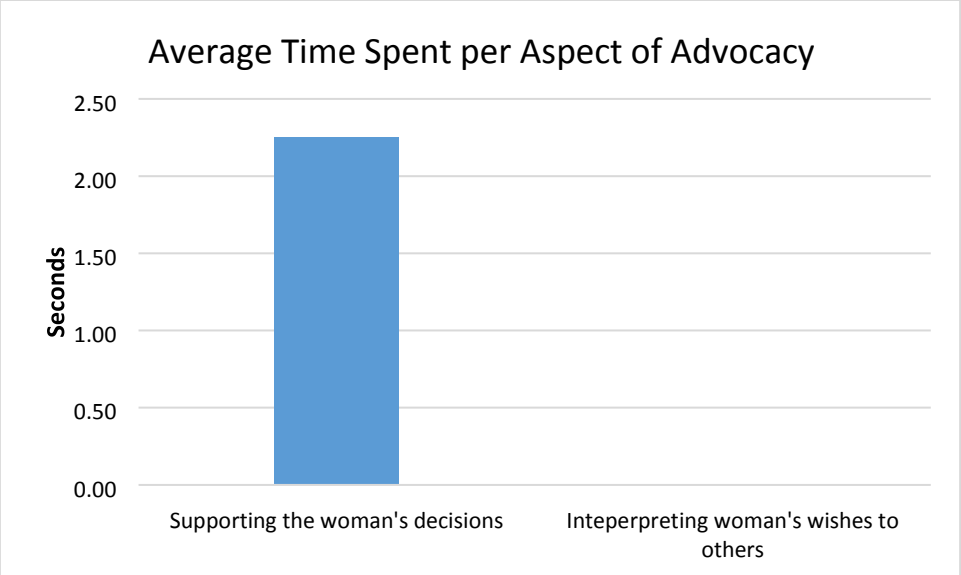

Figure 4.2.2.6.2: Average Time Spent per Aspect of Advocacy across all MOUs

In this study, 'advocacy' was seen by the researcher to include intervening on behalf of the patient to prevent harm to that patient. There were some patients in the MOUs during the data collection phase who were classified as 'high risk' or 'hospital patients' while in ante-natal clinic. They did not, however, wish to go to the hospital and came instead to the MOU. Midwives supported their decisions where it was deemed not to be unsafe, and allowed them to deliver at the MOU. This was the only activity noted related to advocacy from Hodnett's tool and occurred in two of the six MOUs.

Many of the opportunities to support the woman's decision and interpret the woman's wishes occur in ante-natal clinic, rather than in the MOU when they are already in labour. For this reason, it is unlikely that time would have been spent on, for example, discussing with the patient the pros and cons of having a caesarean section, which is one of the classic 'advocacy' opportunities.

There was, however, evidence of advocacy in patients who were not included in the data set but were observed by the researcher as having been supported by the midwives. As they were transferred out of the MOU to hospital they could not be included, but acts of advocacy included communicating on behalf of the patient with EMS staff, and also evaluating and assessing the skills of the EMS staff who arrived to transport the patient and taking appropriate decisions.

Advocacy is an important aspect of perceived labour support. The patient perceives advocacy by being supported by the midwife and those around her. She expects to be accepted as she is and to be allowed to make a contribution in the delivery of her child. Being kept informed about the process of labour and to be given options about when, where and how the labour process should take place within the limits of what is available, affordable and safe. In that way, she gains a sense of esteem that makes her confident and less anxious (Bowers, 2002:749).

Advocacy is enshrined in the constitution of the International Confederation of Midwives (ICM 2005a). It is defined as an act of informing, supporting and protecting women. Nurse advocates act as intermediaries between the patient and obstetricians and other professional colleagues and facilitate informed choice. The midwife has an obligation to respect human dignity, respect the human rights of women and advocate for them (Simmonds, 2008).

Continuity of care and advocacy are widely regarded as important elements in healthcare, but more often than not they are found to be lacking from the care given to women during childbirth. The findings of an NHS study, exploring the impact of a caseload in an urban NHS, found that safe and competent midwifery

care and advocacy emanate from an effective basic and continuing education. The role of being a patient advocate is demanding and challenging.

4.2.2.7 Support for husband/partner

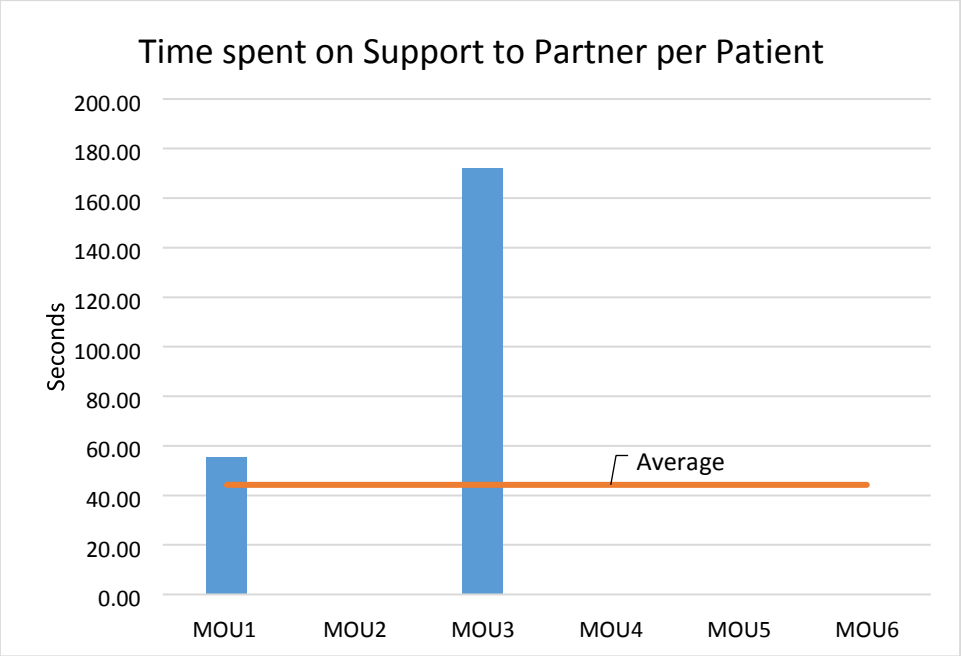

Figure 4.2.2.7.1: Support of husband/partner across all MOUs

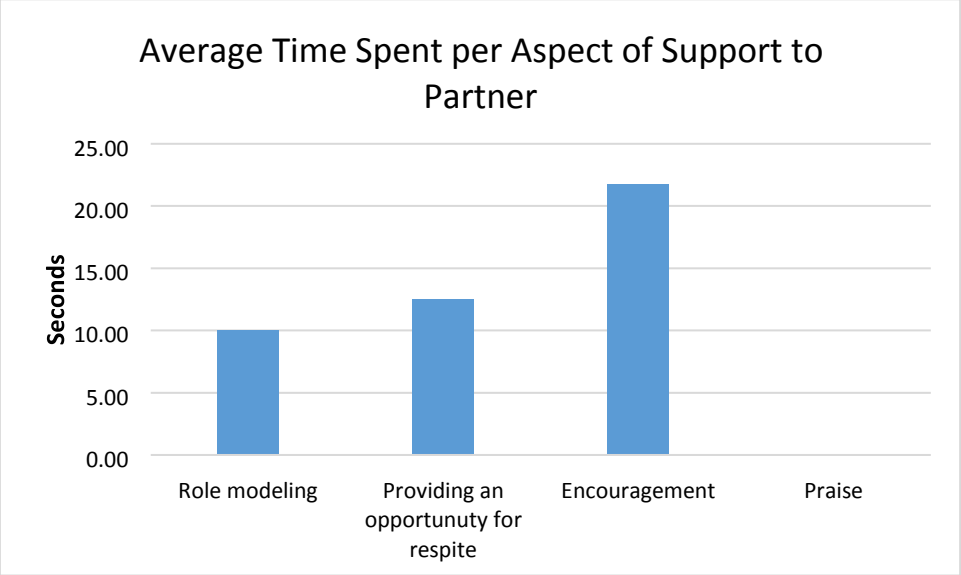

Figure 4.2.2.7.2: Average Time Spent per Aspect of Support to Partner across all MOUs

Culturally, Black African males are not found at the scene where childbirth is taking place. It was not surprising that the score on this category was negative.

Partners were only present at the side of two patients in the entire sample, one of whom did not stay for the duration of labour, although he was invited to do so. Of the one who did remain, this male companion was observed supporting his partner, but judging by the manner in which he conducted himself, he appeared to have been well trained in labour support. He also received support from the attending midwife.

The MOUs do not have private room for their patients, which no doubt contributes to the reluctance of partners to be present in labour. The partners who were present obtained a great deal of encouragement and support as indicated by the length of time spent on role modelling (e.g. showing the partner how to rub the patient's back) and encouraging them to assist and remain with the labouring woman. 'Providing respite' in this study meant giving the partner an opportunity to step outside should he/she feel the need to do so, for example, when the partner's membranes broke and when she passed a stool.

Had the study been undertaken in a rural area, it is less likely that any partner would have been present during labour. Not having a partner during delivery is a cultural norm, which the black community has yet to overcome in South Africa. A study in Tanzania showed that even though the husband/ doula was not going to be physically present in the delivery room, he/she was an important part of the preparation for labour, so that if the woman cannot make decisions, the partner could advocate on her behalf (Tancred et al.,:2016).

Provision of support during labour is internationally recognized as the core role of the midwife (Hodnett, 1992:3). As mentioned earlier, comfort and support measures are closely related. It would seem, based on the findings of Ferguson et al. (2013) that the presence of a partner also depends on the amount and quality of antenatal education the woman receives. This literature review did not, however, include any articles from Africa which may make the findings less applicable. A South African study by Chadwick et al. (2013), however, showed that one of the factors that caused distress in labour was the absence of a labour companion. If there is a reluctance on the part of the male partner of the labouring

woman to provide continuing support, the presence of a person outside the patient's network would, according to Hodnett et al. (2013), be an acceptable, or even preferable alternative.

Hodnett et al. state that "continuous support from a person who is present solely to provide support, is not a member of the woman's social network, is experienced in providing labour support, and has at least a modest amount of training, appears to be most beneficial. In comparison with having no companion during labour, support from a chosen family member or friend appears to increase women's satisfaction with their childbearing experience."

In this study, no doulas (women who care for other women) were present, although this category of health worker is becoming more acceptable, and Honikman et al. (2015) believe that there is much evidence to suggest that their presence can be of great benefit. The space and layout of the MOUs, however, may continue to pose problems in this regard, although it may well be more acceptable to have women companions than men, given the fact that the labouring women have little privacy in the MOUs.

4.2.2.8 Hodnett's instrumental care

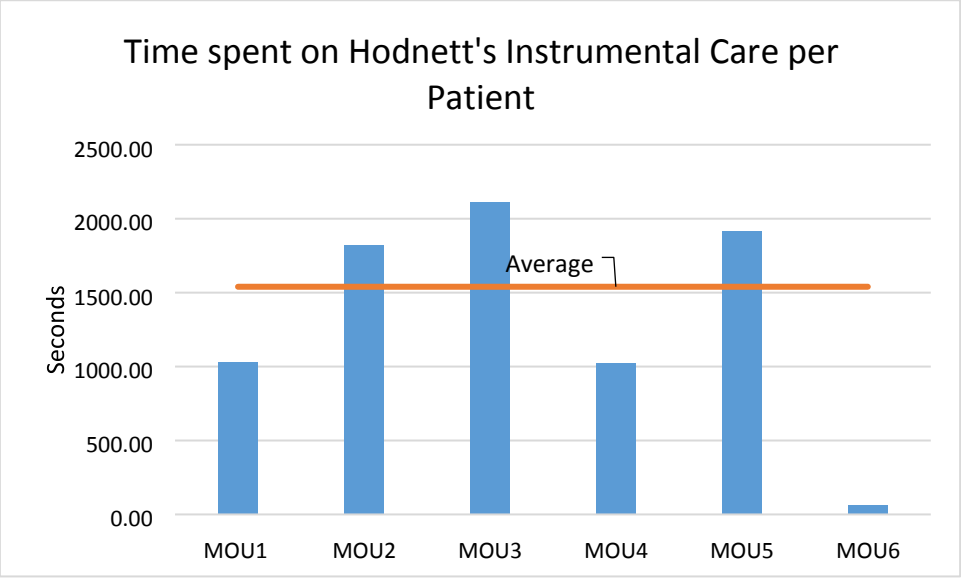

Figure 4.2.2.8.1: Hodnett's instrumental care per patient across all MOUs

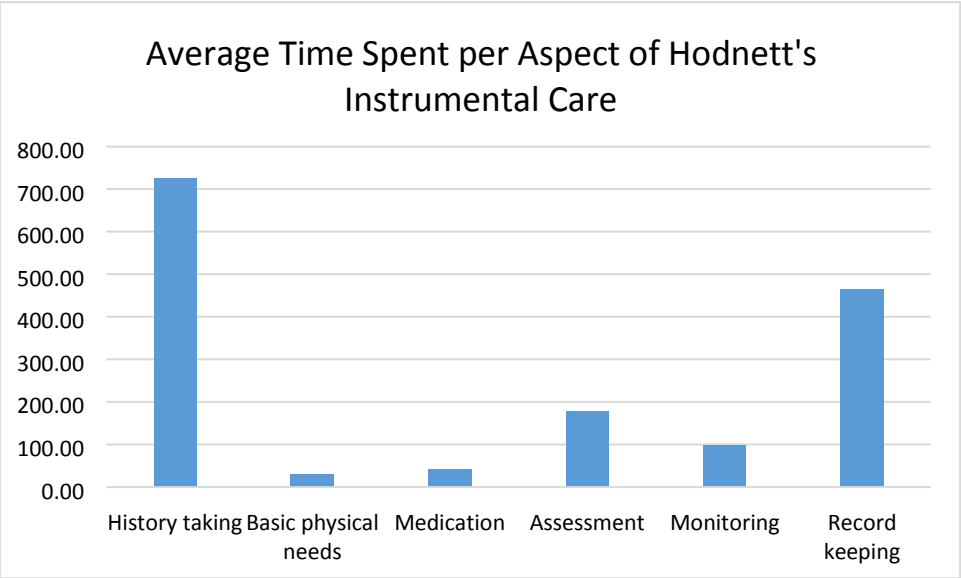

Figure 4.2.2.8.2: Average Time Spent per Aspect of Hodnett's Instrumental Care across all MOUs

Record keeping relates to the completion of official documentation, including the progress of labour, monitoring processes and admission procedures. As this recording is a legal requirement, it is taken seriously at the MOUs and midwives remained on duty after a delivery until this documentation was complete, irrespective of the time they were due to knock off.

History taking took much longer in patients who were unbooked or came from another hospital. For those patients who had received antenatal care at the MOU it took relatively short time. Language problems were also obvious with several patients, including South African patients. The researcher observed several instances where midwives were reluctant to even to attempt to communicate in a language other than the official languages of Gauteng. In some instances, the midwife would call someone else to interpret or take the history. This led to delays and patients were sometimes disadvantaged by this process. It is not known how often midwives in this situation mis-interpreted information given by the patient during history taking. In a multi-country African study (Duysburgh et al., 2013), history taking was acknowledged as being important but was not one done well. This study did not measure the quality of the history taking but showed that much time is spent on this aspect.

The problem of unbooked patients is not unique to South Africa by any means, with several articles (Thakur et al., 2015; Adeniran et al., 2015; Chowdhury et al., 2016) all raising the concern that the high levels of unbooked patients in developing countries leads to poor outcomes in patients. In this study, the time taken to take histories was measured, and this was a direct indication that this is often not done during the ante-natal period, as it should not take long to take an admission history if the patient comes in to the MOU with a complete ante-natal record.

As seen in the breakdown of Hodnett's category of instrumental care, medication is seldom given, but as the patients in the MOUs are low-risk patients, medication is seldom prescribed.

In relation to monitoring, it was noted that all monitoring equipment was readily available and, therefore, did not lead to any delays in carrying out these important activities. The researcher observed that midwives stick rigidly to protocols relating to monitoring, and do not make any attempt to attend to the patient unless it was due according to the protocol.

This adherence to protocols, rather than monitoring the patient on an individual basis, sometimes led to midwives giving patients inappropriate instructions. For example, a patient who was deemed to be only six centimetres dilated was instructed to breathe when she called for the midwife as the midwife did not believe she could be delivering. In reality, she was in the second stage of labour.

This adherence to protocols is of particular concern when considering the findings of Hamilton et al. (2016), who found that there are wide variations in the rate at which cervical dilatation occurs and the 'normal' curve may not be as 'normal' as initially thought. These variations do not appear necessarily to impact on the obstetrical outcomes, but they do have a bearing on the care or perceived care of the patient.

4.2.2.9 Other instrumental care

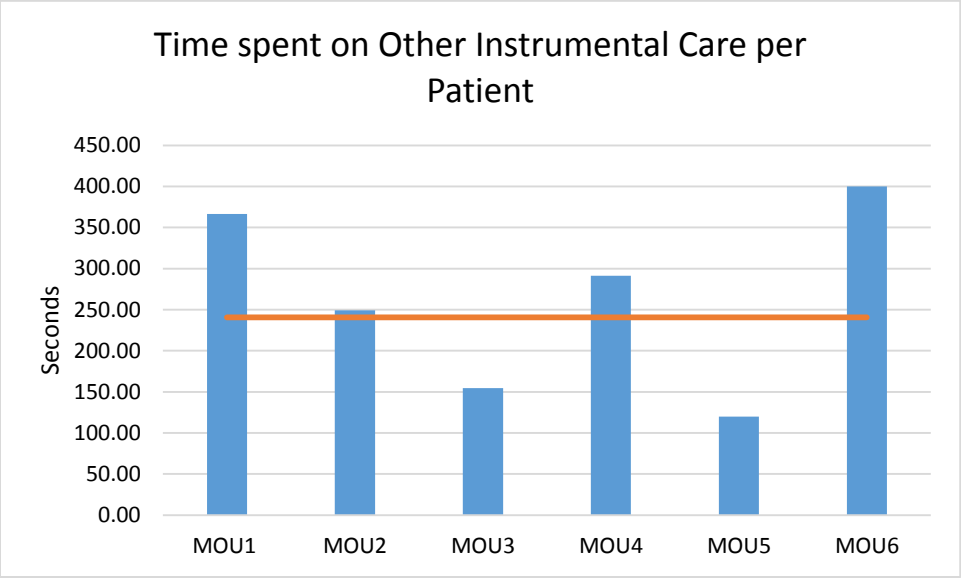

Figure 4.2.2.9.1: Other instrumental care per patient across all MOUs

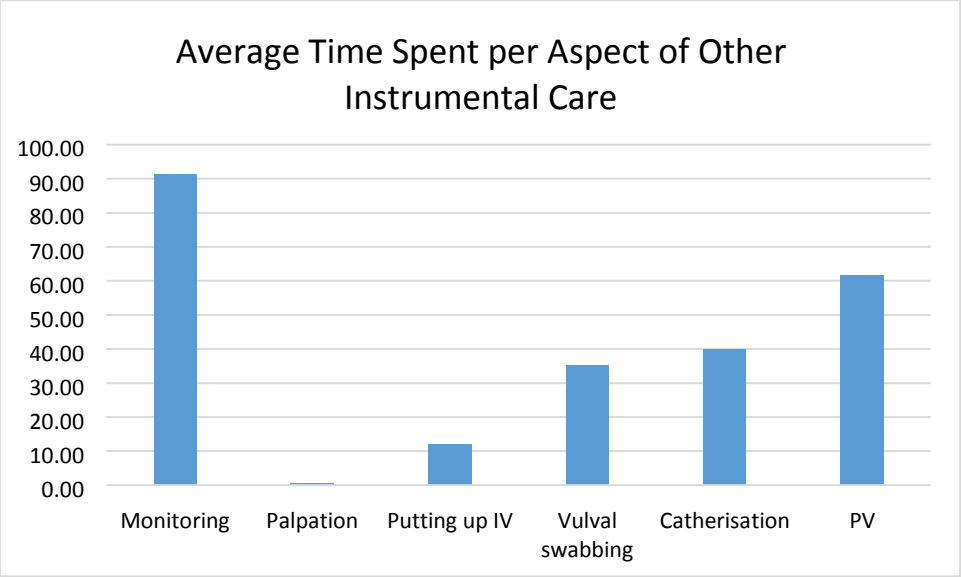

Figure 4.2.2.9.2: Average Time Spent per Aspect of Other Instrumental Care across all MOUs

Data collection in this category presented unique challenges, as much of the monitoring aspect of this category was provided by different categories of nurse, who tended to carry out procedures on the patient simultaneously. This made accurate recording of the monitoring difficult. The results of the monitoring subcategory should therefore be viewed with caution.

It was noted that vaginal examinations were often carried out without first doing a palpation, and most were done to confirm that the patient was fully dilated and to check the station of the head. The number of vaginal examinations carried out is of concern, both due to the discomfort it causes the mother and due to new evidence

(Shetty et al., 2014) that while “digital vaginal examination” has long been the accepted way of monitoring labour, both abdominal and vaginal examination are often subjective and inaccurate.

Seven (or 19.4%) of the patient were catheterised which is of concern as it is not generally necessary to do this in a normal delivery, and adds to the possibility of urinary tract infections. In the four cases where an intravenous line was inserted it was done in anticipation of a transfer to hospital.

4.3 Section Two - Naive Sketches

The third objective in this study was to establish the factors that influence compliance to and duration of nursing activities. At the end of the labour, the participant (in this case the midwife) responded to two open ended questions that give rise to the naive sketches (Annexure 6) about the factors that influenced nursing activities and the time taken to complete them. The responses in the naive sketches were then coded into four categories viz. resources, communication, relationships, and systems failures.

Table 4.1: Factors influencing compliance to and duration of activities

Category	**Subcategory**
Resources	Staff Equipment
Communication	Language Quality of information Ante-natal records

Category	Subcategory
Relationships	Patient The community Other categories of health workers
Systems failures	Support systems Laboratory results

4.3.1 Resources

The two sub-categories in this category were staffing and equipment. The naive sketches pertaining to this category all complained that there were shortages of both types of resources.

a) Staffing

Shortage of staff was high on the list of challenges experienced by the midwives in the MOUs, which they believed influenced both the time it took to care for patients and the amount of time spent caring for them.

One of the issues raised was that the MOUs are staffed largely by midwives and they felt that they should have the other categories of nurse to complement their presence. In the absence of other categories of nurse, they are obliged to provide all aspects of care, and felt that this meant they spent their time on basic nursing care instead of using their specialist skills, as illustrated by participant number 2.6 who stated that "*shortage of staff …not enough staff to do other nursing care.*" Participant 4.6. complained about *"having to do (a) delivery on your own."*
Participant 2.2 stated, "*shortage of staff … one member has to stretch herself doing a task that could be done by a junior staff."* Another (participant 1.5.) was more specific and referred to the accepted norm that labouring women should receive one-on-one care. She said, *"Attendance of many patients at the same time because there is no one-is-to-one ratio."*

This perception of the midwives is interesting as the researcher observed the midwives spending a good deal of time in the rest room/duty room chatting or reading magazines beyond tea or lunch breaks. This time could have been used to provide labour support.

The average staffing for day and night shifts was three, with a skills mix of 2 professional nurses to 1 enrolled nursing assistant (PN 2: ENA 1). This was found to be the norm in five of the MOU's. In one MOU, the staffing was different with a skills mix of two professional nurses, one enrolled nurse and one enrolled nursing assistant (PN 2: EN 1: ENA 1). It must be noted that this is the only clinic that has enrolled nurses in the maternity staff establishment. At this clinic, enrolled nurses are used for giving of medication pre- and post-partum to the mother and the baby.
Staffing was found to be the same irrespective of what day of the week it was.

Another frequently raised issue was that patients arrive at the MOU without having been tested for HIV. This meant that the MOU staff had to first counsel them, which is very time-consuming.

This issue was explained by 5.6 who said, *"We don't have counsellors over the weekend. A lot of time is needed for explaining and counselling patients who are HIV positive. Some pregnant women were not counselled and some have not accepted the condition. This increases the workload because the midwife has to dig into the feelings of the patients."*

There appeared to be a recognition amongst midwives that skills and motivation of individual midwives makes a difference to how much care one gives to patients.

Participant 1.6. stated, *"level of skill of health workers is one of the factors that influence time. If you are well skilled you manage your patient."* Participant 3.5 echoed this idea and elaborated on this and other issues saying, *"knowledge of work, passion, acquired skill, motivation by management, staffing, working hours and individual needs of patients. Desire for healthy mother and baby. Patient*

cooperation, ability to work fast, implementing acquired skills, nurse patient relationship, availability of working equipment and malfunctioning of equipment. Education level of the patient."

b) Equipment

Participants complained that they were often required to share equipment between the MOUs, which resulted in delays and improvisation.

This was illustrated by participant 5.6 who said, "*Sometimes we run around to other clinics borrowing stuff,"* and participant 2.5. who said, "*We have one BP machine, I have to wait for it before I can use it".*

The other issue related to equipment was the lack of information technology. The MOUs are provided with computers but participants stated that they do not always work and that insufficient support was available to use the technology (participant number 3.7).

4.3.2 Communication

The sub-categories in this category included, language, quality of information and ante-natal records. Both verbal and non-verbal communication problems cause delays and can affect the quality of the nursing care.

a) Language

Not all patients using the MOUs are local residents and, being in a lower socio economic urban area, there are many migrants living there. Participant 1.2 said, *"Communication barrier (is a problem) because we see more foreign patients e.g. Shona speaking."* This was confirmed by Participant 1.2 who stated that one of the factors that caused care to be time-consuming was " (a) *shortage of staff who can communicate in other black languages."* Another, participant 5.2, singled out Zimbabwean patients as having problems. She said, "*Sometimes language challenges e.g. patients from Zimbabwe speaking Shona."*

b) Quality of information

Apart from the obvious issues relating to the different languages spoken in the region, the participants allege that patients are given incorrect information at other clinics. It could be that this is true and the information was wrong, or it could mean that the patients misinterpreted the information they were given. A belief also exists that patients do not have the capacity to communicate adequately, as illustrated by participant 1.5. who said, *"Our patients cannot give accurate history – most of them lack knowledge,"* and participant 2.1 who said, *"Patient gave wrong information, she did not mention that she previously delivered by Caesarean Section."*

c) Ante-natal records

The main complaint in this regard was that ante-natal clinics sent incomplete information about the patients, which included incomplete ante-natal cards or 'green cards'. The other area of concern was that, due to problems related to nonfunctioning telephones, messages were sometimes either not received or incorrectly interpreted by the staff in the ante-natal clinics. There appears to be a fair amount of tension in this regard, as illustrated by participant number 5.2 who stated that they are often given *"wrong referrals by our feeder ANC clinics."*

There was also a positive remark made in this regard by participant 5.4 who stated how important correct ante-natal records are. She said, "*our ANC records help us speed up processes and cooperation among sisters and co-workers. It makes it better.*"

4.3.3 Relationships

In this category, there were three sub-categories, viz. patients, the community and other health workers. It became clear from the naive sketches that the midwives at the MOUs feel as though they are 'under siege'. They state they are not supported and are expected to produce miracles with very little. The perception is also that politicians have created expectations among the community who are disappointed with the reality of the situation in the MOU. Patients, members of the community and other health workers such as doctors and emergency medical service

personnel were blamed for issues relating to time taken to care and the ability to provide care.

a) Patients

The reason for the poor relationships between midwife and patient could be related to the power relationships between the two if one considers what participant 1.2 said: *"Most patients are still afraid of personnel, thus accurate history is lacking."*

Participant 3.4 appears to have a poor opinion of the patients' ability to cope with labour stating, "*pain threshold is low [of the patients]…and level of education is low.*" As the patients in this study were not offered any form of pain relief and very few comfort measures, this issue is of concern.

Patients were said to hold different cultural and religious beliefs from the midwives, which impacted on labour and therefore made for strained relationships. Participant number 2.4 felt particularly strongly about this, saying, "*mob psychology – patient advised to take herbal medicines,*" and participant 4.3 who said, "*just patients cooperativeness in both the nursing care activities and the time taken,*" indicating that patients were deliberately uncooperative with the midwives.

b) The community

Midwives felt that patients had unrealistic expectations of them, emanating from the emphasis on the Batho Pele principles, and tended to remember their rights and not their responsibilities. This causes anxiety among the staff who are concerned about being 'reported'. Participant 5.6 stated, "*attitude of patients and expectations are sometimes unrealistic. This causes anxiety in the clinic because you will be thinking that there is no doctor nearby the hospital, which makes workers jump to call the ambulance, whereas there is nothing wrong with the patient. Patients also ask too many questions, which are not relevant to midwifery. This will delay us to give care on time*."

c) Other categories of health worker

There were several complaints that doctors in the hospitals do not respond at all to the midwives questions or requests to transfer. One midwife (2.1) stated that writing referral notes for patients needing transfer to hospital was time-consuming and caused delays in transferring the patient. This was especially stressful when there were other patients in labour who need their attention. There was also a perception that the midwives were expected to care for patients who should have been managed in a hospital, as stated by participant 1.4 who said, "*complications that are not manageable on MOU level*."

The midwives did not have anything good to say about the doctors when they wish to refer patients. They perceive them as being not supportive. Participant 5.7 said, *"there is an underground war between doctors and nurses at the expense of the patients. When a midwife phones the hospital requesting to transfer the patient, doctors do not return the call. And when the midwives call for the ambulance, they require a referral letter bearing the name of the doctor who approved the transfer."*

The emergency medical service staff did not escape criticism either. Participant 2.1 said, "*arranging EMS because of previous Caesar [takes a very long time]*" which interfered with the time taken to complete what she considered relevant nursing activities.

Participant 5.5. stated that "*Paramedics are another challenge factor. It is like they were never orientated to assess any condition as to whether the patient belongs to clinic or hospital, so sometimes you need to show them how things are done and they do not understand. It makes some irrelevant cases to come to maternity when they are not supposed to*."

4.3.4 Systems failures

This category referred to broad system issues that have an effect on the midwives' ability to work effectively and included support systems and laboratory results.

Under the support systems, one of the practical issues related to power failures at the MOU, making it difficult to work (participant 6.1). There were also several complaints about the patient transport system, and particularly the Emergency Medical Services (EMS) transport system or ambulance service. One MOU (MOU 6) seemed to be particularly neglected with participant 6.1 saying "*no running water and no privacy. Old delivery beds*." This was the MOU where the researcher struggled to find patients to observe, which indicates that the patients avoid using this MOU.

While there are excellent maternity guidelines available that have been developed by the National Department of Health, these are not always appreciated by the midwives, who think compliance is unnecessarily time consuming as illustrated by participant 1.6 who said, "*adherence to maternity care guidelines and protocol influence nursing activities*." This is interesting as the protocols are designed to improve systems management.

The systems issues often relate to the management of HIV positive patients as illustrated by participant 1.2 who said, *"Un-booked patients where the on-site investigations are to be done while patient is in labour e.g. RH negative testing"* referring to the time this took to conduct these tests, which should be done in the ante-natal clinics.

Midwives were faced with the challenge of having to repeat the investigations if the patient was transferred to another clinic without the record of investigations, as illustrated by participant 5.5, who said, "*We don't have counsellors at weekends so HIV + patient sometimes need time to talk to them about what to do during and after delivery. Some never received any counselling before so it makes our job to be more slow when you still have to go deep into personal feelings."*

4.3.5 Overall Comments on the Naive Sketches

The overall perception of the researcher, when analysing the naive sketches, was that participants often spoke very generally of factors that influenced time management rather than specific patient issues. Most of the participants could not

distinguish between the factors influencing nursing activities and the factors that influenced the time taken to complete the nursing care activities. Midwives from the same MOU stated very similar issues, despite the fact that they wrote their naive sketches separately and on different occasions. This leads one to believe that specific issues are problematic in clinics rather than it being the norm. There is little doubt that many of the midwives are frustrated by their working conditions, which automatically impacts on the amount and quality of the care that patients receive.

4.4 Section Three – Reflection On The Use Of Hodnett's Tool

The final objective of this study was to determine whether the categories of labour developed by Hodnett (1996) are suitable for timing activities in a labour ward in a midwife obstetrics unit with a view to determining suitability for future use.

In planning for this study, it was recognised that as the researcher was collecting all her own data, and it would only be possible for her to self-reflect on this issue rather than employing conventional methods such as expert reviews or focus groups. It was only through using the tool that it would be possible to make this determination.

Hodnett's categories of labour support are well accepted and have been validated, but have not previously been used for the purpose of timing activities. It has also not previously been used for any purpose in the MOUs in Gauteng. This selfreflection was done by means of using the standard criteria for assessing the quality of a product viz. reliability, validity and practicability or fitness for purpose and did not aim at doing a factor analysis, as this was outside the scope of the study and would not have been feasible with such a small sample and for what was, in essence, a pilot study. The researcher and her supervisor reviewed each aspect of the study, including the contents of the tool and the methodology used in this study in order to attempt to meet this objective.

4.4.1 Reliability

Reliability refers to the consistency of scores (Oermann and Gaberson, 2009). In order to be considered reliable when used for the purpose of this study, similar scores would need to be produced if the recordings were done again at a different time on the same patients. It should also be consistent over time and between different raters. Oermann and Gaberson (2009) make the observation that reliability pertains to the results rather than the instrument used. Reliability should be calculated using statistical indices in terms of a reliability coefficient. Another important aspect relating to reliability is that it is possible to be reliable, or consistent, but to consistently produce inaccurate results.

The researcher has concerns about the reliability of a tool based on Hodnett's categories of labour. For a start it is not possible to repeat the recordings on any one patient as once labour is over there is no second chance so it is not possible to know this. With regard to inter-rater reliability, the researcher has some doubt whether another person observing the same patient would have recorded exactly the same times, as activities often happen simultaneously, leading to some inaccuracy, and they happen very quickly – often only a couple of seconds - and thirdly there is some overlap between categories and activities which may not be interpreted exactly the same way by different raters. Due to the small size of the sample it is not possible to check for a reliability coefficient.

There were aspects in the tool such as eye contact, touch and holding that are intuitive rather than considered, and were particularly difficult to measure. Often if an activity was carried out, it was naturally accompanied by touching and eye contact and could therefore not be recorded as such.

4.4.2 Validity

Validity relates to whether an instrument accurately measures what it was intended to measure. Hodnett's (1996) categories were developed to represent the types of activities needed during labour to provide adequate support. It was not, therefore, designed to assess whether support occurred or not, and not how

long these activities take. It is based on the ideal activities required to provide labour support rather than the reality of what happens.

In terms of content validity which relates to the extent to which the tool looks into the various aspects of a construct, in this study the construct was labour support. Further work has been done subsequently by Hodnett and simplified into evidence based guidelines (RCN, 2012) that 'reduce' the categories into four namely emotional support, physical support (which includes comfort measures), information and advice and advocacy.

The instrumental care aspect is now not included in the guidelines. The majority of time was spent on instrumental care in the MOUs, and the question has to be asked whether instrumental care should be part of labour support or not. There is no doubt that providing instrumental care is essential for a labouring woman who is vulnerable and unable to care for herself, and midwives believe their role is not only to support the woman but also to prevent her from harm. Da Gama et al. (2016) showed that good practices in labour were significantly more frequent in births where women were assisted by midwives.

The researcher therefore believes that it is correct to add instrumental care and believes it was appropriate to do so in this study.

When the researcher developed the proposal for this study it was done on the assumption that midwives know what care is required in order to support and care for a labouring woman, and that they practice accordingly. It became clear as the study progressed that this is not the case, and that midwives in the MOUs in this region, and probably elsewhere, do not practice the 'soft skills' which are the very aspects of care included in Hodnett's 1996 tool. This raises an issue relating to the validity of the tool as so many aspects in the instrument were not ever carried out or observed.

Although it was not the intention to measured quality of care, but rather time activities and caring behaviours with a view to establishing activity based norms, the study has provided useful information to address issues of concern with regard

to the quality of care. But as stated above, it is the opinion of the researcher that instrumental care must be included in any such tool used in the future.

Based on the results of the study, it is possible to time activities of care including instrumental care, but it may be necessary to modify the tool, based on the findings of this study, before attempting to use it to develop activity based norms.

4.4.3 Practicality

Oermann and Gaberson (2009) state that “although reliability and validity are used to describe the ways in which scores are interpreted and used, practicality is a quality of the assessment instrument itself and its administrative procedures.” They specifically suggest considering whether it is easy to use, whether time taken to administer the tool was reasonable, whether the costs associated were reasonable and whether results can be easily interpreted by those who use them.

On one level, the tool was easy to use as it meant that the researcher had to observe what was happening and record the time it took. She was the only one recording the times so her interpretation of what a particular category or activity entailed was consistent. Should this study be replicated, there would have to be notes accompanying the tool explaining which activity occurred where and some of the overlapping issues would have to be eliminated. Labour often progresses rapidly and many activities occur simultaneously, particularly when more than one nurse is caring for the woman, which made the tool difficult to use as second stage of labour approached.

With regard to the time taken to administer the tool, observation studies are notoriously time consuming. There is, however, no other way of calculating time taken for activities except by observing them and timing them.

The costs to administer the tool relate directly to the cost of the time and effort of the person conducting the observations. It is the researcher’s opinion that a trained midwife would need to administer this tool in order for valid results to be obtained, as the person would need knowledge of the procedures and would also

have to have permission to do so. It would not be appropriate for a person who is not a health professional to observe labour as the researcher did.

4.4.4 Overall Comments

The researcher believes that any future attempt to measure / time activities during labour in this South African context could include the following categories only:

Ante-natal clinic:

Emotional support, information and advice, advocacy and instrumental care.

Labour ward:

Emotional support, comfort measures, information and advice, supporting the partner and instrumental care.

Instrumental care needs to include both what has been referred to in this study as 'Hodnett's instrumental care' and 'other instrumental care'. Instrumental care should therefore include history taking, basic physical needs, medication, assessment (which should include palpation and vaginal examination), monitoring (all types), recording, putting up an IV line, vulval swabbing, and catherisation. A decision would also have to be made, if using this tool in future, whether to include first and second stage of labour. If this is done, it is recommended that these are timed as two single events rather trying to separate activities, such cutting the cord and giving Pitocin.

4.5 Conclusion

This chapter has presented the findings of the study related to the four objectives. Some discussion has been provided about the findings related to the time taken to care for the various categories and the implications of those findings. A broader discussion follows in the next chapter where the overall results in relation to the purpose of the study will be addressed.

Chapter 5: Main Findings, Discussion of Findings, Limitations, Recommendations and Conclusion

5.1 Introduction

This chapter states the main findings of the study, the details of which were given in chapter 4, and discusses the overall findings. The discussion of the findings pertaining to the individual MOUs and the categories of care was provided in chapter 4; the discussion section in this chapter seeks rather to address the purpose of the study. In addition, a reflection will be provided on the limitations of this study as well as the recommendations and conclusion.

5.2 Main Findings

The integration of qualitative and quantitative data allowed the researcher to focus on issues beyond staffing and the setting in which nursing activities are being carried out. At the beginning of the study, the six designated health facilities, known as MOUs were inspected. Although the purpose of their existence was common to all, it was found that they differed in structure and, despite having common standard operating procedures, differed in the amount and quality of care they provided. It is not clear as to the extent the structure of the MOU and individual motivation and expertise play in determining the amount and quality of care provided.

- Activities carried out by midwives in the MOUs were almost exclusively related to instrumental care, or providing for the physiological needs of the labouring women. Midwives in MOUs did not display the “soft skills” referred to in Hodnett’s categories of labour support.
- The use of the tool was challenging, particularly in relation to the “soft skills” mentioned above, partly because they commonly occur simultaneously with other activities. An example of such activities are touching and holding. In

addition, it was difficult for a single observer to measure activities as they often occurred in ‘batches’ and very quickly, particularly as the second stage of labour approached.

- The midwives showed little insight into how their circumstances or the availability of resources may affect their ability to care for individual women, choosing instead to concentrate on generic issues.
- No attempt was made to solicit the opinion of the patients on factors that impacted on the time taken to care for them.
- With the exception of cultural issues, which may affect the relationship between midwife and patient, none of the factors cited by the midwives that impact on the time taken to care for the patients would influence labour support. It became clear that either the midwives did not recognise that they were not providing labour support, or they did not think it mattered. This could be attributed to the type of midwifery training they receive, where there is no emphasis on the “soft issues” referred to in Hodnett’s tool.
- The presence of the researcher may have affected the level of care given while she was present but, if this was the case and midwives were providing “best care” because they were being observed, it is concerning to consider the level of care that may be given if the researcher had not been there.

5.3 Discussion of Findings

The intention of this study was to find a suitable means of measuring the time taken by midwives to care for a labouring woman, with the intention of using such information to establish activity based norms. The MOUs were chosen as the site for the research as this is where normal deliveries routinely occur, and they were seen to be the best place for assessing time taken to provide care for a ‘normal’ labour.

At the time of commencing the study, no attempt had been made to determine norms for labour care in a public service labour ward. As the doctors do most of the deliveries in the private sector, where in any event, few vaginal deliveries take

place, it was also not possible to use norms from the private sector for this purpose.

In searching for a tool for this purpose, the researcher was aware of the need to calculate time taken for all aspects of care including labour support and instrumental care. This has been known for a long time to be important in South Africa, after the publication of a study by Hofmeyr et al. (1991) showed that while companionship during labour in a clinical environment had no measurable effect on the progress of labour, it did assist in promoting self-esteem which, in turn, affects successful initiation of breast feeding, perceptions of labour and confidence in adapting to parenthood.

Research into labour support has continued over the years, in many different countries and contexts, with the findings almost universally being that labour support, from husbands, female supporters, doulas and midwives, does have a positive impact on transitioning to parenting, a woman's personal identity and social role, and even anxiety and post-natal depression (Sapkota et al., 2013). In a Cochrane review of 22 trials, Hodnett, Gates, Hofmeyr and Sakala (2012) showed that women who receive continuous labour support are more likely to have a spontaneous vaginal birth, less likely to need intrapartum analgesia, less likely to have a baby with low Apgar scores, and are more likely to express satisfaction about the birth experience. It is interesting to note, in light of the current study, that no conclusions could be drawn on when, or at what stage during labour, the labour support should commence. Even if a decision were to be taken, constraints of space in some, but not all, clinics would affect its implementation. At MOUs 1, 3 & 4, commencement of, or allowing, labour support could be a possibility, though privacy could be another hindering factor.

The rationale for using Hodnett's labour support tool was therefore considered to be sound, and by using the instrumental care suggested in an earlier version by Mc Niven and Hodnett (1992), and adding to the activities that occur in instrumental care, it was thought to be fit for purpose. Compliance to the tool was assumed to be an indication of good quality of care given.

What had not been anticipated, when commencing this study, was the poor quality of care that was given to the labouring women. If one is to use the times taken for labour care into consideration, it is important that at least acceptable care is offered and that the time taken to provide such acceptable care is measured on that basis. As a result, the results were disappointing and the researcher is left wondering what can be done to address this issue before attempting once again to develop activity based norms. One possible solution for this is to simulate several labours and ask a group of experts to 'provide' appropriate care and use the timings obtained from this. This could be done by videoing several real life labours with experts in attendance and using them as simulated scenarios. If this were to be successful, and staffing norms were to be developed on the basis of this 'expert' care, the norms would be set at a higher ratio, but there is no guarantee that midwives would provide the care, they may just gain more time to sit and talk rather than caring for the women who need them.

This leads one to consider that, if providing support and companionship during labour is not provided by all midwives, why or what motivates some midwives to provide such care? In a study by Aune et al. (2014), carried out in Norway, it was found that a midwife's skill in building a relationship with the woman, together with his/her values and understanding of the midwifery profession were key factors in his/her decision as to whether to provide support or not. This could be profoundly relevant to the researcher's findings as one of the issues the midwives raised in the naïve sketches was the fact that women often did not speak the same language as they did and also did not seem to understand what they were told. This latter comment indicates they believe the patients are poorly educated and lack the ability to understand. This in turn would suggest some difficulties in building a relationship with the women. The fact that most of these patients attend antenatal care at smaller clinics, which do not provide delivery services, and are only transferred to MOUs when in labour impacts on the relationship as the patients are not known to the midwives prior to admission.

The second part of this argument, relating to the midwives' values and understanding of the midwifery profession, led the researcher to explore what

midwives were taught that related to labour support. There is one chapter on psychosocial aspects of patient care in labour in the book prescribed by the Nursing College from which most of the midwives qualified, but this aspect does not appear at all in any of the three curricula used for training midwives in the nursing colleges in Gauteng, i.e. the one year diploma in midwifery followed by students who have qualified from the Bridging course, the 4 year diploma curriculum (R425) followed by students training as nurses and midwives at the colleges, or the one year Advanced midwifery programme. It is the researcher's assumption that the product of this curriculum is a midwife who does not have confidence to practice as a midwife. This could result in a shortage of competent practising midwives. It is a fact that a midwifery certificate is used as a stepping stone for entry into other post basic courses, and many of the nurses who train as midwives did not have the intention to practice as such.

This idea that caring behaviours need to be taught goes against the long held theory that caring is instinctive (Kohlberg, 1984) and the historical role of women to care for other women in labour and other times of vulnerability. Theofanidis and Sapountzi-Krepia (2015) point out that women's involvement in health issues is an 'ancient tradition in human cultures'.

The National Health Service (2012) in the United Kingdom developed a policy referred to as the 6 Cs in an attempt to entrench caring into nursing and midwifery but, although it was no doubt well intended and developed in response to the criticisms from patients about the lack of care, it raises the question as to whether a policy will improve the level of caring. Bradshaw (2016) referred to this effort as turning the 'moral virtues' of caring and compassion into commodities.

Landers (2014) prefers to distinguish 'caring' from professional caring, stating that the latter consists of altruism, authentic presence and therapeutic care. She suggests that student nurses need help to internalise the concept of caring and to develop competencies in providing therapeutic care. In a study by Ma et al. (2013), it was found that while caring ability was low in nurses in their sample, it could be improved by a reduction in exposure to negative role models, and also by

using education processes such as truth telling and helping students think in a critical manner.

The latter suggestion indicates that student midwives could be assisted to learn how to provide therapeutic care, or labour support. This notion is supported by Berragan et al. (2014) who suggest that one can learn to deliver compassionate care through peer support. This assumes that peer support is available; in this study very little of this was observed.

This led the researcher to wonder why this is the case; a possible answer to this question comes from a study by psychologists Varca and Rittenburg (2014), who showed that front line workers are rewarded for not identifying with their customers as, if one avoids identifying with ones customers, one avoids what they refer to as 'work strain'. In other words, it is a self-preservation technique to become emotionally detached from the patients. Another theory put forward by McCluskey and Gunn (2015) is that there is a relationship between early attachment patterns and work dynamics of those people who train as professional caregivers. They maintain that defensive caregiving leads to an 'assuagement of unmet early careseeking needs'.

Whereas it is tempting to look at the midwives for answers to the questions of why they do, or do not, demonstrate caring behaviours, Coe and Fulton (2016) point out that the caring relationship is exactly that – a relationship and that the cue for the desired relationship depth is taken from the patient. This means that unless the patient indicates she desires a caring relationship the midwife will not provide it. In an environment where the expectations of patients are low, this may further add to the lack of labour support.

A third element related to the concern about why caring behaviours, or, in the case of this study, labour support, are not optimum is the environment. Sumner and Fisher (2016) conclude their paper on measuring care by stating, "cultivating institutional resources in support of …caring requires methods for identifying, gauging and managing the effects of caring on the nurses who provide it."

It is particularly evident in the MOUs that there is very little supervision. The midwives who work there work alone or with lower category nurses, who do not question the quality of care given by the midwives. Working without collegial support lends itself to developing bad habits and taking short cuts.

The time taken for recording care was considerable which led the researcher to consider that time is used in activities that can be audited or checked and, therefore, a failure to keep records would result in possible sanctions, whereas the, relatively disempowered, women (patients) in the MOUs are unlikely to complain about a lack of care or the way they are addressed, so those aspects may not be of such concern to the midwives.

Theofanidis and Sapountzi-Krepia (2015) state that when a community suffers from poverty and austerity, the essence of care is often undermined as a result of poor social or community nursing services. If this is indeed the case, the very poor quality of some of the services offered could impact on the care given. This was certainly the belief of the Democratic Nursing Organisation of South Africa (DENOSA), which spurred them on to developing their project on creating positive practice environments (DENOSA, 2013).

In a sub-optimum working environment, the staff are more likely to do what is good for themselves rather than what is good for the patients, as it is a survival mechanism. There was little doubt from what the midwives said in their naïve sketches that they feel disempowered working in a dysfunctional health care system. Many of their observations related to their own experiences, but there did appear to be a culture of ‘making other people’s experience your experience’ (Hatfield, 2017). Hatfield explains this phenomenon of nurses who hear of experiences from other nurses – especially related to not being given resources or opportunities when requesting them – will apply to me too so there is no point in asking or trying to improve matters.

While there is evidence to support the explanations put forward to try and answer the researcher’s questions, the study did not aim to measure the quality of care

but rather the time it took for caring activities. As this was an observational study, however, the researcher was in a unique position to observe care and therefore, formulate questions that should be followed up in later studies. The fact that the given objective was not to monitor the quality of care did make it more likely that the midwives acted 'normally' so the findings may well be valuable.

In relation to the tool adapted for this study (Hodnett, 1996), there is little doubt that the categories of labour support are the ideal, and no one would question that all the activities in the tool have a positive impact on the outcomes of labour and should therefore be implemented. It is also clear that few resources, apart from the staff themselves, are required to provide such labour support. A shortage of staff was not evident at the MOUs, but midwives appeared to hold the belief that they should not have to provide the lower levels of care that could be given by lower categories of care ('nurses'). It would seem intuitive, with relatively low numbers of deliveries, to require the midwives to provide total patient care as their presence is required to do the deliveries and they are able to carry out all activities and provide labour support. It may also be worth considering the practice of placing advanced midwives in MOUs as they are not providing a higher level of care which they are intended to provide in the MOUs and may be better utilised in specialised units. It is acknowledged, however, that the rationale is that they should be able to recognise signs of complications early on so that referral to a hospital occurs timeously. It should be considered whether this function could be carried out by a registered midwife with good training, which would free up the advanced midwives for specialised care. With the advent of the new qualifications in nursing, advanced midwives are likely to become a rare breed so this suggestion should be carefully considered.

The activities performed at MOUs were generally the same. There are activities that were performed at all MOUs and there are those that were not performed at any of the MOUs such as application of hot and cold compresses under the category of comfort measures. In the category of emotional support, distraction was not observed at all. The rest of the other forms of support were not observed. Application of comfort measures scored higher than emotional support. Advocacy

and supporting the husband/partner were minimally applied. Some of the possible reasons have been discussed under the relevant headings. The researcher did, despite some challenges, measure the time taken on various activities and can confirm that it is possible to determine the duration of the nursing activities on instrumental care. As discussed above, either videos or a second observer would assist if this study were to be replicated.

In the researcher's opinion, and after having gone through a rigorous process of an observational study, it is not possible to apply all the categories of labour support in the current setting, without extensive changes to the management and structure of maternal health services. There is, however, no reason why the category relating to advocacy cannot be implemented immediately at antenatal clinics, where the decisions about the type of delivery are made. The patient should be able to voice her wishes, and the medical team will be in a position to interpret them appropriately in the clinic during the ante-natal period. Comfort measures are also applicable in a labour ward setting. It was found that hydrotherapy and bathing were not performed, due to the routine followed at all MOUs and also the available resources. The patients only presented themselves when the labour was established. There is no scientific contraindication to hydrotherapy, but it was not encouraged in the MOUs.

5.4 Limitations

- This study was designed to be what was, effectively, a pilot study, in order to test whether Hodnett's categories of care could be used as a basis for determining activity based norms for midwife obstetric units in Gauteng. The sample was, therefore, small as it was recognised that an observational study of this nature would be time-consuming, and it was essential to ensure it was feasible. The intention was to include 6 MOUs, i.e. all 6 in a selected district, or a total sample of MOUs in that district. The sampling framework required that patients were selected from different days of the week, day and night, primigravida and multigravida. Despite visiting MOU 6 more than 4 times and making telephone contact to

determine whether patients were in labour or not, the researcher only managed to observe one patient at this clinic, making it impossible to come to any comparisons with other MOUs. Some patients, where the observations commenced, were transferred to a higher level of care, which also impacted on the overall results of the study. The length of time spent with each of the patients included in the study varied

as the inclusion criteria only stated that they should be more than 4 cm dilated.

- None of the MOUs practised total patient care, making it difficult to assess the impact of factors that may have influenced the midwife's ability to spend time with the patient, or the impact of factors on the length of time it took to provide each caring activity. In many cases, more than one nurse/midwife was providing care to the patient simultaneously, which also impacted on the ability of the researcher to time the activities and to understand the context of the care. Being present with each labour did, however, enable the researcher to note factors impacting on the time taken to care and provided valuable insights for this study.
- When technologies were used to measure vital signs or establish baseline data, the researcher had to make a judgement with regard to whether to measure the time taken for the midwife to place the cardiotochograph in place and to assess the results rather than the time taken for the measurement itself. There was heavy reliance on the use of the tochograph for measuring the foetal heart.
- As stated in the discussion, the tool measured the ideal rather than the reality, which raises questions as to whether it is suitable for measuring time taken for activities as a basis for developing nursing norms.
- The data from the naïve sketches was subject to what USC libraries research guide (undated) refers to as selective memory, telescoping, attribution and possibly exaggeration. Selective memory appeared to occur in that the midwives only discussed negative influences or constraints rather than opportunities for care. Telescoping refers to the fact that the incident or issue they were describing may have happened at another time,

not related to the patient they were asked about. Attribution refers to attributing events or outcomes from another person to oneself. This was used to explain events that had clearly happened to other midwives rather than themselves. It was not clear whether the midwives exaggerated, but if they did, the researcher's observation of the working conditions in some of the MOUs could explain their dissatisfaction and would lead to them seeing things in a negative light.

5.5 Recommendations for Nursing Education, Nursing Research and Nursing Practice

5.5.1 Nursing education

There is an urgent need to emphasize the importance of labour support in the curriculum of midwifery training. Supporting women, or the application of the categories of labour support, is the only human activity that is non evasive and has the capacity to make a positive and lasting impression on the patient in labour. The use of technology as an intervention should be regarded as a secondary method of assisting a woman in labour.

There is a need to encourage student midwives, both at basic and advance level, to develop advocacy skills both for themselves as a profession and for the patients to ensure that childbirth remains a natural event wherever possible, and that medicalisation of childbirth and physician dominance does not become the norm.

5.5.2 Nursing practice

Supporting women in labour has been scientifically proven to improve patient satisfaction and reduce stress related effects of labour; it may contribute to what we have come to know as a positive practice environment (McNiven et al., 1992). In order to ensure midwives do practice in a positive practice environment, it is important that the workload is carefully examined, which may mean changing the practice of employing advanced midwives in MOUs, and rather ensuring midwives who are able and willing to provide comprehensive support are used optimally.

Failure to do this may result in further reduction in job satisfaction, high stress levels of midwives and nurses, and increased burnout and loss of staff. For this reason the quest to develop activity based norms should continue.

Application of scientifically determined staffing norms is intended to improve productivity, but mere calculation of the norms, as has been done in the WISN study (Daviaud & Subedar, 2013), without appropriate implementation will be a wasted exercise. The WISN are also not sufficiently specific for the staffing of labour units within the MOUs, as they concentrate of providing staffing for all the activities within Community Health Centres and MOUs.

The benefits of well formulated and appropriately implemented norms should have the result of providing support to the women in labour, and will result in an increase of patient satisfaction. Studies have shown that women who receive adequate support during labour have less stress and have a high threshold for pain. This reduces their chances of seeking pain medication and the need for a caesarean delivery. The chances of a natural birth are increased. While these benefits are recognised, it will only happen if midwives provide adequate labour support; the provision of good staffing levels has been shown in this study to be a small part of encouraging midwives to provide labour support.

5.5.3 Nursing research

There is no doubt that this study needs to be replicated. A much bigger sample size is required to confirm the findings of the current study. It must be mentioned that it was only possible to observe the behaviours that were displayed by the participants at the time of data collection. It cannot therefore be confirmed that the categories of labour support measured in this study are the only ones provided on a routine basis. It is on that basis that a recommendation for the replication of the study on a broader sample is made.

It is further recommended that a second observer attends the labour and records data or that the labour is videotaped to allow for later verification of the data. The

presence of the researcher is, however, important as it enables the researcher to understand the context in which the care is given.

5.6 Conclusion

Determination of staffing needs is a priority for an organization seeking to provide safe patient care in an environment which is cost conscious. A workload measurement system is critical for identifying needs. Inadequate staffing ratios have no place in an environment characterized by rising costs and public expectations.

The Department of Health has adopted the World Health Organization's activity based staffing norms. In the previous chapters, the researcher has provided evidence to support the fact that determination of time spent on activities is one of the key factors in determining activity based staffing norms. In South Africa, the implementation of Workload Indicators of Staffing Needs has commenced, but has not been fully implemented.

The mixed methods design enabled the researcher to explore not only the times taken on activities but also the context in which they take place, and this element should be added to any further attempts to develop work based norms.

A pilot study is intended to carry out a small scale version of a study to check for feasibility, which include the elements of time and cost and also, as Baker (1994) stated, to pre-test or "try out" a particular research instrument. This was done in this study and, while it will be necessary to make changes to the instrument and methodology before rolling out a large scale project to gather data for activity based norms for labour wards, it has proved invaluable in predicting any problems and therefore being able to avoid them in a large scale study.

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Annexures

Annexure 1. Categories of Labour Support Tool

Code for patient: Name of Researcher Date of observation…

ACTIVITY	TIME		DURATION	PERSON RESPONSIBLE
	START	FINISH		
EMOTIONAL SUPPORT				
Companionship				
Eye contact				
Praise				
Distraction				
Affirmation				
Reassurance				
Visualization				
Attention focusing				
COMFORT MEASURES				
Reassuring touch				
Holding				
Applications of heat/cold				
Giving ice chips, fluids, food				
Helping with personal hygiene				
Massage				
Hydrotherapy (bath or shower)				
Helping with positioning				
Assisting with ambulation				
INFORMATION/ADVICE				
Providing information				
Offering advice				
Coaching in breathing, relaxation techniques				

Interpreting medical jargon				
ADVOCACY				
Supporting the woman's decisions				
Interpreting the woman's wishes				
SUPPORTING THE PARTNER				
Role modelling				
Providing an opportunity for respite				
Encouragement				
Praise				
INSTRUMENTAL CARE				
History taking				
Basic physical needs				
Medication				
Assessment				
Monitoring				
Record keeping				
OTHER				
Monitoring (vital signs, Hb)				
Palpation				
Vaginal examination				
Catheterisation				
Urinalysis				
Siting intravenous infusion				
Vulval swabbing				

Modified from Hodnett, 1996:257

Annexure 2. Information Sheet for Patients

A DETERMINATION OF TIME SPENT ON NURSING ACTIVITIES IN A LABOUR WARD IN A MIDWIFE OBSTETRICS UNIT

INFORMATION SHEET FOR PATIENTS

Good Day, my name Duduzile Ngidi. I am studying at the University of the Witwatersrand for a Masters' Degree in Nursing.

I intend to conduct a study to determine whether a tool developed by a Canadian researcher called Ellen Hodnett (1996) on categories of labour support and the time taken to perform nursing activities during labour is suitable to be used in South African Midwife
Obstetric Units (MOU's). This will inform the future process of developing nursing norms for labour wards in the public sector.

Before agreeing to participate it is important that you understand the purpose of the study and the study procedures, as well as understanding your right to withdraw from the study at any time. This information sheet is to help you decide if you would like to participate. You need to understand what is involved before you proceed. If you have any questions, do not hesitate to ask me. If you decide to take part in this study you will be asked to sign the attached consent form to confirm that you understand the study and agree to participate.

The researcher who is a trained midwife will observe the activities of the midwife who is allocated to care for you during your labour. The researcher will record how long it took your midwife to carry out each activity. You will not be asked to contribute actively to the research but I need to ask you if you are willing for the researcher to make these recordings. Your agreement or refusal to allow the researcher to observe your midwife will not make any difference to the care you receive. You will not be victimized or prejudiced in any way if you do not wish to participate.

The results of the research will be confidential. No names will be used. The results from the study will be compiled into a composite report so no one apart from the researcher will have access to any of the information collected. Your participation will not be of any direct benefit to you personally but the results of this research may assist future generations of nurses and patients as it will be used as part of the process for determining norms for labour wards.

Should you have any questions about your rights as a study participant, or questions or concerns about any aspect of this study, please call the Ethics Department of the University of the Witwatersrand on +27 11 717 1234 or my study supervisor Dr Sue Armstrong on +27 11 488 3094.

Thank you,

Mrs Duduzile Ngidi

Tel number 082 376 9568

Annexure 3. Consent Form for Patients

A DETERMINATION OF TIME SPENT ON NURSING ACTIVITIES IN A LABOUR WARD IN A MIDWIFE OBSTETRICS UNIT

CONSENT FORM FOR PATIENTS

I have been given the information sheet on the project entitled: “a determination of time spent on nursing activities in a labour ward in a maternity obstetrics unit”. I have read and understand the information sheet and all my questions have been answered satisfactorily.

I understand that it is up to me whether or not I would like to participate in the research and that there will be no negative consequences if I decide not to participate. I understand that the nursing care I receive from my attending midwife will be observed and timed. I also understand I can ask the researcher to stop the observations and recordings at any time.

I understand that the researcher involved in this project will make every effort to ensure confidentiality and that my name will not be used in the study reports. I consent voluntarily to my labour being observed and recorded by the researcher. I have been given telephone numbers that I may call if we have any questions or concerns about the research.

Participant’s signature:_____ Date:_____

Annexure 4. Information Sheet for Nurses

A DETERMINATION OF TIME SPENT ON NURSING ACTIVITIES IN A LABOUR WARD IN A MIDWIFE OBSTETRICS UNIT

INFORMATION SHEET FOR NURSES

Introduction and background

Hello. My name is Duduzile Florence Ngidi. I am a Masters student from the Department of Nursing at University of Witwatersrand. I am conducting a study to pilot a tool to be used to determine nurse activities in the maternity obstetrics units of Ekurhuleni Health District in Gauteng.

The purpose of the study is to determine whether the tool can be used in the South African context to measure nursing activities in the labour ward of a maternity obstetrics unit. If it is suitable it will be used as part of the very important task of developing nursing norms for the country.

At the end of each session of observations using the tool, all participating midwives will be requested to complete naïve sketches of factors they believe influenced nursing care activities and the time it took to complete the activities.

Confidentiality

All information obtained during the pilot study will be kept confidential. I have signed a confidentiality document which prohibits me from divulging any participant information obtained during the research process. Your name will not be revealed in any feedback, written data or report resulting from the study. The information obtained will be collated, analysed and written up in the form of a report.

Benefits and risks of participation

There will be no benefits to any individual participating in the study but your participation will assist in the development of a quality nursing workforce for future generations. The study will be done during your normal working hours and will not interfere with your work.

Recording the interview

We request permission to record your responses to the short questions you will be asked once the patient has delivered. Your responses will be kept confidential. Recordings will be destroyed 2 years after publication of research findings.

Consent

We are required by the ethics committee to ask you to sign a written consent form that you have read and understood this information, and that you agree to participate in the study.

You will also be requested to sign a separate consent form for recording your responses.

Contact details

The University of the Witwatersrand Research Ethics Committee has approved this research. You may contact this office if you have questions about your rights as a study participant, or questions about any aspect of this study can be directed to: 011 7171234. If you have questions or concerns, you may also contact my supervisor if you have any further concerns:

Dr S. Armstrong
Department of Nursing Science
University of the Witwatersrand, Johannesburg
Phone: +27 11 488 3094
Fax: +27 11 488 4272
Email: Sue.Armstrong@wits.ac.za

My contact details are:

Mrs D Ngidi
Department of nursing
Chris Hani Baragwanath Academic Hospital
Cell Number 0823769568
Phone: +27 11 933 0134/9779
Fax: +27 11 938 8161
Email: Dudu.Ngidi@gauteng.gov.za

Annexure 5. Consent Form for Nurses

A DETERMINATION OF TIME SPENT ON NURSING ACTIVITIES IN A LABOUR WARD IN A MIDWIFE OBSTETRICS UNIT

CONSENT FORM FOR NURSES

I have been given the information sheet on the project entitled: “a determination of time spent on nursing activities in a labour ward in a maternity obstetrics unit”. I have read and understand the information sheet and all my questions have been answered satisfactorily.

I understand that it is up to me whether or not I would like to participate in the research and that there will be no negative consequences if I decide not to participate. I understand that the nursing care I give to the participants will be observed and timed. I also understand that I do not have to answer any questions that I am uncomfortable with and that I can stop at any time, or request the researcher to cease the observations.

I understand that the researcher involved in this project will make every effort to ensure confidentiality and that my name will not be used in the study reports, and that comments that I make will not be reported back to anybody else. I consent voluntarily to participate in the interview for this study. I have been given telephone numbers that I may call if we have any questions or concerns about the research.

Participant’s signature:_____ Date:_____

Interviewer’s signature:_____ Date: _____

Annexure 6. Naïve Sketch Form

A DETERMINATION OF TIME SPENT ON NURSING ACTIVITIES IN A LABOUR WARD IN A MIDWIFE OBSTETRICS UNIT

NAÏVE SKETCH FORM Question	Comment
1. What factors do you think influenced nursing activities you gave to the patient?	
2. What factors do you think influenced the time taken to complete the nursing care activities?	

Annexure 7. Ethics Committee Permission

R14/49 Ms Duduzile Florence Ngidi

HUMAN RESEARCH ETHICS COMMITTEE (MEDICAL)

CLEARANCE CERTIFICATE NO. M130634

NAME: (Principal Investigator)	Ms Duduzile Florence Ngidi
DEPARTMENT:	Nursing Education Faculty of Health Sciences Chris Hani Baragwanath Academic Hospital
PROJECT TITLE:	A Determination of Time Spent on Nursing Activities in a Labour Ward in a Midwife Obstetrics Unit
DATE CONSIDERED:	28/06/2013
DECISION:	Approved unconditionally
CONDITIONS:	
SUPERVISOR:	Dr Sue Armstrong
APPROVED BY:	Professor PE Cleaton-Jones, Chairperson, HREC (Medical)
DATE OF APPROVAL:	18/11/2013

This clearance certificate is valid for 5 years from date of approval. Extension may be applied for.

DECLARATION OF INVESTIGATORS

To be completed in duplicate and **ONE COPY** returned to the Secretary in Room 10004, 10th floor, Senate House, University

I/we fully understand the conditions under which I am/we are authorized to carry out the above-mentioned research and I/we undertake to ensure compliance with these conditions. Should any departure be contemplated from the research protocol as approved, I/we undertake to resubmit the application to the Committee. **I agree to submit a yearly progress report**

Principal Investigator Signature _____ Date _____

PLEASE QUOTE THE PROTOCOL NUMBER IN ALL ENQUIRIES

Annexure 8. Gauteng Department of Health Permission

GAUTENG PROVINCE
HEALTH
REPUBLIC OF SOUTH AFRICA

OUTCOME OF PROVINCIAL PROTOCOL REVIEW COMMITTEE (PPRC)

Researcher's Name (Principal investigator)	Duduzile Florence Ngidi
Organization / Institution	Wits University
Research Title	A determination of time spent on nursing activities in a labour word in a midwife obstetric unit
Contact number	Contact no: Cell: 082 376 9568 Email: dudu.ngidi@gauteng.gov .za
Protocol number	
Date submitted	10/05/2014
Date reviewed	19/05/2014
Outcome	Permission
Sites	Ekurhuleni District

Your application to conduct the abovementioned trial has been reviewed by the Provincial Protocol Review Committee and permission has / has not been granted to proceed.

We request that you submit a report after completion of your study and present your findings to the Gauteng Health Department.

Dr B. Ikalafeng
(On behalf of PPRC)

Date: 19/05/2014

Annexure 9. Ekurhuleni Health District Permission

RESEARCH CLEARANCE CERTIFICATE

Research Project Title: A Determination Of Time Spent On Nursing Activities In A Labour Ward In A Midwife Obstetrics Unit

Research Project Number: 19/05/2014-2

Name of Researcher(s): Duduzile Florence Ngidi

Division/Institution/Company: Master Of Science (Nursing) In the department of Nursing Education, Faculty of Health Sciences, University of Witwatersrand

DECISION TAKEN BY THE EKURHULENI HEALTH DISTRICT RESEARCH COMMITTEE (EHDRC)

- *THIS DOCUMENT CERTIFIES THAT THE ABOVE RESEARCH PROJECT HAS BEEN FULLY APPROVED BY THE EHDRC. THE RESEARCHER(S) MAY THEREFORE COMMENCE WITH THE INTENDED RESEARCH PROJECT.*
- *NOTE THAT THE RESEARCHER WILL BE EXPECTED TO PRESENT THE RESEARCH FINDINGS OF THE PROPOSED RESEARCH PROJECT AT THE ANNUAL EKURHULENI RESEARCH CONFERENCE.*
- *THE ETHICS PANEL WISHES THE RESEARCHER(S) THE BEST OF SUCCESS.*

DR J SEPHAYA

DEPUTY CHAIRPERSON: EKURHULENI METROPOLITAN MUNICIPALITY

Dated: 21/5/2014

Dr R Kellerman

CHAIRPERSON: GAUTENG DEPARTMENT OF HEALTH (EKURHULENI REGION)

Dated: 21/05/2014

Annexure 10: Hodnett's approval letter

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