Development, Implementation, and Evaluation of a Miscarriage Educational Intervention for Emergency Department Nurses

By

Laura Ferguson

A practicum project submitted to the Faculty of Graduate Studies

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Abstract

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For most women, pregnancy is considered a joyous event. Unfortunately for some women their pregnancy ends in miscarriage. Miscarriage is a common and profound experience. The impact miscarriage has is often misunderstood and underestimated, at times leading to dissatisfaction with care received. Currently, no research on the use of an educational bereavement program for emergency department nurses dealing with women who are experiencing a miscarriage exists. The purpose of this project is to develop, implement and evaluate the effectiveness of a miscarriage educational intervention for emergency department nurses working at the Health Sciences Center in Winnipeg, Manitoba. The goal of the practicum project is to increase emergency department nurse's understanding related to the issue of miscarriage and the psychosocial care necessary for women. The project compliments the Early Pregnancy Loss Algorithm, developed by the Emergency Care Task Force for the Winnipeg Regional Health Authority. The algorithm and this project are intended to standardize the medical and emotional components of care that are necessary for women experiencing miscarriage.

The core component of the educational intervention is a self-learning package. It was developed using the four key concepts identified in the Emergency Care Task Force focus group discussions and implemented using Knowles' principles of adult learning theory. The effectiveness of this intervention was evaluated utilizing a pretest posttest design and a questionnaire. Data analysis indicated the package was well received, and the majority of respondents demonstrated increased knowledge and understanding of the miscarriage process.

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CHAPTER ONE

DESCRIPTION OF THE PROBLEM

Introduction

For most women, pregnancy is considered a joyous event. Unfortunately for some women the pregnancy ends in miscarriage. Miscarriage or spontaneous abortion is defined as an unintentional termination of pregnancy before the twentieth week of gestation (Shapiro, 1988). Miscarriage is a common and profound experience. The impact miscarriage has is frequently misunderstood and underestimated. It is often a significant loss for the mother. In addition to the loss of the attention and care that she is likely to have received as a pregnant women, she has also lost the dream of motherhood she imagined, the feelings of attachment with the developing fetus and a loss of self-esteem because she has failed to complete what is seen as a basic bodily function (Boyce, Condon & Ellwood, 2002).

Incidence

Spontaneous abortion is the most common complication of early pregnancy (Regan & Rai, 2000). Approximately 10% to 20% of clinically recognized pregnancies under twenty weeks gestation will undergo abortion; 80% of these occur in the first twelve weeks of gestation (Wilcox & Weinberg, 1988). The loss of unrecognized pregnancies is even higher. Some experts estimate that about half of all fertilized eggs die and are miscarried before the woman knows she is pregnant (Brost & Kenney, 1992). Speroff, Glass and Kaswe (1999) suggest that the true early pregnancy loss rate is actually closer to 50% because of the high number of unrecognized miscarriages that occur as early as two to four weeks after conception.

Between 1997-2001, hospitalized cases of miscarriage accounted for a national annual average of almost 2% of total pregnancies (Statistics Canada 22/01/05). The numbers of

miscarriages in Canada is thought to be significantly underestimated in these statistics. Not all women who miscarry require medical attention, and those who do may be treated in non-hospital settings such as a physician's office or an outpatient clinic. Without this key piece of information, it is very difficult to quantify the true incidence nationally. In many instances, the miscarriage cannot be registered as a birth or death, therefore, not captured in the statistics. Furthermore, many hospitals do not abstract their emergency department visits. Women who miscarried prior to presentation to hospital or those sent home to miscarry are not identified in the statistics. Ultimately, the true rate of miscarriage is a hidden statistic. In the absence of conclusive data on the rate of miscarriage, figures that are available indicate that miscarriage is a common event impacting women across the childbearing life span.

Manitoba Perspective

Within Manitoba, the Manitoba Perinatal Health Surveillance Report (2000) concluded that of the approximately 21000 reported pregnancies (1989-1998), 10% resulted in a spontaneous abortion. Between 1994-1998, the Winnipeg Regional Health Authority reported 5053 spontaneous abortions; an average of 7.9% to 9.3% of all pregnancies (Manitoba Health, 2000).

Maternal Risk Factors

There are several maternal risk factors associated with a higher rate of pregnancy loss. Advancing maternal age is the most important risk factor for spontaneous miscarriage in a normal woman (Al-Fozan & Tulandi, 2004). Past obstetrical history is an important predictor of subsequent pregnancy outcome. The risk of miscarriage in future pregnancies is approximately 20% after one miscarriage, 28% after two miscarriages, and 43% after three or more miscarriages (Regan, Broude & Trembath, 1989). The causes are typically classified as genetic,

endocrinologic, anatomic, immunologic or microbiologic (Klier, Geller & Ritsher, 2002). The table below summarizes the causes of miscarriage and their respected studies.

Table 1 – Causes of Miscarriage

Causes of Miscarriage	**Study**
Chromosomal abnormalities	Klier, Geller & Ritsher, 2002
Environmental factors (caffeine, tobacco, nicotine and other drug use), toxins	Abel, 1997; Kline et al, 1991; Ness et al, 1999; Borja-Aburto et al., 1999
Electromagnetic fields	Marcus et al., 2000
History of multiple induced abortions	Levin et al., 1980
Parental chromosomal abnormalities	Tharapel et al., 1985
Stressful life events	Neugbauer et al., 1996
Various maternal factors: uterine abnormalities (congenital or acquired), autoimmune factors such as antithyroid antibodies, antiphospholipid antibodies and alloimmune factors (natural killer cells, cytotoxic T-cells) and embryotoxic factors	Kaider et al., 1999; Meccaci et al., 2000; Emmer et al., 2000
Hypercoagulable states, endocrinological irregularities, infections (HIV), anatomic factors (polycystic ovaries) and trace elements (folate and homocysteine) discussed in the etiology of recurrent reproductive failures	Blumenfeld & Brenner, 1999; Bussen et al., 1999; D'Ubaldo et al., 1998; Rai et al., 2000; Nelen et al., 2000

Clinical Presentation and Terminology

Women experiencing a spontaneous abortion usually present with a history of amenorrhea, vaginal bleeding and lower abdominal pain (Al-Fozan & Tulandi, 2004). Vaginal bleeding is common and is often painless or accompanied by mild suprapubic pain. On examination, the cervix is open and the products of conception can be visualized in the vagina or

cervical os, if they have not already been passed. The various types of spontaneous abortion manifest as follows:

Table 2 – Classification of Spontaneous Abortions

Threatened Abortion	**Inevitable Abortion**	**Complete & Incomplete Abortion**	**Missed Abortion**
A closed cervix and the uterine size is appropriate for gestational age (Al-Fozan & Tulandi, 2004).	A dilated cervix, bleeding increasing and painful uterine cramps/contractions is present. The gestational tissue is often felt or seen through the internal cervical os and passage is imminent (Al-Fozan & Tulandi, 2004).	**Complete** – when a miscarriage occurs before 12 weeks gestation, it is common for the entire contents of the uterus to be expelled. The uterus is small and well contracted with an open cervix, scant vaginal bleeding and only mild abdominal cramping (Al-Fozan & Tulandi, 2004). **Incomplete** – after 12 weeks of gestation, the membranes often rupture and the fetus is passed but significant amounts of placental tissue may be retained, leading to an incomplete abortion (Al-Fozan, & Tulandi, 2004).	In-utero death of the embryo or fetus prior to the twentieth week of gestation, with the retention of the pregnancy for a prolonged period of time. Also called a blighted ovum, anembryonic pregnancy or embryonic/fetal demise (Al-Fozan & Tulandi, 2004).

Treatment

The accepted treatment of spontaneous abortion has not changed substantially in the last sixty to seventy years (Lee, Cheung, Haines, Chan & Chung, 2001). Recent literature supports conservative management of spontaneous abortion. Evidence from randomized control trials and

observational studies has shown that surgery is unnecessary for spontaneous abortions of less than twelve weeks' gestation (Ben-Baruch, Schiff, Moran, Menashe, Mashiach & Menczer, 1991; Nielsen & Hahlin, 1995; Mansur, 1992; Wiebe & Janssen, 1998; Chipcase & James, 1997). Although evidence shows that surgical treatment confers no benefit, a 1995 study in Vancouver found 92% of women seeking medical care for spontaneous abortion in a hospital were treated surgically and 51% of family practice patients had surgery (Wiebe & Janssen, 1998). Surgery adds risk of anesthesia, cervical damage and post-operative infection; and might add emotional trauma to an already traumatic event (Wiebe & Janssen, 1999). Despite this, when women are given choices, many choose surgery (Jurkovic, Ross, Nicolaides, 1998).

Prostaglandin analogues (such as misoprostol) have been shown to be effective in emptying the uterus in cases of spontaneous abortion (Chung, Cheung, Leung, Haines & Chang, 1995). In recent years, in response to evidence presented in a number of observational studies and controlled trials, the medical concerns of not performing an evacuation of retained products of conception (ERPC) have abated, and prostaglandin is gaining popularity as a treatment option for spontaneous abortion (Lee et al, 2001). However, there has been little research on the impact of noninvasive treatment strategies on the psychological well-being of the women who are being treated (Chung et al, 1995; Nielsen & Hahlin, 1995; Chung, Cheung, Leung, Haines & Chang, 1997). Although studies have not yet been conducted to compare surgical and medical treatment of miscarriage in terms of psychological impact and client satisfaction, there are two studies on induced abortion. Published studies by Henshaw et al (1993) and Slade et al (1998) demonstrated that women who underwent induced abortion by prostaglandin analogue had no more psychological morbidity when compared with women who underwent surgical treatment. However, because the context and the meaning of induced abortion and spontaneous abortion are

substantially different, the findings concerning induced abortion cannot be generalized to abortion (Lee at al, 2001).

Impact of the Problem

Miscarriage is particularly difficult to cope with because the experience is permeated with ambiguity and most often is unexpected, permitting only a short time to prepare. Contributing to the ambiguity is the absence of a person to bury and of memories of time together to treasure and grieve. Instead, only the dream of a wished for future can be mourned, usually without any clearly established rituals or adequate support. The latter is due, in part to the tendency of family, friends and health care professionals to not appreciate or to minimize the degree of sorrow present (Armstrong & Hutti, 1998; Aurilio, 1988; Hutti, 1988; Cote-Arsenault, Bidlack & Humm, 2001).

There is considerable evidence to support the belief that the miscarriage experience is a difficult life event. Along with the emotional consequences of miscarriage, women report dissatisfaction with the emotional care provided by professionals (Wong, Crawford, Gask & Grinyer, 2003). Nurses encounter women experiencing perinatal loss in a variety of inpatient and outpatient settings including clinics, physician's offices, surgery, emergency departments and obstetrical units. Although health care professionals have frequent contact with women experiencing perinatal loss, the psychological effects are not understood (Hutti, 1984; Reed, 1990). Lack of knowledge about this common, but little acknowledged outcome of pregnancy hinders their ability to help those so bereaved. Health care professionals must recognize the specialized support and therapeutic approaches required when addressing the impact and subsequent needs of those patients experiencing miscarriage (McColgan, 1989; Witzel & Chartier, 1989; Moulder, 1999, 2001; Kohner, 2000; Toedter, Lasker & Janssen, 2001). When

miscarriage occurs, health care professionals need to be able to provide an appropriate continuum of support and help, which respects individuality and cultural diversity.

Background

During the last decade there has been a growing body of literature describing the emotional impact of miscarriage. Study results have identified not only a uniquely complex picture of maternal grief with pronounced feelings of guilt and self blame, but also elevated rates of psychological morbidity in the early months following the loss (Bansen & Stevens, 1992; Friedman & Gath, 1989; Frost & Condon, 1996; Nikcevic & Kuczmiercyzk, 1999; Peppers & Knapp, 1979; Prettyman, 1995). However, the role and quality of health care received within an experiential perspective of miscarriage has been relatively overlooked (Tsartsara & Johnson, 2002).

Dissatisfaction with care following miscarriage has been noted within the literature, with up to 80% of patients in one study feeling disappointed about the care given to them following miscarriage, with many subjects reporting feelings of anger about the care given to them (Cecil, 1994b). Women report that simple interventions such as providing information, engaging in open lines of communication and being cared for by supportive and empathetic staff increased satisfaction and well being (Evans, Lloyd, Considine & Hancock, 2002). In spite of the importance of staff behaviour on patient outcomes there have been few studies that have explored the psychosocial effects of miscarriage as perceived by hospital staff, their perceptions regarding care provided to women and the educational needs of hospital staff that care for women experiencing miscarriage. Prettyman & Cordle (1992) showed that although staff agreed that psychosocial support was important there was considerable disagreement as to who should provide this support.

The Emergency Department Setting

When the first sign of miscarriage occurs, women and their support system can become fearful for the well being of the fetus and mother. Women often choose to present to their local emergency department for medical attention. Women may feel a sense of urgency and a need for emergent medical intervention in hopes of preventing the miscarriage from occurring. The very nature of the emergency department setting may escalate these feelings. With the ever-changing and unpredictable dynamics of the emergency department setting and the problems of patient flow, providing emotionally supportive care to women experiencing miscarriage creates a challenge for the emergency department care team.

Skills required of an emergency department nurse include being self-directed, taking initiative, working collaboratively with others, communicating clearly, taking calculated but informed risks and making judgements that they can be responsible and accountable for. Emergency department nurses must learn to cope in an environment that is uncertain and rapidly changing. Time constraints and care demands of other emergency department patients may lead the needs of bereaved families to be overlooked. Limited human resources, time pressures to care for the miscarrying women, a lack of knowledge related to the most effective way to deliver care as well as the nurse's own grief response may influence the provision of care delivery to bereaved women and their families (LeBrocq, Charles, Chan & Buchanan, 2003).

Professional nursing practice is a dynamic activity that changes and requires adaptation with each individual encounter. Patient conditions and problems may bear similar characteristics, but individuals do not. Ovretveit (1992) argues that practitioners need the necessary professional knowledge and skills to be effective and that such knowledge is not static but needs refreshment and development on a continuous basis. Women who miscarry are a

frequent presence in the emergency department setting, requiring nursing staff to be up to date with their knowledge and skills in order to provide the appropriate care.

Emergency department nurses must possess a complex range of professional skills and knowledge that marries both science and art in skillful, expert practice. Such expertise takes years to accumulate and cannot be acquired after a few years of training and education. Newcomers and novice nurses, unfamiliar with everyday situations of an emergency department setting often encounter difficulty recognizing their environmental landscape, as everything appears like a blur of activity with few boundaries. It is important that newly acquired staff be given the opportunity to develop their practice when dealing with the miscarrying woman.

Further along the continuum are those nurses who are experienced practitioners and whose judgements are based on routines and rituals. There is a risk that experienced practitioners' vision of practice has become dulled by repetition, amongst daily routines and unrelenting workloads. As a result they may have forgotten to value the individual and recognize the significance of the miscarriage experience for the patient. What is lacking is the knowledge of the specific patient-identified interventions to help emergency department nurses focus energy on nursing care interventions that are most helpful to women and their families experiencing a miscarriage.

Purpose of the Project

The purpose of this project is to develop, implement and evaluate the effectiveness of a miscarriage learning package for emergency department nurses to increase their understanding of patient identified interventions desired by women who are experiencing a miscarriage. There are limited studies that address the impact of bereavement education for health care professionals. Currently, there is no research on the use of an educational bereavement program for emergency

department nurses providing care to women who are experiencing a miscarriage. Greater awareness and increased knowledge of the unique needs of this population will assist emergency department nurses in the provision of care.

Significance of the Project

In January 2004, the Winnipeg public was invited to contact the Winnipeg Regional Health Authority (WRHA) with any concerns that they had related to the emergency departments across the region. The impetus for this invitation was waiting time challenges and media coverage. There were one hundred and fifty one (151) individuals who contacted the WRHA. The WRHA contacted one hundred and six (106) individuals to seek information about their views on emergency department care and to solicit their feedback on recommendations to improve care delivery. Approximately twenty seven percent of all calls (n=41) were from women who had experienced miscarriages. Twenty (20) of these women indicated a willingness to participate in a series of focus groups to identify potential solutions related to the care and provide feedback on specific strategies being considered to improve care for women within WRHA Emergency Departments related specifically to potential or actual pregnancy loss. The focus group findings were organized into four key themes, which were forwarded to the WRHA Emergency Room Task Force. The Task Force developed recommendations for the Manitoba Minister of Health related to improving emergency department care in the Winnipeg Health Region. An Early Pregnancy Loss algorithm was created to outline a step-by-step approach to be initiated at triage when a woman less than twenty weeks gestation experiencing bleeding or pain in pregnancy presents to any emergency department (Appendix A, B, C, D, E). The algorithm was designed to assist health care professionals in the management of potential or actual pregnancy loss, specifically focusing on supportive care, follow-up obstetrical ultrasound and

community resources regarding perinatal loss. Plans call for this algorithm to be implemented in July of 2005. It is hoped that this project will compliment the initiation of the algorithm with the results of the project providing a basis of understanding of the patient identified interventions desired by the miscarrying woman and how they can be met with the assistance the emergency department nurse.

CHAPTER TWO

LITERATURE REVIEW

Introduction

This chapter is divided into two sections. The first section provides an overview of the grieving process and the psychological sequelae related to miscarriage. Issues surrounding the history of our understanding of the miscarriage phenomena and its effects, the short term and long-term effects of miscarriage for the woman and her partner are discussed. The second section explores the emotional reaction to the miscarriage experience, the Winnipeg initiatives regarding appropriate miscarriage care, the perceptions of care from the woman's perspective and the patient identified interventions desired by women and their supports to aid in the miscarriage experience.

The Grieving Process

It was not until the 1970s that perinatal loss became the subject of research. Klaus and Kennell (1972) were among the first to write in the professional literature about perinatal grief. They identified the bond that parents have with their children during pregnancy, after birth and even after death. In 1982, the study of miscarriage as a separate entity first appeared in the professional literature. Most literature took the position that miscarriage should be treated in the same manner as any other type of perinatal loss (Stack 1984; Wetzel, 1982). Stack (1984) identified eleven factors unique to the emotional experience of miscarriage. He asserted that these underlying factors explained the difficulty in mourning a pregnancy loss. Some of the factors included the ambivalence a woman may have during her pregnancy, the difficulty in grieving the loss of one's self and a lack of tangible evidence that a loss has occurred.

Studies of the miscarriage experience suggest a profound event that is best understood in the context of woman's personal expectations and life experiences (Swanson, 1999). Common themes identified are: a) uncertainty and dread in realizing impending loss; b) multiple meanings attributed to the loss; c) feelings of emptiness, guilt, grief and lack of control; d) need for information, recognition and support; e) failure of others, especially health care providers to recognize and validate women's experiences; f) fear and vulnerability in future childbearing (Hutti, 1986; Reed, 1990; Swanson, 1999; Wall-Hass, 1985).

Grief can be described as an emotion of change and readjustment, which can affect individuals in an emotional, physical, behavioral or psychological way (Klier, Geller & Ritsher, 2002). Grief is an acute, overwhelming sense of loss, a feeling of emptiness and a great longing for what has been taken away. It is very private and often very lonely. Only the grieving person fully understands what they have lost and what this means to them, and it is difficult and sometimes impossible to describe their feelings of loss to others. Even those who are very close to them may not be able to understand or share in their grief.

A number of studies have been published which address issues surrounding loss generally, bereavement specifically or a combination of the two from a variety of differing perspectives. For many women, miscarriage constitutes an unanticipated, often physically as well as psychologically traumatic event (Klier, Geller & Ritsher, 2002). The personal grief experienced by the mother who has lost a child is profound. Coping with sadness and incomprehensibility of the loss predisposes her to feelings of helplessness and isolation (Kohner & Henley, 2001). The woman not only looses the physical concept, but also the dreams, images and long term plan for the future of her child. A sense of biological failure, loss of self, lack of

memories, and a minimization of the loss can precipitate a loss of innocence regarding future pregnancies and healthy outcomes (Kohner & Henley, 2001)

Historically, this particular grief has been dealt with by providing privacy, a box of tissue, perhaps holding a hand or a cursory "it'll get better in time". Unfortunately, none of these gestures have proven beneficial but rather tend to increase the isolation and vulnerability that the grieving mother is experiencing. Along with the lack of validation come the many misconceptions relating to pregnancy loss, which seem to flourish in society. Two beliefs are especially prominent: another pregnancy will cure the grief and the longer the pregnancy, the greater the depth of grief will be (Kohner & Henley, 2001). These misconceptions are reflected in the literature and stem from well meaning family members and friends as well as health care providers.

Reed (1992) surveyed two hundred and ninety-two (292) obstetric nurses about their perceptions regarding the impact of miscarriage on a mother's grief. Reed found that nurses believed that pregnancy length and whether the pregnancy was intended versus unintended increased the emotional seriousness of the loss and priority of care. Conversely, women who experienced a miscarriage from an unintended pregnancy were expected to require less emotional care. In an earlier study by Reed (1990) confirmed that nurses believed gestational age was not a consideration in the emotional support they would be willing to give a patient, but pregnancy intention would influence emotional support given. Nurses felt that they would give a woman with a planned pregnancy more emotional support. These misconceptions provide little comfort; more often comments arising from these beliefs negate or minimize the loss.

Post Miscarriage Sequelae

There is a continuum of responses to miscarriage. Some parents view it as a learning experience and other feel intense grief. Grief cannot be compared or measured. Grief is like a fingerprint, composed of identifiable universal characteristics and yet uniquely individual. The abruptness of loss and the apparent inability of society to deal with the loss amplify the woman's vulnerability and her sense of loss of control (Pepper & Knapp, 1980). As a consequence, miscarriage may increase woman's risk for psychiatric symptoms and disorders.

Relatively little empirical research has been done to describe or quantify emotional reactions following a miscarriage and the available data is somewhat inconsistent because of small samples used, variable assessment points at which emotions are measured, lack of comparison groups, differing assessment tools and definitions/timing of pregnancy loss. While no obvious pattern has been identified, some repeated factors within the literature are present.

Most women experience an intense period of emotional distress following the loss characterized by grief, despair, guilt and anxiety (Leppert & Pahlka, 1984). It is known that miscarriage increases the likelihood of a depressive reaction (Klier, Geller & Ritsher, 2002). Because of the failure in most studies to distinguish between symptoms of grief and clinical depression, the actual incidence of depression is unclear. Across different studies, depressive symptoms or episodes have been assessed in women primarily at two weeks after the loss, at four weeks, six weeks and two to six months (Beutel et al., 1995; Cecil & Leslie, 1993; Garel et al., 1992; Neugebauer et al., 1992a, 1992b, 1997; Prettyman et al., 1993; Seibel & Graves, 1980; Thapar & Thapar, 1992; Janssen et al., 1996; Stirtzinger et al., 1999; Swanson, 2000; Tunaley et al., 1993; Klier et al., 2000; Lee et al., 1997; Robinson et al., 1994). The wide range of timing

of evaluation across studies complicates comparisons but speaks to the prolonged psychological effects of miscarriage and the impact upon a woman's well being. It is also known that high levels of guilt following miscarriage often contribute to the development of depression, and when intense and unremitting, these guilt feelings tend not to resolve without professional help (Neugebauer, Kline & O'Connor, 1992a).

Symptoms of grief after miscarriage are common, occurring in up to 90% of women (Seibel & Graves, 1980) (Appendix F). Psychological distress, which is characterized by anxiety, depression and somatization, can persist for at least six months (Janssen et al, 1996). There is increased risk of developing a depressive or anxiety disorder in the six months after a pregnancy loss and any pre-existing psychotic disorders can be precipitated (Neugebauer et al, 1997). The risk of developing depression is high, with studies reporting rates between 10% and 48%, depending on the study methods (Neugebauer et al., 1996; Friedman & Gath, 1989, Lee & Slade, 1996). Depression is more likely in women with a history of depression or past psychopathology, and in women who have had a previous pregnancy loss or have no other children (Boyce, Condon & Ellwood, 2002). Friedman and Gath (1989) interviewed sixty-seven (67) women four weeks after a spontaneous abortion with a semi-structured psychiatric interview and found 48% to be suffering from depression. Toedter and associates (1998) found that the most significant factors associated with higher levels of grief were poor overall maternal health, more advanced gestational age at the time of miscarriage, poor marital relationships and pre-loss mental health symptoms. Significantly, they found that presence of living children, maternal age, prior losses, socioeconomic status, religiosity, and fertility problems were not predictive of the degree of grief that the mother experienced, her sense of despair, or her ability to cope with the loss.

Prettyman, Cordle & Cook (1993) used the Hospital Anxiety and Depression Scale to follow up a sample of sixty-five (65) women who had miscarried. At one week 41% of the women reported clinically significant levels of anxiety and 22% reported depression. At six weeks, the respective numbers were 32% and 6%. Those whose pregnancy was unplanned reported greater anxiety. Neugebauer, Kline & Shrout (1997) followed up a much larger cohort (n=229) of miscarrying women and a comparison group drawn from the general population. The risk of major depression, as ascertained by a structured psychiatric interview six months after abortion was 11% among the miscarrying women and was 2.5 times higher than in matched general population. The risk was greater for childless women but was unrelated to prior reproductive loss, maternal age or to attitude toward pregnancy.

Consequences of Miscarriage for a Woman's Support Network

Although men can be deeply affected by pregnancy loss, there has been little research addressing the impact of miscarriage on the partners of miscarrying women. The focus appears to be either on the woman's experiences or on men only as part of a couple or within a family unit (Lasker & Toedter, 1991; Cecil, 1994a). No published research exists regarding the female partner's response to the loss in the case of lesbian couples.

Miron & Chapman (1994) published one of the few studies to focus specifically on the experience from a male perspective. Using a grounded theory approach, they conducted in-depth interviews with eight (8) Canadian men whose partner had had an early miscarriage. The authors concluded that miscarriage for some men evokes strong feelings of sadness, loss and anger. Furthermore, there was an expectation that men would support their partners. Other accounts in the literature related to men and early miscarriage tend to be anecdotal (Borg & Lasker, 1982; Leroy, 1988; Kohner & Henley, 1991; Kohn & Moffitt, 1992).

Despite the limited literature on men's experience after early miscarriage, there appears to be parallels between the experiences described by men. In a study by Murphy (1998), men described the need to keep their feelings (sadness, loss and anger) suppressed in order to support their partners. They also felt that the intensity, duration and expression of their grieving were different from and less than those of their partners, who were so obviously distressed by the experience.

Emergency Department Perspective

There is an increasing amount of literature that highlights the adverse effects of early pregnancy loss on women. Despite this, a recurrent theme expressed in the literature is a criticism that health care professionals demonstrate an apparent lack of awareness and support during and after hospital admission for women experiencing a miscarriage (Campbell, 1988; SANDS, 1995; Prettyman, 1995). Although there is an abundance of emergency medicine literature addressing the medical management of miscarriage, there is little written about the psychological effects of early pregnancy loss and the perception of care received during the miscarriage experience in the context of the emergency department.

Zaccardi, Abott & Koziol-Mclain (1993) addressed the psychological and functional consequences of miscarriage in women after emergency department treatment in a prospective telephone follow-up study. A consecutive sample of forty-four (44) women who were treated for miscarriage participated to identify variables that were associated with feelings of loss and grief. The researchers concluded women commonly felt a sense of loss (82%) and most experienced some limitations with daily functioning (77%). Whether the pregnancy was planned or not did not correlate with a greater sense of loss. Within their cohort of subjects, there was no subgroup of women who could be expected not to experience grief and loss. The authors emphasized the

emergency department management of the woman who miscarries should address the anticipated loss and grief.

Koziol-McLain and associates (1992), created a qualitative study designed to gain a greater understanding of the human experience of miscarriage in the emergency department setting. The interviewers used open-ended questions about the experience in general, the patient's physical condition, feelings about loss, social support and system issues surrounding the emergency department. Amongst the findings were four common themes: what happened in the emergency department; whether the miscarriage was the woman's fault; if a normal pregnancy is possible; and how to deal with the loss. Women identified instances in which nurses had been caring or in which needs had not been met. Apprising the patient of what to expect, explaining delays, and allowing family and friends to sit with the patient were often cited as being helpful. Women identified the nurse as patient advocates and as instrumental in facilitating a positive experience.

The Woman's Perspective of Needs

There is an evident gap in service provision for miscarriage care as perceived by many women who have experienced a miscarriage. Harvey, Moyle & Creedy (2001) describe the experience of three women who had experienced early miscarriage within the previous twelve months. Despite the small number of participants in this study, three major themes of loss emerged: the loss of a baby, the loss of the role of motherhood and the loss of the hopes and dreams the women possessed for their baby. These losses were complicated by the women's negative thoughts about the care they received while in hospital, their perceptions of health care professional's negative attitudes, the lack of information given to them and the lack of understanding shown by family and friends about their situation. They sought explanation from

those around them and they experienced disappointment and frustration as a result of this lack of reassurance. The women were distressed as they recognized that health care professionals were not able to help clients such as themselves who were experiencing distress after miscarriage. In fact, further distress was generated as they recognized that health care professionals kept their distance to avoid confronting the situation.

A major theme that arose from Harvey, Moyle & Creedy's study was the meaning the women gave to their clinical care. There were many clinical issues that the women perceived to impact negatively on them and which they felt subsequently affected their recovery. They believed that they did not receive adequate information at the time of their miscarriage experience, thus hindering their recovery. Furthermore, they believed that this made them feel disempowered and lacking control over their lives.

The women in the Harvey, Moyle & Creedy study perceived that health care professionals did not care or appreciate what they were experiencing. They believed that health care professionals were only concerned with the physical aspects of their care and that they stayed distant from them so that they did not have to listen or try to understand the women.

A descriptive ex post facto study to explore the experience of couples that had a spontaneous pregnancy loss before sixteen weeks gestation was completed with a convenience sample of forty (40) couples. Speraw (1994) conducted focused interviews with couples to discuss their experience as they related to seven specific, predetermined content areas associated with pregnancy loss. The study addressed four research questions: (1) What are parent's recollections of the chronologic progression of the miscarriage event, with emphasis on elements of the event that were particularly stressful; (2) At the time of the event, what things were most helpful to parents in their efforts to cope with the event; (3) What things were detrimental to

effective coping; (4) If parents could change the event in any way to make it better for someone else going through the same thing in the future, what would they change and how would they change it?

When asked to relay the elements that were most upsetting for them, men and women reported similar factors, but the frequency with which these elements caused distress varied between the two groups. Most often upsetting for women was the actual loss of a child (37.5%) or the loss of hope and dreams associated with that child (15%). Other frequent sources of upset for women included feelings of helplessness and vulnerability (20%). Men, in comparison, had different concerns. They were most strongly affected by feelings of powerlessness and vulnerability (40%). Many men (30%) were also particularly upset with the physical condition of their wife and admit that their greatest fear was that she would die, thus leaving them without a wife and also without a child. Still others were concerned with their mate's emotional pain (27%), and many cited the loss of a child and hopes and dreams for their family with that child as losses (45%).

The comments of couples regarding the general health care experience were often quite critical and fell into two categories: (1) responses to the clerical or administrative process of admission and giving informed consent and (2) feelings about procedures involved in medical treatment. Couples were distressed by the volume of paperwork required for admission and were often confused, particularly with the use of medical terms. Several persons were upset with the use of the term abortion on consent forms, attributing to the common usage (meaning to electively terminate a pregnancy) to their procedure.

Approximately one third (32.5%) of couples in this study singled out their physicians and nurses as being most helpful at the time of the loss. Notable was the fact that what couples

viewed as most supportive were signs of personal involvement, compassion and empathy. A total of 20 couples (50%) singled out the actions of attitudes of either their physicians or nurses as being particularly detrimental to their ability to cope with the loss. Particularly noted were inadequacies in interventions directed toward pain management and the giving of information and the perceived detachment and insensitivity of direct-care providers. In addition to the interventions that hindered the couples coping with the loss, parents added several other suggestions for making the experience more tolerable. A number stated that they wished they had been told the gender of the fetus, and several couples expressed a desire to have seen the fetus after the passage of tissue. Others commented that all pregnant women should be given information about the statistical possibility of miscarriage and about signs and symptoms that could signal a problem with the viability of the pregnancy.

Patients want to know that their health care provider is a person with compassion who possesses warmth and personal sensitivity in addition to clinical competence. Friedman and Gath (1989) argue that it may be that health care professionals appear uncaring and ignore the emotional aspect of the miscarriage experience because of the brief time such women spend in hospital. Gath contends that there is no time to develop therapeutic relationships with women experiencing miscarriage. Murphy (1992) stated that the uncaring, distant approach adopted by health care professionals might be the only way in which they can cope with the intensely emotional situation. Keeping a distance from such women is of particular importance to nursing practice as caring and the central, unifying focus for nursing practice (Leininger, 1984) and as such can not be offered from a distance. On the contrary, Wall-Haas (1985) and Oakley (1986) suggest that a nurse's indifference may be based on the medical perception of a miscarriage as a

simple, non-threatening physical condition. Therefore, the nurse may infer that the non-serious physical situation has little emotional impact.

Winnipeg Experience

The potential and actual pregnancy loss focus groups findings from the WRHA Emergency Department were organized into four key themes. The women involved in the focus group had many reasons for participating; they wanted to help others, they wanted to voice their opinion and have an opportunity to discuss solutions and find closure to their own experience (Sorin & Austin-Wiebe, 2004). Participants shared the problems they experienced which included; poor communication between themselves, their support person and among staff in the emergency department, attitudes of staff that were condescending and judgemental at times, a lack of respect shown to them by their care providers, a lack of understanding about what was happening to them and what was going to happen to them and a need to have their physical issues responded to and cared for by the emergency room staff (Sorin, Austin-Wiebe, 2004). The participant results were summarized into four key themes as described below:

I WANTED TO UNDERSTAND	I WANTED TO BE UNDERSTOOD
"I wanted to know how long I would need to wait" "I wanted to know what could be done to save my child was being done" "Don't make excuses for the problem but do tell me how you will address the concerns" "I feel for the staff because they are so stretched. Nobody is happy in that situation. They try to be compassionate but they don't have the time to do that"	"I wanted to be provided with clear communication that I was in the right place" "I wanted to be able to address my experience of loss" "I wanted the life inside of me to be valued and attended to with the same care and urgency as other life threatening incidences. Not that the outcome would be different but the care and concern would be actively present" "Communicate with me in an open, respectful and compassionate manner" "I needed an acknowledgement from staff that I was not forgotten"
I WANTED TO BE IN CONTROL	**I WANTED MY NEEDS MET**
"I need to be part of the care team that is addressing my health issues and concerns. This includes the partnerships and relationships I have with those around me, present or not" "Tell me how you want me to best get my needs met" "Make me a part of the care team" "Give me the opportunity to complain and work through my expectations"	"I am able to participate in my care and access the technological and other supports I need to address my care needs in a holistic manner" "I want to be quickly placed in the hands of the best care providers for my condition" "Improve the physical environment of emergency rooms to be more comfortable, safe and conducive to people who are ill or going through difficult experiences. Consider all psychosocial needs"

After the Early Pregnancy Loss Algorithm was created (Appendix A), participants of the focus group were asked for their feedback about the algorithm and whether it was suitable and

appropriate to meet their needs. Based upon their suggestions the algorithm was implemented on July 12, 2005 in all Winnipeg Emergency Departments.

Swanson's Middle Range Theory of Caring

Upon review of the literature, the focus group themes identified by women who had experienced a miscarriage, parallel the concepts outlined in Swanson's middle range theory of caring. Swanson (1991) derived and validated the theory through phenomenological studies in three separate perinatal contexts. She identified five caring categories that encompass the miscarriage experience. Through these studies, the definition of caring and the five essential categories or processes that are proposed to characterize caring were identified. The caring categories identified are the processes, which underlie the behaviors which subjects perceived as being caring. They include:

Knowing

Knowing the meaning of the woman's loss, feeling a sense of her loss and identifying the woman's desire to be understood for her experience is the first caring category in the miscarriage experience (Swanson-Kauffman, 1986). Integral to knowing is the provider's value of personhood and the willingness to appreciate the other as an essential being (Swanson, 1991).

Being With

The message expressed through being with is that the other's experience matters to the one caring (Swanson, 1991). This includes being emotional present for the other, conveying ongoing availability and having others feel with her, not necessarily as her, but with her.

Enabling

Enabling refers to the process of facilitating the woman's ability to grieve, providing information and explanations as well as offering emotional support of the woman going through

her loss by validating the other's feelings (Swanson-Kauffman, 1986). Enabling often includes supporting the ones cared for to focus on their distress, establish alternatives, and think through ways to look at or act on a situation (Swanson, 1991).

Doing for

Doing for answers the woman's need to have others do-for-her in her time of duress. The caregiver does for the woman what she would do for herself if she had the knowledge or emotional and physical strength to do so. Care that is doing for is comforting, anticipatory, protective of the other's needs, and performed competently and skillfully (Swanson, 1991).

Maintaining belief

This process focuses on the woman's need to have others not lose sight of her capacity to get through the event or transition and face a future with meaning (Hutti, 1986). The goal is not to give the other's life meaning. Preferably, the one caring comes to know, be with, do for, and enable the other so that within the difficulty, constraints, and resources of the others' life, a path filled with meaning will be chosen (Swanson, 1991).

What Interventions have been done to address the issue

Several studies have focused on the most helpful behaviors in working with families that experience perinatal loss (Calhoun, 1994; Lemmer, 1991; Rybarik, 1996). Kavanaugh (1997) studied components of supportive relationships between health care providers and parents who experienced a perinatal loss. The behaviours she identified as most helpful were:

1. Giving information straightforwardly, in understandable language that enables parents to gain a sense of control over the situation and alleviate many fears.
2. Providing competent care utilizing expert medical knowledge.

3. Giving special attention by expanding visitation, additional time, and making parents a priority over other patients.

Kavanaugh (1997) also affirmed that support by health care professionals is critical because the family or friend support network of these patients is unlikely to have ever experienced perinatal loss and thus may not understand the intensity of the grief. The research affirms that parents need others to acknowledge the baby, and need to be provided with education and information concerning support groups, the grieving process and gender differences in grieving.

Wong, Crawford, Gask & Grinyer (2003), conducted a qualitative study using questionnaires, semi-structured interviews of patients and health care professionals in focus groups. The study sample consisted of one hundred patients following a miscarriage and seventy-one general practitioners who were responsible for the medical care of the patients. The aim of the study was to explore the experiences of miscarriage care that may impact the ability of the primary health care team to detect psychiatric morbidity after miscarriage. The study concluded participants lacked understanding about the initial events, felt health care professionals normalized the experience and wanted formal follow-up plans to address specific answers regarding the miscarriage experience. Study participants noted variability in the care they received and skill deficiency. Health care providers emphasized a need for addressing the educational needs as a means of equipping key care providers with the skills and experience necessary to manage the emotional impact of miscarriage. Within this study, health care providers regarded educationally appropriate skills as an important way to helping them manage miscarriage issues.

In spite of the importance of staff behavior on patient outcomes there have been few studies that have explored the psychosocial effects of miscarriage as perceived by hospital staff,

their perceptions regarding care provided to women and the educational needs of hospital staff that care for women experiencing miscarriage. Prettyman & Cordle (1992) showed that although staff agreed that psychological support was important, there was considerable disagreement as to who should provide this support.

The aim of the study by Evans, Lloyd, Considine & Hancock (2002) were to describe; 1) psychosocial needs as perceived by a sample of women following miscarriage; 2) psychosocial effects of miscarriage as experienced by a sample of women; 3) variables associated with level of psychosocial effects; 4) usual care provided to women experiencing a miscarriage in two Australian hospitals; 5) level of satisfaction with care provided while in hospital and; 6) psychosocial needs of women who have miscarried as perceived by a sample of hospital caregivers.

One hundred and nine (109) women were asked to complete a survey within one month of discharge from hospital following a miscarriage. The women were asked to describe their psychosocial needs, satisfaction with hospital care and type of follow up care provided. Forty-three (43) staff was asked questions relating to the psychosocial effects of miscarriage on these women, how the hospital experience could be improved for women and barriers to providing adequate psychosocial care. Responders were a mix of social workers, nurses and doctors. The staff mainly worked in the emergency department, gynecology wards or surgical units. When staff was asked about the quality of psychosocial care provided by them to women, approximately two thirds were either unsure or agreed that the psychosocial needs of their patients were not adequately met. Almost three-quarters of the staff felt that there was not enough time to listen and talk with women. Sixty percent of staff reported having no professional training in caring for women experiencing loss and grief and eighty percent reported

they would like to receive training. Eighty- eight percent of staff agreed that the hospital experience could be improved for women who miscarry. Staff considered that the provision of counseling, more privacy for the women and additional staff, were the three most important aspects of care that should be changed to improve the hospital experience for women who miscarry. Women's perception of how their experience could be improved contrasted those of the health care workers. Women felt more consideration shown by staff, less waiting time for medical treatment and admittance to a more appropriate ward were important for the experience.

Bereavement Programs

During the last twenty years, there have been several publications concerned with bereavement counseling services in Western countries (MacCarthy & MacKeith, 1965; Beem et al, 1998; Gardner, 1999). The 'Resolve Through Sharing (RTS) Program' was the first well-developed model (Limbo & Wheeler, 1986). In the late 1970s and early 1980s, several individuals at Lutheran Hospital in LaCrosse, Wisconsin began providing more than routine care for families who lost a child through miscarriage, ectopic pregnancy, stillbirth or newborn death. Maternal nurse practitioners were providing nursing care and follow-up after discharge for grieving families on the obstetrical and gynecological units. In their work with bereaved parents they became increasingly aware of the pain and grief families experience. They identified the need for a one-to-one helping relationship between counselors and grieving families. As a result, Resolve Through Sharing (RTS) officially began in September 1981 with the first RTS Counselor Training Course. Several national speaking engagements by RTS Counselors in the spring of 1983 led to the national program. What began in 1981 at Gundersen Lutheran Medical Center with a few RTS Counselors has grown to a program involving thousands of health care professionals across the world. RTS Counselor and Coordinator Training Courses are now

taught throughout the United States, Canada, England, Germany, Ireland, Switzerland, Japan and the Philippines. Today, families are seen in the antepartum clinic, same-day surgery, the emergency room, operating and recovery room, the gynecology unit, the labor and delivery, postpartum and the neonatal intensive care unit.

A review of the literature reveals a paucity of studies addressing the impact of bereavement education on health care professionals' perceptions of perinatal loss or their abilities to implement bereavement care. Gardner (1999) related that nurses identified formal education, mentoring, communication skills and personal support as essential to enable them to provide the standard of care necessary for grieving parents. DiMarco, Renker, Medas, Bertosa & Gorantis (2002) examined the differences in health care professionals' perceptions after attending an educational program on perinatal bereavement. Health care professionals attending either a 1-day or 3-day conference on perinatal loss were recruited. The conference was developed to enhance health care providers' awareness of the skills needed to respond to families experiencing perinatal loss. The content was based on the Resolve Through Sharing Sensitivity seminar, "When a Baby Dies" (Di Marco et al, 2002). The 3-day conference was a course designed to allow the participants to receive a certificate in bereavement counseling and was based on the Resolve Through Sharing Coordinator Certification Manual (Di Marco et al, 2002). Using a quasi-experimental design with pretest and posttest format, the researchers concluded that health care professionals' perceptions were dramatically increased after an educational program. The miscarriage vignette had the largest change score and the lowest mean scores on the pretest and posttest, which indicated that professionals still do not view miscarriage as a significant loss as stillbirth or neonatal loss.

Summary

Miscarriage affects approximately 10-20% of all women who have confirmed pregnancies. Symptoms of emotional and psychosocial distress following miscarriage are common and may have long lasting effects. Dissatisfaction with care following miscarriage is noted through out the literature. This is concerning given that studies have demonstrated that satisfaction increases and well-being is enhanced by effective and relatively simple interventions, such as providing information and being cared for by supportive and empathetic staff (Lasker & Toedtker, 1991).

The purpose of this practicum project is to develop, implement and evaluate the effectiveness of a miscarriage educational intervention for emergency department nurses to increase their knowledge base and skills in relation to the delivery of care for women who experience pregnancy loss. With the implementation of the learning package, it is anticipated that women experiencing a miscarriage in an emergency department will receive the necessary psychosocial support and care they need.

CHAPTER THREE

THEORETICAL FRAMEWORK

Introduction

Knowles' adult learning theory provides the theoretical framework for this practicum project. While the focus group findings were used to frame the overall concepts included in the learning package, it is necessary to consider effective approaches to stimulate learning among the participants. To construct a theory of adult learning, the socio-cultural background of the individual must be taken into consideration; hence the unique nature of those involved in the learning process is taken into account (Jarvis, 1995). Jarvis identifies four different theories of learning: behaviorist, cognitive, humanist and social: and how each provides learning. However, it is seen that most theories cannot be considered in isolation and that some overlap must exist to ensure the key aspects (skills, knowledge, attitudes, values and feelings) of adult learning are achievable (Ward & McCormack, 2000). Malcolm Knowles is most frequently associated with the concept of adult learning (Jarvis, 2004).

Adult Learning Theory

Knowles first began writing about adults as self-directed learners in the 1970s. He described adults as needing to know why they need to learn something; as needing to learn experientially, by problem solving, and when the topic is of immediate value to them (Jarvis, 2004). This description is compatible with the learning that is required in the emergency department setting.

Ongoing education is the longest educational stage of any given career (Thomson, 1998). There are many instances the learner has to learn, for example, competency assessment of basic and advance life support requires a minimum amount of learning for safe practice irrespective of whether the emergency nurse has a desire for knowledge in that area (Horner, 1995). Adult

learning relies on elements of self-direction and motivation (Considine & Hood, 2000). Although a structured approach to education is emphasized by many authors (Forrest, Brown & Pollock, 1996; Horner, 1995; Karunije, 1997), anecdotal evidence suggests that many ward or unit-based education programs deteriorate to an ad-hoc approach as a consequence of time and workload constraints (Considine & hood, 2000). Thomson (1998) asserts that didactic lectures and audiovisual material are the least effective in changing the behavior of health professionals. The passive dissemination of information perceived to be important may increase knowledge and awareness, but has little impact on practice (Thomson, 1998).

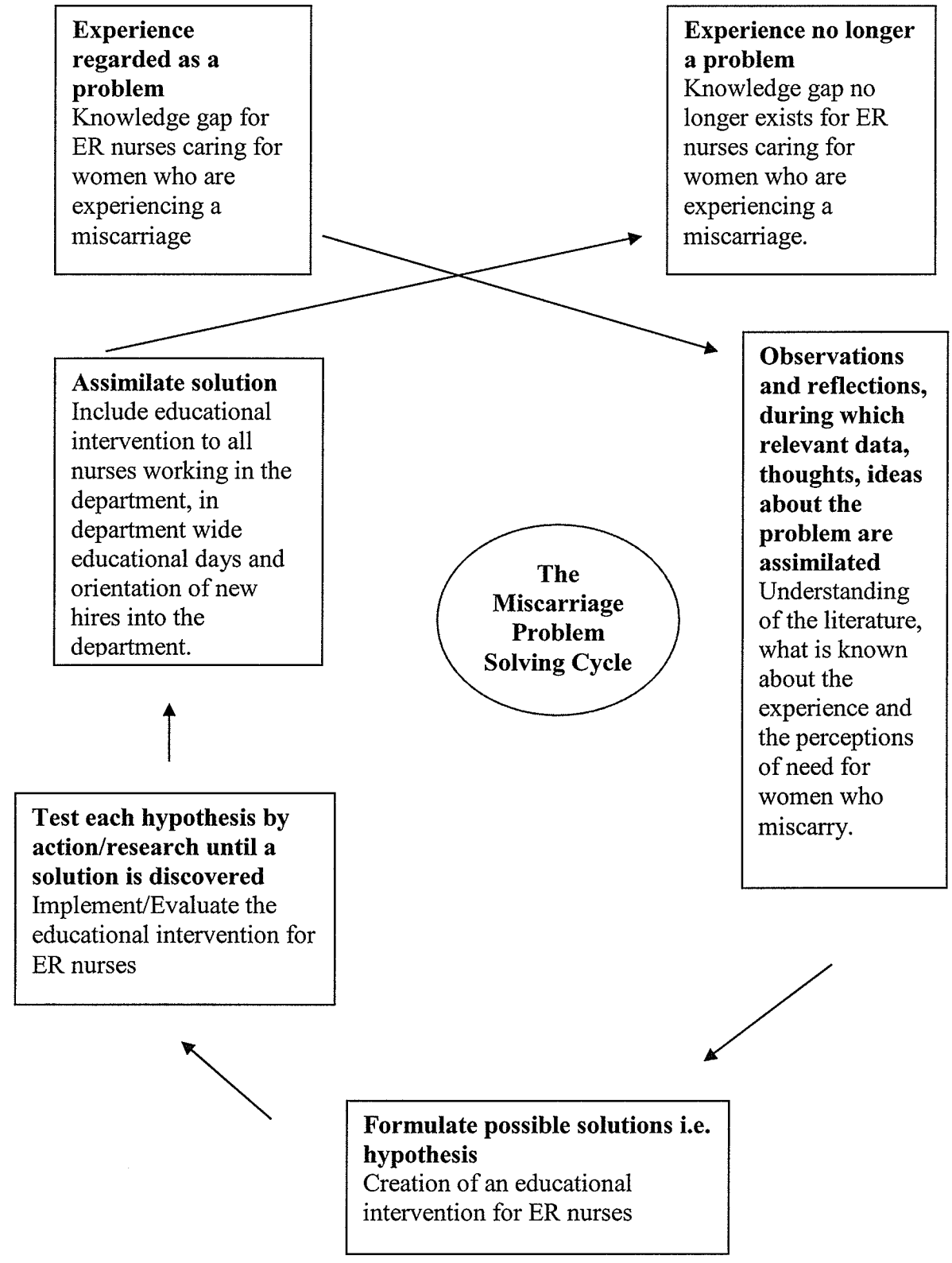
Due to the rapidly changing dynamics of the emergency department, the nurse may have limited time and opportunity for learning. The reality of the clinical setting may not afford the luxury of time away from the department to attend a presentation or workshop. Offering a self-directed learning option offers access to education in the emergency department and gives the staff an alternate method of educational delivery to help augment their knowledge about the needs of the miscarrying women. In accordance with Knowles' assumptions of adult learners, the self-learning package incorporates the adult learning principles noted:

- Adults are *autonomous* and *self-directed.* They need to be free to direct themselves.
- Adults have accumulated a foundation of *life experiences* and *knowledge* that may include work-related activities and previous education.
- Adults are *goal-oriented.* Participants usually know what goal they want to attain. They, therefore, appreciate an educational program that is organized and has clearly defined elements.
- Adults are *relevancy-oriented.* They must see a reason for learning something. Learning has to be applicable to their work or other responsibilities to be of value to them.

- Adults are *practical*, focusing on the aspects of a lesson most useful to them in their work. They may not be interested in knowledge for its own sake. Instructors must tell participants explicitly how the lesson will be useful to them on the job.
- As do all learners, adults need to be shown *respect*. There must be an acknowledgment of the wealth of experiences that adult participants bring.

The miscarriage problem solving cycle below depicts the incorporation of Knowles' adult learning theory as it relates to the miscarriage experience and the role of the educational intervention for adult emergency department nurses.

Figure 1 – Miscarriage Problem Solving Cycle



Adapted from Jarvis (2004)

CHAPTER FOUR

METHODOLOGY

Introduction

This practicum project took place in the Adult Emergency Department (ED) of the Health Sciences Center (HSC) in Winnipeg, Manitoba. It was chosen, in part, because the WRHA Early Pregnancy Loss Algorithm was implemented at this site. The Health Sciences Center is a tertiary care facility that serves as the trauma center for all of Manitoba and Northwestern Ontario. The Health Sciences Center has a unique role within the region as it provides patient care to the core area of Winnipeg and to the Aboriginal peoples of Manitoba, Northwestern Ontario and the Nunuvat. Furthermore, the Health Sciences Center includes the Women's Hospital, Children's Hospital, a large rehabilitation facility and mental health facility. The adult ED provides care for approximately 40,000 patients annually. Although the exact numbers of women who present to this department with first trimester bleeding are unknown, informal surveying suggests approximately 5 women each day present with actual or threatened miscarriage.

Project Objectives

1. Develop a miscarriage learning package for emergency department nurses to increase their understanding of the patient identified interventions desired by women who are experiencing a miscarriage.
2. To implement a miscarriage learning package for emergency department nurses to increase their understanding of the patient identified interventions desired by women who are experiencing a miscarriage.
3. To evaluate the effectiveness of a miscarriage learning package for emergency department nurses using a pretest posttest questionnaire and evaluation survey.

Outcomes Expected of the Learner

Following completion of the educational package, the learner will be able to:

1. Provide a general overview of the physical manifestations of miscarriage.
2. Provide rationale for the components included in the Early Pregnancy Loss Algorithm.
3. Understand the patient identified interventions desired by women experiencing miscarriage.
4. Build in a meaningful way on the learner's existing knowledge and understanding of the psychosocial components required for women who miscarry, therefore, the knowledge gained will be immediately useful in their nursing practice.

Educational Intervention Design

The core component of the educational intervention consisted of a self-learning package provided to nursing staff. The learning package provided a general overview of the issue of miscarriage (incidence, maternal risk factors, clinical presentations and treatment options), discussion of grief theory and the phases of bereavement, key components of care for the woman experiencing a miscarriage and strategies for the emergency room nurse in the care of the woman experiencing a miscarriage (Appendix J). The learning package was developed using the four key themes, which were identified by the WRHA Emergency Care Task Force focus group, highlighting the areas in which the study participants need to understand the emotional impact the miscarriage experience may have on a woman.

Project Method

Currently, the emergency department at the Health Sciences Center employs 70 full, part time and casual nurses. The project targeted all the emergency department nurses caring for women who present with first trimester bleeding. There are five clinical resource nurses and two

nurse educators within the department. Approximately sixty five percent of the nursing staff are in full time positions with the remaining thirty five percent in varying part time and casual positions.

Each staff member was provided with an educational package which included one letter and a copy of, a pretest and posttest questionnaire, a miscarriage learning package, an evaluation survey for the miscarriage learning package and two response envelopes for participants to submit to the researcher. The study began on July 12, 2005 and concluded on July 26, 2005.

Packages were delivered to each of the seventy nurses' mailboxes in the emergency department. Information posters were placed in the coffee room, staff communication book, and staff washroom at the beginning of the study. Reminder posters were posted one week into the study in the coffee room, staff communication book and staff washroom.

Timing, that is, the point at which teaching should take place, is very important because anything that affects physical or psychological comfort can affect a learner's ability and willingness to learn (Bastable, 1997). The dynamic environment of an emergency department makes educating nursing staff a difficult task. Asking staff to attend an educational session on their days off or during the course of a shift is not feasible; therefore, providing an educational intervention that is suitable to this clinical setting is of paramount importance. Based upon this concept, the self-learning package was completed on the participants own time line whether it be during the course of their shift or during off hours from work.

Pretest and Posttest

The participants were asked to respond to four vignettes, describing a case of miscarriage during the first trimester (Appendix I). In each vignette, age, parity status, gestational age, previous history of miscarriage and planning status were systematically combined to represent

different situations. Four levels of age (19, 21, 28, 36), three levels of parity status (0, 2, 4), unplanned (2) and planned (2) pregnancy status, and previous history of miscarriage (1) are used to create the four different vignettes. The nurses were asked to respond to the situations presented to them as if it occurred on a typical day in their clinical setting and as if they were responsible for the patients' care.

Within each vignette, there were 5 items measuring various aspects of emotional care. A Likert scale presented respondents with a series of items worded favorably or unfavorably toward the miscarriage phenomenon. Responses indicate a level of agreement or disagreement with each statement. Each of the miscarriage vignettes were titled to reflect the four key themes of the focus group findings; I wanted to understand; I wanted to be understood; I wanted to be in control; I wanted my needs met (Sorin & Austin-Wiebe, 2004).

Vignettes were chosen to elicit information about how people might behave in situations that would be difficult to observe in daily clinical practice. The items were worded so that they measure the nurse's willingness to provide the aspects of care in question. Some of the items also focus on the grief process. The respondents were instructed to read the vignette and circle the number from 1 to 7 that described how they would respond to the patient in the vignette situation. Low scores indicate that the item is not of importance to the nurse; high scores indicate the item is very important.

Each miscarriage vignette used a summated rating scale. The minimum summated rating score each vignette may have was 5 (1x5) and a maximum of 35 (7x5). Mean pretest and posttest scores were calculated for each participant. A paired t-test was used to test for a significant increase in scores from pretest to posttest.

Evaluation Survey

Participants were asked to complete a short evaluation survey after completing the posttest questionnaire, specific to the content of the learning package (Appendix K). Usefulness, comprehensiveness, clarity, understanding and potential changes in practice were evaluated. Evaluating whether the expected outcomes, as well as other unintended outcomes were addressed.

Ethical Considerations

This project was reviewed and approved by both the University Of Manitoba Education/Nursing Research Ethics Board and the Health Sciences Center Impact Approval Committee (Appendix G). Ethical guidelines, as outlined by the Education/Nursing Ethics Board, University of Manitoba and the Health Sciences Center were followed. The protocol for obtaining informed consent included the provision of written information about the project to each participant. The project leader emphasized that participation in the project was voluntary. Potential participants were advised that the individual responses would in no way be identifiable in published or disseminated outcomes.

In order to maintain anonymity, identifying information about the participants, including names and addresses was not collected. Pretest and posttest questionnaires were coded for analysis only. However, the participants were asked if they would like to receive a written summary of the evaluation outcomes. If they indicated an interest on their returned consent form, they would have received a copy of the evaluation findings in their mailbox. Consent forms were returned in a separate envelope (Appendix H). These envelopes were opened after all completed envelopes with the pretest and posttest questionnaires and evaluation form were opened. Twenty-five participants indicated a desire to receive results of the evaluation.

This project did not involve any deliberate withholding of essential information or the provision of deliberately misleading information about the research or its purpose. There was no identifiable risk to the participants. The benefits to participants included an increased awareness of the miscarrying experience. Participants were not compensated for their participation.

Summary

This practicum project involved the development, implementation and evaluation of a miscarriage educational intervention for emergency department nurses in the Adult ED at HSC. It was evaluated using a pretest and posttest questionnaire and an evaluation survey of the learning package.

CHAPTER FIVE

RESULTS

Introduction

The intent of the educational learning package for emergency department nurses was aimed at enhancing their knowledge and understanding of the patient identified interventions desired by women experiencing miscarriage. It was hypothesized that this would lead to an increase in the support provided to women experiencing pregnancy loss. The effectiveness of the intervention was evaluated using two strategies including a pretest posttest questionnaire and staff evaluation survey of the learning package. Of the seventy envelope packages distributed to the potential participants, the principal researcher received thirty-three completed packages. The practicum project had an overall response rate of 47%.

This chapter reports data analysis from the thirty-three (33) participants. Results are presented for the four miscarriage vignettes and the evaluation survey.

Pretest and Posttest Results

The following tables include the pretest and posttest summated scores for each miscarriage vignette. The minimum summated rating score of each vignette is 5 (1x5) and a maximum of 35 (7x5). Change scores for each participant are documented in the four tables along with the mean change scores for each of the four vignettes. Mean scores are also reported.

Most tests of significance use the mean (LoBiondo-Wood & Haber, 2002). The mean is affected by every score but is more stable than the median or mode. Of the three measures of central tendency, it is the most constant and least affected (Lobiondo-Wood & Haber, 2002). Central tendency refers to the summary statistics. They are sample specific, meaning if the study

were conducted with another sample, the results would be different (LoBiondo-Wood & Haber, 2002).

Miscarriage Vignette One

Thirty-three (33) completed questionnaires were returned for vignette one, for an overall response rate of 47.1%. The mean pretest score was 28.2 and the mean posttest score was 30.5. The mean change score for vignette one was 2.3. Notably, five participants reported a negative change score.

Table 3 - Miscarriage Vignette One Questionnaire Results

Coded Participants	Pretest Summated Scores	Posttest Summated Scores	Change Scores
06	26	30	4
02	31	30	-1*
10	28	31	3
59	34	34	0
46	31	30	-1*
54	26	27	1
70	27	28	1
44	32	35	3
68	26	31	5
22	28	30	2
08	31	34	3
51	27	33	6
42	22	25	3
75	27	30	3
32	25	24	-1*
17	32	33	1
43	32	30	-2*
03	20	30	10
23	29	33	4
35	30	34	4
37	30	33	3
28	20	22	2
41	34	34	0
34	26	27	1
36	30	33	3
27	25	33	8
61	32	33	1

13	31	33	2
14	28	29	1
65	30	30	0
05	24	29	5
19	31	33	2
45	28	27	-1*
Total Score	933	1008	75
Overall Mean Score	28.2	30.5	2.27

Miscarriage Vignette Two

The following table indicates the pretest and posttest summated scores for miscarriage vignette two. The minimum summated rating score for vignette two is 5 (1x5) and a maximum of 35 (7x5). Change scores for each participant are documented in the table. Thirty-three (33) completed questionnaires were returned for vignette two for a response rate of 47.1%. The mean pretest score was 28.1 and the mean posttest score was 30.5. The mean change score for vignette two was 2.4. Four participants reported a negative change score.

Table 4 - Miscarriage Vignette Two Questionnaire Results

Coded Participants	Pretest Summated Scores	Posttest Summated Scores	Change Scores
06	22	28	6
02	31	31	0
10	29	32	3
59	33	33	0
46	28	28	0
54	26	27	1
70	25	27	2
44	29	35	6
68	20	28	8
22	31	30	-1*
08	31	31	0
51	31	35	4
42	27	29	2
75	30	31	1
32	23	26	3
17	30	30	0
43	30	30	0

03	28	33	5
23	27	29	2
35	32	33	1
37	24	31	7
28	27	26	-1*
41	32	32	0
34	28	30	2
36	29	32	3
27	26	33	7
61	33	34	1
13	30	32	2
14	30	31	1
65	27	25	-2*
05	28	32	4
19	32	32	0
45	18	29	11
Total Score	927	1005	78
Overall Mean Scores	28.1	30.5	2.36

Miscarriage Vignette Three

The following table indicates the pretest and posttest summated scores for miscarriage vignette three. The minimum summated rating score for vignette three is 5 (1x5) and a maximum of 35 (7x5). Change scores for each participant are documented in the table. Thirty-three (33) completed questionnaires were returned for vignette three with a response rate of 47.1%. The mean pretest score was 29.6 and the mean posttest score was 31.2. The mean change score for vignette three was 1.7. Five participants reported a negative change score.

Table 5 – Miscarriage Vignette Three Questionnaire Results

Coded Participants	Pretest Summated Scores	Posttest Summated Scores	Change Scores
06	30	32	2
02	27	30	3
10	33	32	-1*
59	32	35	3
46	21	25	4
54	28	29	1
70	25	29	4

44	33	35	2
68	27	27	0
22	25	31	6
08	32	35	3
51	32	33	1
42	29	27	-2*
75	30	32	2
32	27	26	-1*
17	25	30	5
43	32	34	2
03	24	31	7
23	35	35	0
35	30	34	4
37	30	33	3
28	28	27	-1*
41	33	33	0
34	29	30	1
36	31	34	3
27	30	33	3
61	33	34	1
13	30	33	3
14	32	32	0
65	29	29	0
05	35	35	0
19	33	33	0
45	27	23	-4*
Total Score	950	1031	56
Overall Mean Scores	29.6	31.2	1. 7

Miscarriage Vignette Four

The following table indicates the pretest and posttest summated scores for miscarriage vignette four. The minimum summated rating score for vignette four is 5 (1x5) and a maximum of 35 (7x5). Change scores for each participant are documented in the table. Thirty-three (33) completed questionnaires were returned for vignette four for a response rate of 47.1%. The mean pretest score was 25.8 and the mean posttest score was 29.6. The mean change score for vignette four was 3.8. One participant reported a negative change score.

Table 6 – Miscarriage Vignette Four Questionnaire Results

Coded Participants	Pretest Summated Scores	Posttest Summated Scores	Change Scores
06	19	29	10
02	26	28	2
10	30	30	0
59	33	35	2
46	22	27	5
54	23	28	5
70	28	30	2
44	33	35	2
68	14	22	8
22	27	32	5
08	23	32	9
51	25	31	6
42	23	23	0
75	32	31	-1*
32	19	25	6
17	24	29	5
43	28	28	0
03	25	31	6
23	33	34	1
35	24	32	8
37	24	29	5
28	24	27	3
41	30	30	0
34	24	26	2
36	28	33	5
27	27	34	7
61	32	32	0
13	29	34	5
14	28	30	2
65	22	22	0
05	29	33	4
19	28	30	2
45	17	25	8
Total Score	853	977	124
Overall Mean Scores	25.8	29.6	3.76

Paired Samples t-test

The data collected was obtained from two measures (pretest and posttest) using the same subjects, therefore, a paired t-test was used to determine the statistical significance. The p value is the reported result of a significance test and allows us to determine that there is a statistically significant increase in the mean score from pretest to posttest scores in all four vignettes (Polit & Beck, 2004).

Table 7 – Paired Samples t-tests for Pretest and Posttest Scores on Vignettes

Vignette	N (Sample)	Mean	Standard. Deviation	t	df	Sig
1 Pretest	33	5.65	.72	-4.97	32	< .001
1 Posttest	33	6.11	.63			
2 Pretest	33	5.62	.72	-4.55	32	< .001
2 Posttest	33	6.09	.52			
3 Pretest	33	5.92	.66	-2.33	32	0.026
3 Posttest	33	6.18	.71			
4 Pretest	33	5.17	.93	-7.12	32	< .001
4 Posttest	33	5.92	.71			

Evaluation Survey

Participants were asked a series of six questions to elicit their opinions about the learning package. Responses were obtained about the usefulness, most helpful and least helpful components, and suggestions for change to the package. Lastly, participants were asked about the potential changes in their clinical practice that would result after completing the learning package.

Usefulness

Participants were asked if the package was useful. Thirty-three (33) participants offered comments on the packages' worth. The narrative comments received are summarized in the following table below:

Table 8 – Usefulness Evaluation Survey Responses

Usefulness
• Yes (30 responses)
• Reinforced information on terminology for miscarriages and to think about the emotional impact of miscarriage
• Good review and reminder
• Found the statistics interesting
• Helped raise my awareness of the need to provide emotional support to women and their partners
• Concise and well put together
• The facts provided plus 'straight from the horses mouth' quotes make it more real
• Mostly things I was already aware of – but I didn't know the stats which was were useful
• Very useful gives better understanding of what is needed and resources

Not useful (or no clear answer received)
• Slightly
• Ok
• Information was what I thought I would think would be provided

Helpful Components of the Package

Participants were asked to comment on the most beneficial components of the learning package. Thirty-three (33) participants offered their opinions about most helpful portions of the package. Their narrative comments are illustrated in the following table:

Table 9 – Helpful Components Evaluation Survey Responses

Helpful Components
• All (1) • Patient's quotes (13) • The statistics (7) • Definitions (5) • Emotional care (8) • No response (3)

Least Helpful Components of the Package

Participants were asked to comment on the least helpful components of the learning package. Of the thirty-three (33) participants, only three (3) respondents indicated one section of the learning package to be least helpful. Their comments are included in the following table:

Table 10 – Least Helpful Components Evaluation Survey Responses

Least Helpful Components
• None or no answer (30) • The factual information (1) • Length (1) • Not as much 'concrete' things that women wanted to be said/done at triage (1)

Table 10 – Least Helpful Components Evaluation Survey Responses

- Statistics (1)
- Hard to answer a priority question when 'hypothetically' there is nothing else to compare to (2)
- Pathophysiology (2)

Participants Needs

Participants were asked to comment whether the package met their needs. Thirty-two (32) participants offered feedback; the following table represents the participants' narrative comments about the package.

Table 11 – Needs Met Evaluation Survey Responses

Needs Being Met

- Yes (25 responses)
- Good review, no new information, very informative, provided reinforcement (4)
- Not entirely, how to manage at triage when there is nowhere to put people and no beds moving, what can you really say? (1)
- Partially, would like to know what support groups are available (2)
- No answer (1)

Suggestions for Change to the Package

Participants were asked in there was any components of the package they would like to change or be included if they could. Fourteen (14) participants offered their narrative comments illustrated in the table below.

Table 12 – Suggested Changes Evaluation Survey Responses

What should be included or changed
• No answer or no changes suggested (19)
• Add the support groups presently available (2)
• Review the steps of a D&C and post op care and complications (1)
• Staff be more educated in support services and different avenues that we are able to offer the patient (1)
• Encourage staff to offer parents a chance to see baby or hold baby, depending on gestation and/or formation (1)
• Methods of initiating conversation with miscarrying women (1)
• Clear suggestions on what to say to women and their families (1)
• The package refers to priorization in relation to the patient who is miscarrying. In HSC ER, there are times this type of patient is seen immediately and others where she is literally one of several. Its hard to gauge the vignette patients' priority without a larger patient load/acuity picture (4)
• Comparing the emotional distress between women who have had therapeutic abortions versus spontaneous abortions (1)
• Seeing the algorithm, having it included in this learning package (2)
• List of possible solutions to common complaints by women miscarrying (1)

Change in Practice

Lastly, participants were asked if after completing the learning package, there was anything that they would do differently in caring for women experiencing a miscarriage. Thirty-three (33) participants offered feedback about the impact the learning package might have upon their clinical practice and changes they may now include in the care provided to women who are miscarrying. The narrative feedback received is as follows:

Table 13 – Change in Practice Evaluation Survey Responses

Change in Practice
• Be available to provide emotional support (13) • Be more aware of personal biases and personal value system (1) • To be more available for frequent communication (2) • Be more empathetic, understanding toward what they might be experiencing (4) • As a man in nursing, I think I would veer towards having female nurses do most of the teaching, as men in nursing are often seen as not being able to understand the emotional responses and need for support. Thank you, this may help me. (1) • Providing privacy (5) • Try to keep the lines of communication open (3) • Spend more time with the patient, even just to listen. Telling patients about the resources that are in the community if the patient is interested (3) • Yes, easier time of acknowledging, maybe slight anticipation of patient reactions (1) • Be more sensitive, take more time with the patient, this needs to be coupled with greater colleague and CRN understanding that this time is required (1) • Increase priority at triage, attempt to be more compassionate (2) • Address the loss, validate concerns (2) • No answer (4)

Summary

The range of mean pretest summated scores for the four vignettes are 25.8 to 29.6. The range of mean posttest scores for the four vignettes is 29.6 to 31.2. The range of mean change scores for the four vignettes is 1.7 to 3.76. Mean posttest scores for each of the vignettes were higher than pretest scores. Overall mean pretest and posttest scores were lowest for vignette

four, but reflected the highest change score. Paired samples t-test demonstrated a statistically significant increase in the mean scores from the pretest to posttest scores in all four miscarriage vignettes. Miscarriage vignette three had the highest pretest and posttest scores with the smallest change score. Negative change scores were reported in all four vignettes, with vignette one and three having five participants report negative change scores. Feedback from the evaluation survey concluded that the staff that participated in this project, overall, felt it was useful, met their needs, and made an impact upon their clinical practice.

CHAPTER SIX

DISCUSSION

Introduction

The learning package was developed using the Emergency Care Task Force focus group findings and Knowles' principles of adult learning theory to affect change in the emergency department nurses' knowledge and understanding of the miscarriage experience. This intervention was aimed at building on the pre-existing knowledge of the emergency department nurses to ensure their understanding of the patient identified interventions desired by women who miscarry. In addition to evaluating the participants' knowledge through the use of a pretest and posttest questionnaire, participant feedback was elicited to evaluate the components of the package. This chapter will present analysis of the questionnaire results and the four themes that emerged from the evaluation survey. Limitations of the project, implications for nursing practice, education and research along with dissemination of the findings are addressed.

Pretest and Posttest Questionnaire Analysis

The mean pretest scores for each of the vignettes ranged from 25.8 to 29.6. The mean posttest scores ranged from 29.6 to 31.2; with the mean change in scores ranging from 1.7 to 3.8. It was hypothesized that the learning package would provide a basis of knowledge and understanding of the patient identified interventions desired by women experiencing a miscarriage. The paired samples t-test indicated statistically significant increases in the mean score from pretest to posttest for all four vignettes. This suggests the learning package was effective in improving knowledge levels or emergency department nurses.

Although change scores were noted in all four vignettes, vignette three and four provided the most interesting results. Miscarriage vignette four had the lowest mean pretest and posttest scores and the highest change score. Vignette three had the highest pretest and posttest scores and the lowest change score. The context of the vignettes and the scoring of items may explain the findings.

The context of vignette four describes the direct emotional care required for a woman who has experienced a miscarriage. Addressing the post miscarriage sequelae, the grieving process and ensuring appropriate discharge planning were the items to be scored in this vignette. In vignette three, the triage encounter and the facilitation of further medical attention is described. Even though the participants' may feel a sense of compassion and a need to provide emotional care, the other demands placed upon the triaging nurse may hinder the attention necessary to the miscarrying woman. Five participants made specific note of the items on the questionnaire in relation to the 'priority' placed on a woman presenting to triage with early pregnancy loss. The ability to manage a woman experiencing a miscarriage at triage when the department is full and there is no opportunity to facilitate a bed were items on the vignettes participants felt should be changed. They felt it was very difficult to score this as a priority when the overall context and level of acuity in the department is unknown.

Vignette three had the lowest change score suggesting that participants with high pretest scores indicate a high baseline of knowledge and therefore, had less of an increase in their posttest scores. The low pretest mean scores in vignette four may be related to the participants' lack of comfort in providing direct patient care to the miscarrying woman. Although this vignette had the lowest mean pretest and posttest scores, it demonstrated the highest change scores speaking to the effectiveness of the learning package.

Overall, there were notable change scores for each of the four vignettes. Mean change scores ranged from 1.7 to 3.8. The act of data collection can affect the items on which the researcher wants to collect data. The participants may have improved their performance because they knew they were a part of an experimental group. This is known as the Hawthorne Effect (LoBiondo-Wood & Haber, 2002).

In this practicum project, participants' change scores may be attributed to inclusion in the study and not due to the effects of the educational intervention. It is difficult to ascertain whether the change scores reported are clinically significant to result in a change in nursing practice. Moreover, the effect of taking a pretest may sensitize an individual and improve the score of the posttest. Individuals generally score higher when they take a test a second time, regardless of the intervention. The differences between the posttest and pretest scores may not be a result of the independent variable but rather of the experience gained through testing.

The high overall pretest scores reported by participants may speak to their preexisting commitment to caring for women and their partners experiencing a miscarriage. The questionnaire used miscarriage vignettes to gather useful information about the participants' knowledge and understanding of the miscarriage experience. The task was approached directly by asking participants to score their responses to the miscarriage situation as if occurred on a typical day in their clinical setting and if they were responsible for the patients' care. The use of self-reporting can be inaccurate. There is often no way to know whether the respondent is reporting what they believe will make a favorable impression or what is indeed true. Response biases or social desirability refers to the tendency of respondents to distort their responses in an effort to misrepresent their responses consistently by giving answers that are congruent with prevailing social values (Munro, 2001). The anonymity of the questionnaire may have resulted

in more candid responses. However, there is no way to tell the whether the participants were telling the truth or responding in a socially desirable way, therefore, the researcher is left to assume that the participants were telling the truth.

Negative Change Scores

Within each of the four vignettes, a few negative change scores were reported. Any data produced using measures will have errors. Some of the errors produced by the measurement method may be chance error or systematic bias (LoBiondo-Wood & Haber, 2002). It is difficult to explain the negative change scores. The questionnaire may have been unreliable because it may have been difficult for the participants to understand the intent of the vignette and the items they were asked to score. The setting or method of administration may also affect the measure (questionnaire). Participants may not have taken the time to read the vignettes clearly and score the appropriate item. Additionally, the package was completed during the participant's own time, therefore, controlling where the study was completed was not possible. Due to these facts, it is not surprising that there was some variance in the data.

Reliability & Validity

Reliability is the extent to which a data gathering method will give the same results when repeated (Loiselle & Profetto-McGrath, 2004). The aim is to reduce random errors by using a reliable measure and to reduce additional and built-in systematic errors (Ovretveit, 2002).

The questionnaire in this study lacked established reliability. This could have been established by administering the pretest twice about one week apart to see if the scores remained stable over time.

In order to increase the validity of the measure in retrospect, the testing of the questionnaire and evaluation survey with content experts would have been appropriate. Due to

the time constraints associated with the project, the practicum project committee reviewed the questionnaire, learning package and evaluation survey. The use of an expert panel could have identified ambiguous or incorrect information and provided feedback on the ease of reading and presentation of the learning package. In addition to the panel review, pretesting the education package with emergency department nurses in a similar setting would have identified any problem areas to ensure the objectives of the project were clear

Evaluation Survey Feedback

The aim of many educational interventions in nursing is to increase knowledge (Tippett, 2004) with the assumption that increasing knowledge will improve clinical decisions, nursing practice and patient outcomes. If these assumptions are correct, then the miscarriage educational intervention would enhance the knowledge base of the emergency department nursing staff and ultimately enhance the emotional care provided to the miscarrying women and result in patient satisfaction with the care provided.

Adult learning relies on elements of self-direction and motivation. However, as emergency nursing is fraught with physical, clinical and emotional demands, it is unrealistic to expect that emergency department nurses will be completely responsible for their own learning. An overall response rate of 47% indicates that the self-directed learning was a successful education strategy during this study. In-services and the use of a wide variety of educational activities during this study may have increased overall response rates by providing nursing staff with the choice of methods of education most suitable to them. Lamb and Henderson (1993) suggest that self-directed learning is more effective than traditional lecture methods, especially for clinical skill development.

The evaluation survey was used to determine the effectiveness the educational learning package. It documented the extent to which the goals of the practicum project were attained. Four major themes emanated from the data: 1) practicality, 2) clarity and understanding, 3) comprehensiveness, and 4) potential changes in clinical practice.

Practicality

The project utilized principles of adult learning in addressing an identified need for education in conjunction with the Early Pregnancy Loss Algorithm being implemented. The project provided direct, concrete examples in which the participant could apply their learning in the clinical setting. The finding of the Emergency Care Task Force focus group highlighted the need for emergency department staff to be educated on interventions desired by women who are experiencing a miscarriage. Key to the project is its practicality for the participants. They must see a reason for learning about the miscarriage experience. Along with the relevancy of the project, the learning is applicable to their work and builds upon their pre-existing knowledge base.

Overall, the results indicated that the participants found the miscarriage educational intervention to be practical. Evidence of the package's usefulness is found in table eight provided in chapter five. Many of the participants did not elaborate on the question asked. Simple yes responses were noted on the majority of the evaluations received. Three of the thirty-three respondents gave questionable feedback about the practicality of the package. Comments such as 'ok' or 'slightly' and 'to some degree', although positive responses, suggests the package may not have been as useful to those participants as what they would have liked it to be.

Clarity and Understanding

A self-learning package was the method chosen to provide instructional activities to facilitate the participants in achieving their learning objectives. This method is effective for learning in the cognitive and psychomotor domains where the goal was to master information and apply it to practice (Bastable, 1997). The self-learning package was designed to achieve preset objectives by bringing learners from diverse knowledge and skill backgrounds to a similar level of achievement.

Participants reported the use of the focus group quotes as helpful in understanding the emotional impact the miscarriage experience may have upon a woman. In response to the questions asking what component of the package was most helpful, the following comments were offered:

"Giving actual statements or comments from women and their partners who had gone through a miscarriage (pregnancy loss). Getting their perspective is vital to us as nurses so we can do the best job we can for people dealing with a loss."

"The focus group information - the first hand information in the person's own words helped clarify the situation."

"The comments about having someone treat them with respect and being sympathetic, to acknowledge the degree of emotional trauma and allow them all the steps of grieving that others are allowed."

An overall awareness of the issues surrounding miscarriage including the concise facts about definitions, incidence, etiology and statistics along with the need to provide emotional care were frequent positive comments noted from the evaluation form.

"I was unaware of the incidence of miscarriage and found the general definition to be helpful."

"The terminology, definitions and etiology."

Comprehensiveness

The aim of the miscarriage package was to provide a concise collection of facts about the miscarriage experience focusing specifically on the patient identified interventions desired and practical approaches for the emergency department nurse to adopt in their approach to this patient population. A few participants' narrative comments reflect the comprehensiveness of the learning package.

"Yes, concise and well put together."

"This was good, anymore would be too long."

Two participants recommended including the WRHA Early Pregnancy Loss Algorithm with the learning package received. At the time of the start date of the practicum project, the algorithm was not available. Interestingly, the principal researcher was alerted that the implementation of the Early Pregnancy Loss Algorithm began the same day as the two-week data collection study period. Suggestions for changes to the package centered on the inclusion of community support groups and other resources the participants could convey to a woman who had experienced a miscarriage. Included in the WRHA Early Pregnancy Loss Algorithm is a list of available community resources for women dealing with perinatal loss. Ideally, if timing were perfect, the WRHA Early Pregnancy Loss Algorithm would have been included with the self-learning package.

Change in Practice

The results of this project offer perspective on the important role of staff education. This project addressed continuing education efforts to ensure ongoing learning of the emergency department nursing staff. Indications for successful learning are a change in behaviour (knowledge, skills and attitudes) that can occur at anytime or in any place as a result of exposure

to environmental stimuli. Learning is an action by which knowledge, skills, and attitudes are consciously or unconsciously acquired such that behaviour is altered in some way that can be observed or measured (Bastable, 1997).

The success of the education experience does not lie in how much content has been imparted, but how much the person has learned and how this knowledge will change the way they practice. Providing emotional care, being more available, ensuring open lines of communication, having a greater awareness of the miscarriage experience and an acknowledgement of the loss were the most common narrative comments received by the participants in response to the question asking what participants will do differently in their practice:

"I will try to meet the needs and provide emotional support to women and their support network. I will also encourage others working in the department to do the same."

"Be more empathetic, understanding toward what they may be experiencing."

"I will concentrate on providing more privacy, whenever possible, while waiting at triage."

"Try to keep the lines of communication open and not make excuses for no beds. Validate concerns and keep checking on them."

"As a man in nursing, I think I would veer towards having female nurses do most of the teaching, as men in nursing are often seen as not being able to understand the emotional responses and need for support. Thank you, this may help me."

Successful learning requires a change in attitude, enhancement in knowledge and the acquisition of new skills. The participants all commented that their clinical practice would be changed as a result of the learning package in an effort to provide emotional care for a woman experiencing a miscarriage.

Limitations

Several limitations can be noted in this practicum project. First, the principal researcher was a member of the emergency department staff. This relationship to study participants may have undermined the collection of unbiased high quality data. If the potential participants had or did not have a favorable relationship with the principal researcher, this could have influenced their participation in the study and the responses provided.

No set time or place was allocated for the participants to complete the learning package. Distraction may have been created if participants chose to complete the package during their work time and or in the presence of other emergency department staff. Without an established time or place to complete the package, a range of variables could have influenced participants. Using work time to complete the study may have placed undue burdens of time and/or stress on the participants. All of these variables may have distorted the collection of data and ultimately the results..

The vignettes and pretest and posttests lacked established reliability and validity. The principal concern with vignettes is the validity of the responses (Loiselle & Profetto-McGrath, 2004). If respondents described how they would react in a situation portrayed in the vignette, how accurate is that description of the actual behaviour. The use of self-reports represent a powerful mechanism for obtaining data but the risk of response bias should be considered (Polit & Beck, 2002). Participants may choose to misrepresent themselves in an effort to ensure their responses are congruent with social norms.

The practicum project had an overall response rate of 47%. Nonresponse bias between participants and those who declined to participate must be considered (Loiselle & Profetto-

McGrath, 2004). If the response rate is high, the risk of nonresponse bias may be negligible. The responses from those participants who chose not to participate in the study may have differed from those who did respond. A response rate greater than 65% is probably sufficient for most purposes, but lower response rates are common (Polit & Beck, 2004). This response rate is similar to that obtained by Considine & Botti (2005), who studied the effects of a self-directed learning package on emergency room nurses' knowledge of assessment of oxygenation and use of supplemental oxygen was done. Of the one hundred and ninety-six (196) nurses invited to participate, eighty-eight (88) emergency nurses participated in the study, with an overall response rate of 45%.

Staffing patterns and departmental acuity may have influenced participation in the study. Although reminders were posted in the staff washroom, staff lounge, and departmental communication book, perhaps additional lead-time would have enhanced participation. Conceivably, more highly motivated nurses may have been the ones to respond, however, the length of the data collection period and the time at which the study was performed could have hindered the overall response rate.

Lastly, demographics were not collected for this practicum project. Gender, years of nursing experience, age of the participant and years of experience in emergency nursing would have been helpful in understanding the responses of the participants. The collation of demographics would have aided in ensuring a more typical sampling group of the emergency department setting and help to explain further the individual responses to the questionnaires and the evaluation form.

Recommendations for Future Practice, Research and Education

While this practicum project demonstrated that providing an educational intervention for emergency department nurses about the issue of miscarriage led to a statistically significant change in the pretest and posttest scores, it is unknown whether the intervention has clinical significance. Long-term behavior changes could be measured to strengthen the findings from this practicum project. The use of a practice audit may help to identify whether the use of the learning package impacted the participants' clinical practice.

Further exploration of the implications of the learning package and the implementation of the early pregnancy loss algorithm are needed. The use of a focus group with women who have experienced a miscarriage to capture changes in patient satisfaction would assist in defining the impact of the learning package. The feedback gained could offer valuable insight into further areas of change required.

This practicum project provides valuable beginning data for future studies. A replication of the study in this clinical setting could target those individuals who may not have had the opportunity to participate. It is unknown whether a greater response rate would have resulted in similar findings. Because the Early Pregnancy Loss Algorithm has been implemented at all WRHA emergency departments, a replication of this study with multi site participation would generate a greater evidence base for this important area of clinical practice.

Non-participatory observations of emergency department nurses communicating with miscarrying patients may assist in identify barriers for some nursing staff using the information gained from the learning package. This would allow for adjustment of such barriers and propose further education to enhance their ability to provide the emotional care necessary.

Finally, the concept of a learning package may not be suitable for all emergency department nurses as reflected in the < 50% response rate. The self-learning package, supplemented with in-services and the integration of clinical facilitators are all recommended to enhance the knowledge and understanding of the miscarriage experience and the patient identified interventions desired by women. The combination of these teaching strategies must all be used synergistically as none work in isolation.

Dissemination of the Findings

The results of this project will be presented to the WRHA ED Program. Based on the favorable responses of staff who participated in this project, the potential clinical significance of the learning package for staff, and the introduction of the WRHA Early Pregnancy Loss Algorithm, the adaptation of this package to the annual mandatory education days and use in the orientation of new hires will be recommended. The use and or adaptation of this package to other emergency sites within the city will be considered based upon WRHA ED Program review. It is expected that the results of the project will be shared in a presentation specific to the HSC Adult ER staff. It is anticipated that the results of this project may be shared at provincial and national emergency nursing conferences.

Conclusion

The Emergency Care Task Force focus group findings and Knowles' principles of adult learning provided the appropriate framework for the development, implementation and evaluation of a miscarriage educational intervention. The information provided in the learning package was well received and demonstrated statistical significance. This project demonstrated that the provision of a learning package reinforcing patient identified interventions desired by

women experiencing miscarriage increased knowledge and understanding resulting in changes in the way nurses provide care.

A review of the literature revealed a shortage of studies addressing the impact of bereavement education on health care professionals' perceptions of perinatal loss or their ability to implement bereavement care. Health care professionals are confronted with the clinical problem of how to care for women experiencing a miscarriage. Studies on perinatal bereavement have reported more often on women's perceptions of the inadequacy of emotional care following a loss. More educational programs are needed with staff in emergency areas, in both inpatient and outpatient setting where families experiencing miscarriage are likely to be seen. The findings of this practicum project lead to the conclusion that an educational intervention for emergency department nursing staff should focus on the patient identified interventions, enhancing knowledge but also promote acknowledgement of the loss through appropriate emotional care.

Further research is required to provide additional insight into the clinical significance of the learning package. Emergency department nurses, by anticipating the loss and grief experience of women after miscarriage and addressing this aspect of their plan of care, will expand their current practice to appreciate the miscarriage as a significant life event.

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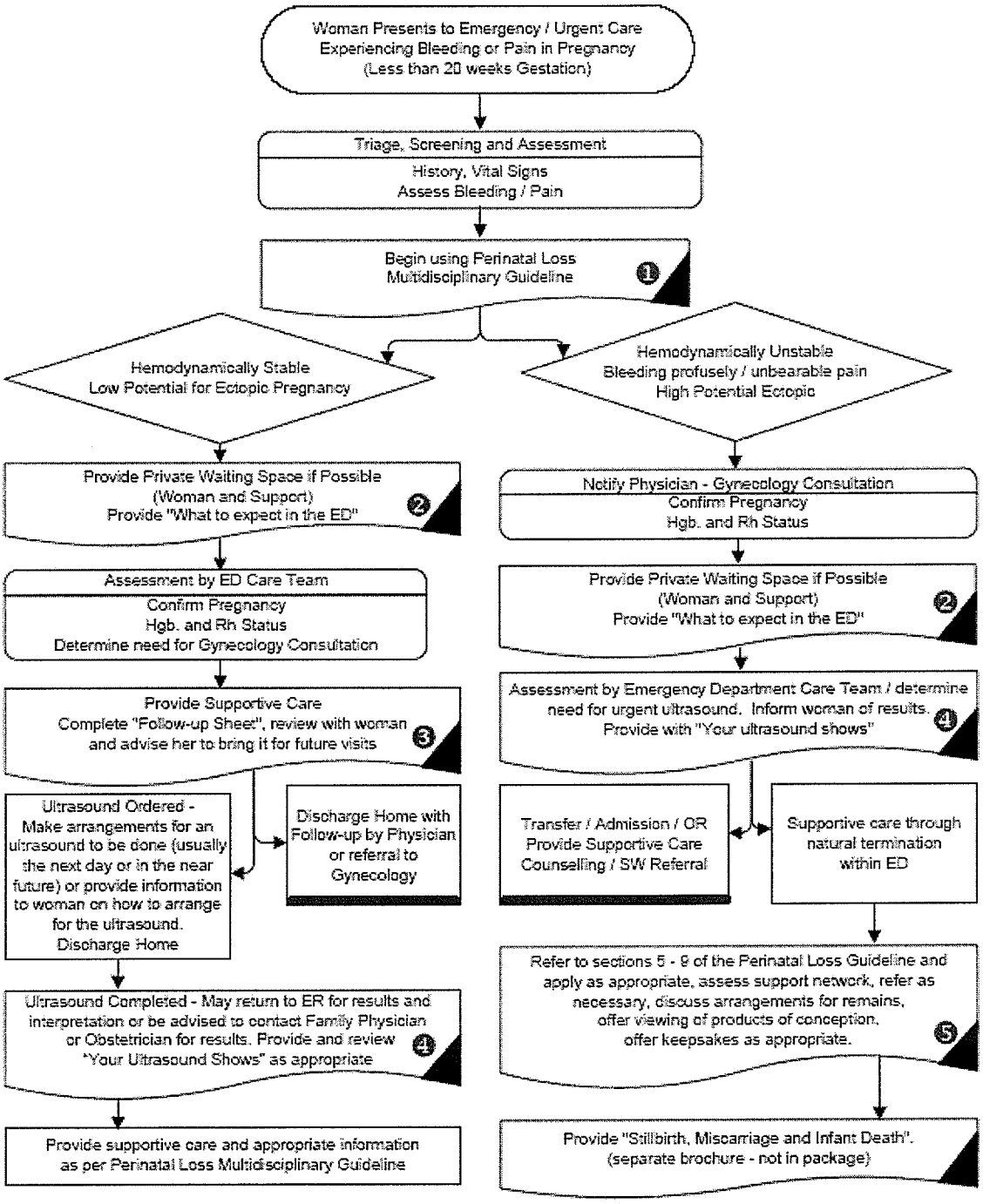
Appendix A


Early Pregnancy Emergency Algorithm
Woman Presents to Emergency / Urgent Care
Experiencing Bleeding or Pain in Pregnancy
(Less than 20 weeks Gestation)
Triage, Screening and Assessment
History, Vital Signs
Assess Bleeding / Pain
Begin using Perinatal Loss
Multidisciplinary Guideline
1
Hemodynamically Stable
Low Potential for Ectopic Pregnancy
Hemodynamically Unstable
Bleeding profusely / unbearable pain
High Potential Ectopic
Provide Private Waiting Space if Possible
(Woman and Support)
Provide "What to expect in the ED"
2
Assessment by ED Care Team
Confirm Pregnancy
Hgb. and Rh Status
Determine need for Gynecology Consultation
Provide Supportive Care
Complete "Follow-up Sheet", review with woman
and advise her to bring it for future visits
3
Ultrasound Ordered -
Make arrangements for an ultrasound to be done (usually the next day or in the near future) or provide information to woman on how to arrange for the ultrasound.
Discharge Home
Discharge Home with Follow-up by Physician or referral to Gynecology
Ultrasound Completed - May return to ER for results and interpretation or be advised to contact Family Physician or Obstetrician for results. Provide and review "Your Ultrasound Shows" as appropriate
4
Provide supportive care and appropriate information as per Perinatal Loss Multidisciplinary Guideline
Notify Physician - Gynecology Consultation
Confirm Pregnancy
Hgb. and Rh Status
Provide Private Waiting Space if Possible
(Woman and Support)
Provide "What to expect in the ED"
2
Assessment by Emergency Department Care Team / determine need for urgent ultrasound. Inform woman of results.
Provide with "Your ultrasound shows"
4
Transfer / Admission / OR
Provide Supportive Care
Counselling / SW Referral
Supportive care through natural termination within ED
Refer to sections 5 - 9 of the Perinatal Loss Guideline and apply as appropriate, assess support network, refer as necessary, discuss arrangements for remains, offer viewing of products of conception, offer keepsakes as appropriate.
5
Provide "Stillbirth, Miscarriage and Infant Death".
(separate brochure - not in package)

Appendix B

WHAT TO EXPECT IN THE EMERGENCY DEPARTMENT

Information for women with vaginal bleeding in the first 4 months of pregnancy

Bleeding in early pregnancy can be stressful but it is not unusual. Many women experience a small or moderate amount of bleeding during early pregnancy and the pregnancy continues normally. For others, bleeding is a first sign of a miscarriage(pregnancy loss).

Unfortunately, if a miscarriage is going to occur, there is nothing that you or the doctor can do to stop it.

We will do some tests to find out if you're having a miscarriage or not. Either way, we want you to understand what is happening with your pregnancy and what to expect over the next few hours and days.

We understand that you want to be seen and examined quickly, but if the Emergency Department is very busy, you may have to wait. Emergency Department staff recognize that this may be a stressful time for you and your family and will try to be supportive and make your wait as short as possible.

If you have any of these symptoms while you're waiting:

- Heavy bleeding (soaking 2 pads in less than 1 hour)
- Much more / stronger /sharper pain
- Feeling weak and dizzy

Go to the triage nurse and let her know.

USUAL EXAMS AND TESTS IN THE EMERGENCY DEPARTMENT

When you go for your examination, you can have a family member or close friend with you, if you choose. They can stay for all, or part of the exam. The nurse or doctor will ask you about private information and there will be a physical and pelvic examination. Some people like to have a friend or family member stay with them, others don't. The decision is yours.

A nurse will talk with you and check your pulse and blood pressure. Often, blood tests and a urine test are done at this time. A physician will talk with you, examine your abdomen and, in most cases, do a pelvic examination. It takes about 1 ½ hours to get the blood test results. The doctor will discuss the plan for your care.

Appendix C

Future Follow-Up Sheet

****BRING THIS DOCUMENT WITH YOU TO FUTURE VISITS****

3

Addressograph

_____

_____

Winnipeg Regional Health Authority
Caring for Health

Office régional de la santé de Winnipeg
À l'écoute de notre santé

FOLLOW-UP SHEET

You have been assessed in the Emergency Department for bleeding or pain in early pregnancy on _____.

You are thought to be at _____ weeks of your pregnancy.

Your lab tests show: Hemoglobin _____

BHCG _____

Rh _____ (A treatment with WinRho needs to be given if you are Rh negative)

☐ Make arrangements to follow-up with your doctor and bring this document with you.

An ultrasound is:
- ☐ not required
- ☐ Required. Your appointment is on _____.
- ☐ Phone the ultrasound department at the HSC at 7:30 a.m. (Monday – Friday) at 787-3701; they will give you a time for the ultrasound.
- ☐ Other

After the ultrasound:
- ☐ Make arrangements to see your doctor to discuss the results
- ☐ Return to the Emergency Room and report to the Triage Nurse. The Emergency Physician will discuss the results with you and arrange any follow-up visits. (The test and follow-up will take several hours).

If your symptoms change (heavy bleeding, increasing pain, feeling faint), you can call HealthLinks at 788-8200 or return to Emergency for reassessment at any time.

For Physician:

Any other special concerns to be noted:

1. _____
2. _____

Family Physician:

_____ Name

_____ Telephone Number

Obstetrician:

_____ Name

_____ Telephone Number

Emergency Provider Signature:

Date:

Appendix D

Ultrasound Follow-Up Handout

Winnipeg Regional Health Authority
Caring for Health

Office régional de la santé de Winnipeg
À l'écoute de notre santé

Date:_____

Your ultrasound shows:

Continued pregnancy Gestational age:_____ Estimated Due Date: _____

The early pregnancy appears normal. Sometimes a small amount of bleeding is noted around the placenta. **Treatment**: "watchful waiting". Often the bleeding slows down on its own over a few days. Talk with your doctor about whether to take time off work or other activities. Occasionally bleeding and cramping gets worse, then you should see your doctor for another examination.

Abnormal Intrauterine Pregnancy

There is no fetal heart activity or no developing embryo/fetus. You may have delayed bleeding and cramping that lasts for many days or you may have a complete miscarriage (natural passage of all tissue). Depending on the size of the pregnancy, you may be offered medical management (medication to cause the pregnancy to pass), expectant management (wait and see if you pass tissue on your own), or a D & C; some women pass all tissue spontaneously. Medically, this is called a 'missed abortion'.

> D & C – means dilation and curettage. The patient receives sedation or a light anesthetic, and the doctor performs a 'scraping' of the inside of the womb to remove any remaining pregnancy tissue. .

Probable Complete Miscarriage:

All, or almost all of the pregnancy tissue has already passed. You may have light bleeding or cramps for many days. If you have heavy bleeding, fever, or pain not responding to Tylenol or Ibuprofen, return to the Emergency Department or your doctor for an urgent check up (in this case you might need a D & C or antibiotics).

Probable Incomplete Miscarriage:

Some, but not all, of the pregnancy tissue has passed. Women with heavy bleeding will be admitted for a D & C. Others will have follow-up arranged for the same week to discuss their options

Results Unclear

Occasionally, the ultrasound does not give a clear enough picture of a very early pregnancy to be certain what is happening. In this case, the physician usually recommends follow up bloodwork and/or an ultrasound within one week. You should return to the emergency department if you experience severe pain, lightheadedness, or fainting because there is still the possibility that your pregnancy is developing outside of the uterus (ectopic pregnancy).

Your follow up arrangements are as follows:

Clinic: _____ Doctor: _____

Address: _____ Date & Time: _____

Special Instructions:

Appendix E

Community Supports and Resources

The Compassionate Friends
Health Sciences Centre
Phone: (204) 786-9251
Clients: Parents
Fee: None
Self-help group that offers friendship and support to any parent grieving the death of a child.

Interfaith Marriage and Family Institute
University of Winnipeg
Phone: (204) 786-9251
Clients: Individuals / Families
Fee: Sliding Scale
Receive service in 2 – 3 weeks

Fort Garry's Women's Resource Centre
1150-A Waverley Street
Phone: (204) 477-1123
Website: www.fgwrc.ca
Clients: Women
Fee: None
Special Information:
Individual Counseling is a 4 – 6 month wait. Bereavement Support Group available. Call for start dates.

Health Sciences Centre
Women's Hospital Health Sciences Centre
Phone: (204) 787-2904
Clients: Parents
Fee: None
First Monday of Every Month. When Monday is a holiday will move to second Monday

Miriam Centre Inc.
440 Beliveau Road East
(204) 255-1499
Clients: Women / Children
Fee: Sliding scale
Special Information:
Long-term, individual and group counseling available.

North End Women's Centre
394 Selkirk Avenue
(204) 589-7347
Clients: Women
Fee: None
12-week grief program for women who have experienced a loss of a loved one.

Pluri-Elles
570 Rue Des Meurons
(204) 233-1735
Clients: Women
Fee: None
Service in French.

Psychological Services
University of Manitoba
(204) 477-9222
Client: General
Fee: None
Masters and Ph.D. students with supervision.

Recovery of Hope
1475 Pembina Hwy.
(204) 477-4673
Client: General
Fee: $15 Students
$19 - $60/hour
Christian focused individual marriage and family counseling.

St. Boniface General Hospital
Pastoral Care
(204) 237-2356
Clients: Women and families
Fee: None
Counseling and support.

Victoria General Hospital
Department of Social Work
(204) 477-3215
Clients: Women and families
Fee: None
Counseling and support

Youville Centre
33 Marion Street
(204) 233-0262
Clients: General
Fee: None
Taking Steps Walking Group – Bereavement support in an informal and comfortable way.

Websites:

Grief Net
http://rivendell.org/
A system that can connect you with a variety of resources related to death, dying, bereavement and major emotional and physical losses.

Appendix F

Symptoms of grief after miscarriage

Sadness, depression
Guilt
Shock and disbelief
Somatic distress
Helplessness
Inability to sleep
Loss of interest
Sexual dysfunction
Loss of appetite
Time confusion
Emotional lability
Anger, irritation
Lack of strength
Poor concentration
Feelings of failure
Repetitive dreams of the baby
Preoccupation with the baby
Inability to return to normal activities
Avoidance of reminders of the pregnancy
Doubting one's femininity and competence

Rosenfeld, J., A. (1991). Bereavement and grieving after spontaneous abortion. *American Family Physician* 43: 1679-1684.

Parkes, C., M. (1972). Bereavement studies of grief in adult life. London: Tavistock.

Raphael, B. (1984). The anatomy of bereavement. A handbook for the caring professions. London: Hutchinson

Pepper, L., G., Knapp, R., J. (1980). Maternal reactions to involuntary fetal/infant death. *Psychiatry* 43: 155-159.

Lindemann, E. (1944). Symptomatology and management of acute grief. *American Journal of Psychiatry* 101: 141-148.

Stack, J., M. (1980). Spontaneous abortion and grieving. *American Family Physician* 21: 99-102.

Kirkley-Best, E. & Kellner, K., R. (1982). The forgotten grief: a review of the psychology of stillbirth. *American Journal of Orthopsychiatry* 52: 420-429.

Leppert, P.L. & Pahlka, B., S. (1984). Grieving characteristics after spontaneous abortion: a management approach. *Obstetrics and Gynaecology* 64: 119-122.

Appendix G

Ethics Approval

UNIVERSITY OF MANITOBA

OFFICE OF RESEARCH SERVICES
Office of the Vice-President (Research)

244 Engineering Bldg.
Winnipeg, MB R3T 5V6
Telephone: (204) 474-8418
Fax: (204) 261-0325
www.umanitoba.ca/research

APPROVAL CERTIFICATE

11 July 2005

TO: **Laura Ferguson** (Advisor D. Askin)
Principal Investigator

FROM: **Stan Straw, Chair**
Education/Nursing Research Ethics Board (ENREB)

Re: **Protocol #E2005:060**
"Development, Implementation and Evaluation of a Miscarriage Educational Intervention for Emergency Room Nurses"

Please be advised that your above-referenced protocol has received human ethics approval by the **Education/Nursing Research Ethics Board**, which is organized and operates according to the Tri-Council Policy Statement. This approval is valid for one year only.

Any significant changes of the protocol and/or informed consent form should be reported to the Human Ethics Secretariat in advance of implementation of such changes.

Please note that, if you have received multi-year funding for this research, responsibility lies with you to apply for and obtain Renewal Approval at the expiry of the initial one-year approval; otherwise the account will be locked.

Health Sciences Centre
OFFICE OF THE DIRECTOR OF RESEARCH

MS7 - 820 SHERBROOK STREET
WINNIPEG, MANITOBA R3A 1R9
DIAL DIRECT (204) 787-2404
FAX (204) 787-4547

July 20, 2005

Ms Laura Ferguson
Principal Investigator
1504-429 Westwood Drive
Winnipeg MB R3K 2B9

Dear Ms Ferguson

RE: DEVELOPMENT, IMPLEMENTATION AND EVALUATION OF A MISCARRIAGE EDUCATIONAL INTERVENTION FOR EMERGENCY ROOM NURSES.

ETHICS #: H2005:060 RIC #: RI05:102

The above-named protocol, **has been evaluated and approved** by the HSC Research Impact Committee.

The Department of Research wishes you much success with your study.

Sincerely

Karen Shaw-Allan
Research Protocol Officer
Health Sciences Centre

cc: Director of Research
Ancillary Services, Finance Division

Appendix H

Research Project title: Development, Implementation and Evaluation of a Miscarriage Educational Intervention for Emergency Department Nurses
Project leader: Laura Ferguson
Project Supervisor: Deb Askin, Faculty of Nursing

This consent form, a copy of which will be left with you for your records and reference, is only part of the process of informed consent. It should give you the basic idea of what the research is about and what your participation will involve. If you would like more detail about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.

You are invited to participate in a practicum project ***Development, Implementation and Evaluation of a Miscarriage Educational Intervention for Emergency Department Nurses.*** Laura Ferguson who is currently enrolled in the Masters of Nursing Program at the University of Manitoba will conduct this project.

This project is designed to evaluate your knowledge and attitudes regarding the delivery of care for women who miscarry with the implementation of a self-learning package. The miscarriage self-learning package will provide knowledge about the issue of miscarriage, the emotional reactions associated with early pregnancy loss and practical approaches for dealing with this patient population. You will be asked to complete a pretest questionnaire prior to reading the self-learning package. Once you have completed the learning package, you will be asked to complete the posttest questionnaire and answer a few questions about the content of the package. Your responses will remain anonymous and confidential. Simple coding of the pretest posttest questionnaire will be used for matching purposes only. The information gathered will remain confidential with no identifying information attached to the data. You will have the opportunity to obtain a summary of the project results from the investigator by completing the bottom portion of the consent form.

Participation is voluntary. You will be under no obligation to participate and may withdraw from the project at any time. There are no risks to participating in this project. The cost to you would involve about fifteen minutes of your time to complete the package and evaluation.

Your signature on this form indicates that you have understood to your satisfaction the information regarding your participation in the research project and agree to participate as a subject. In no way does this waive your legal rights nor release the researchers, sponsors or involved institutions from their legal and professional responsibilities. You are free to withdraw from this study at any time, and /or refrain from answering any questions you prefer to omit, without prejudice or consequence. Your continued participation should be informed as your initial consent, so you should feel free to ask for clarification or new information throughout your participation.

Project leader: Laura Ferguson
889-4130

Project supervisor: Deb Fraser Askin
474-9927 or Debbie_Askin@umanitoba.ca.

The Education and Nursing Ethical Review Committee have approved this research. If you have any concerns or complaints about this project you may contact any of the above-named persons or the Human Ethics Secretariat at 474-7122 or email margaret_bowman@umanitoba.ca. A copy of this consent form has been given to you for your records and reference.

Participant's signature: _____ Date: _____

If you would like to be sent a summary of the results of this evaluation, please complete the following:

Name: _____

A copy will be placed in your mailbox in the coffee room.

Appendix I

Miscarriage Vignette #1 "I want to understand"

Elizabeth Harper is 21 years old. She presents to your ER triage desk with a 2-day history of vaginal bleeding. She informs you she is 10 weeks pregnant. This is Elizabeth's fifth pregnancy, which was unplanned. Her sister is home taking care of her four children. The department is full and no beds are available for Elizabeth.

On a scale of 1 to 7 with 1 being a very low score and 7 being a very high score, circle the number, which best describes your answer to the following questions.

1.) How willing would you be to communicate how long the wait to be seen in the department to Ms. Harper?

1 2 3 4 5 6 7
Not willing **Very willing**

2.) What priority would Ms. Harper's situation receive compared to the other demands placed upon you at triage?

1 2 3 4 5 6 7
Low **High**

3.) How willing would you be to take the initiative to facilitate movement within the department to find a bed for Ms. Harper to be seen?

1 2 3 4 5 6 7
Not willing **Very willing**

4.) How comfortable would you be talking to Ms. Harper about her experience?

1 2 3 4 5 6 7
Very uncomfortable **Very comfortable**

5.) How necessary is it to convey to Ms. Harper information about what to expect in the emergency department?

1 2 3 4 5 6 7
Not necessary **Very necessary**

Miscarriage Vignette #2 "I want to be understood"

You are receiving report about your patient assignment. Kathleen Smith is 36 years old. She presented to the emergency department earlier today with a sudden onset of heavy vaginal bleeding. This is Kathleen's third pregnancy. Your colleague informs you that Ms. Smith's two previous pregnancies were uneventful. Kathleen had just returned from her obstetrical ultrasound and has been informed that her pregnancy is not viable. The gynecology service has been consulted. You are in charge of her care within the department.

On a scale of 1 to 7 with 1 being a very low score and 7 being a very high score, circle the number, which best describes your answer to the following questions.

1.) How much would you encourage Ms. Smith's significant other to be with her at the bedside?

1 2 3 4 5 6 7
Not much Quite a bit

2.) What priority would Ms. Smith's situation receive compared to the other demands placed up you by the other patients you are taking care of?

1 2 3 4 5 6 7
Not much Quite a bit

3.) Compared to the other patients you are taking care of, how much time will you need to care for Ms. Smith?

1 2 3 4 5 6 7
Much less Much more

4.) How comfortable would you be talking to Ms. Smith about her experience?

1 2 3 4 5 6 7
Very uncomfortable Very comfortable

5.) How much emotional distress do you think Ms. Smith will experience as a result of the miscarriage?

1 2 3 4 5 6 7
Will have little reaction Will react intensely

Miscarriage Vignette #3 "I wanted to be in control"

Susan James is 28 years old. She is 11 weeks pregnant. She and her husband had been trying to become pregnant for four years and have conceived with the help of in-vitro fertilization. She reports a one-day history of vaginal bleeding and intense abdominal cramping. This is Susan's second pregnancy. Her previous pregnancy resulted in a miscarriage at 10 weeks gestation. She has been triaged and is waiting with her husband for a bed in the department.

On a scale of 1 to 7 with 1 being a very low score and 7 being a very high score, circle the number, which best describes your answer to the following questions.

1.) How much of an emotional reaction do you think Ms. James will have in this situation?

1	2	3	4	5	6	7
Not much						**Very much**

2.) How necessary do you think it is for you to keep in contact with Ms. James until she is seen in the department?

1	2	3	4	5	6	7
Not necessary						**Very necessary**

3.) How comfortable are you in addressing Ms. James' partner frequent complaints at the triage desk about the wait to be seen?

1	2	3	4	5	6	7
Not comfortable						**Very comfortable**

4.) What priority would Ms. James' situation receive compared to the other demands placed upon you at triage?

1	2	3	4	5	6	7
Not much						**Quite a bit**

5.) How willing would you be to take the initiative to find a private place for Ms. James and her partner to be while waiting to be seen?

1	2	3	4	5	6	7
Not willing						**Very willing**

Miscarriage Vignette #4 "I want my needs met"

Lisa Clark is 19 years old. She is a first year university student. She has been dating her boyfriend for six months. Her pregnancy was not planned but she reports being happy with the news. She has seen and assessed after presenting with a one-week history of vaginal spotting. You are responsible for her discharge after her ultrasound revealed a complete miscarriage.

On a scale of 1 to 7 with 1 being a very low score and 7 being a very high score, circle the number, which best describes your answer to the following questions.

1.) How do you think this miscarriage will affect Ms. Clark's lifestyle in the next few weeks?

1 2 3 4 5 6 7
Not much Quite a bit

2.) How long do you think it will take Ms. Clark to recover from her experience emotionally?

1 2 3 4 5 6 7
Not long Quite a long time

3.) How much assistance do you think Ms. Clark may need in anticipating what to say to family and friends?

1 2 3 4 5 6 7
Not much Quite a bit

4.) Compared to the other patients you are taking care of, how much time will you need to discharge Ms. Clark?

1 2 3 4 5 6 7
Much less Much more

5.) How necessary do you think it is for you to refer Ms. Clark to a perinatal loss support group?

1 2 3 4 5 6 7
Not necessary Very necessary

Appendix J

Self-Learning Package

For Emergency Department Nurses Caring for Women Experiencing Threatened or Actual Pregnancy Loss

"I wanted the life inside of me to be valued and attended to with the same care and urgency as other life threatening incidences. Not that the outcome would be different but the care and concern would be actively present"

June 2005

Introduction

For most women, pregnancy is considered a joyous event. Unfortunately for some, their pregnancy ends in miscarriage. This learning package has been developed for you to gain a greater understanding about the miscarriage experience. This package offers the background piece to the soon-to-be implemented Early Pregnancy Loss Algorithm by the Winnipeg Regional Health Authority. The package will provide you with rationale for the components of the algorithm, an understanding of the key health needs of women experiencing a miscarriage and to build in a meaningful way on your existing knowledge base. It is hoped that this information will be immediately useful in your nursing practice.

This learning package is divided up into two sections. The first section provides you with concise facts about miscarriage including definitions, incidence, maternal risk factors and causes along with treatment options. The second section is designed to take the findings of the focus group results and provide you with greater understanding of the results supported by the literature on miscarriage. Practical approaches to women who miscarry will be included all in an effort to build upon your existing knowledge base and give you more confidence in providing care to women, their families and supports systems that have been impacted by miscarriage.

Facts about Miscarriage

Definition

Miscarriage or spontaneous abortion is defined as an unintentional termination of pregnancy before the twentieth week of gestation[1].

Incidence

Miscarriage or spontaneous abortion is the most common complication of early pregnancy[2]. Approximately 10% to 20% of clinically recognized pregnancies under twenty week's gestation will undergo abortion; 80% of these occur in the first twelve weeks gestation[3].

Maternal Risk Factors and Causes

Advancing maternal age is the most important risk factor for miscarriage or spontaneous abortion in normal women. Past obstetrical history is an important predictor of subsequent pregnancy outcome. The risk of miscarriage in future pregnancy is approximately 20% after one miscarriage, 28% after two miscarriages, and 43% after three or more miscarriages[4]. The causes of miscarriage are typically classified as genetic, endocrinologic, anatomic, immunologic or microbiologic[5].

Clinical Presentation and Terminology

Women experiencing a potential or actual miscarriage usually present with a history of amenorrhea, vaginal bleeding and lower abdominal pain. The various types of spontaneous abortion manifest as follows:

Threatened Abortion – a closed cervix and the uterine size is appropriate for gestational age [6].

Inevitable Abortion – a dilated cervix, bleeding increasing and painful uterine cramps/contractions are present. The gestational tissue is often felt or seen through the internal os and passage is imminent [6].

Complete Abortion – When a miscarriage occurs before 12 weeks gestation, it is common for the entire contents of the uterus to be expelled. The uterus is small and well contracted with an open cervix, scant vaginal bleeding and only mild-abdominal cramping [6].

Incomplete Abortion - – after 12 weeks of gestation, the membranes often rupture and the fetus is passed but significant amounts of placental tissue may be retained, leading to an incomplete abortion [6].

Missed Abortion - In-utero death of the embryo or fetus prior to the twentieth week of gestation, with the retention of the pregnancy for a prolonged period of time. Also called a blighted ovum, anembryonic pregnancy or embryonic/fetal demise [6].

Ectopic Pregnancy – An embryo implanted outside the endometrial cavity usually within the fallopian tube. Pay special attention to the woman who presents with a history of abdominal pain (most often unilateral), amenorrhea and vaginal bleeding (usually spotting). These are classic symptoms of an ectopic pregnancy. Clinical manifestations typically appear six to eight weeks after the last normal menstrual period. Abnormalities of the fallopian tubes with disruption of the normal tube anatomy from previous infection or surgery, tumors, or malformations present since birth increase the risk of ectopic pregnancy. Additionally, women who have had one ectopic pregnancy have an increased risk for having another. The underlying tubal disorder that led to the first ectopic, and the effects of treating the first episode, both increase the risk for another ectopic pregnancy [7].

Treatment

The accepted treatment of spontaneous abortion has not changed substantially in the last sixty to seventy years. Recent literature supports conservative management of spontaneous abortion. Research suggests that surgery (D&C) is unnecessary for spontaneous abortion less than twelve weeks' gestation[8]. Prostaglandin analogues (such as misoprostol) have been shown to be effective in emptying the uterus in cases of spontaneous abortion[9].

The Emotional Impact of Miscarriage

Even though miscarriages occur frequently to women of childbearing age, the experience is rarely life threatening. The emotional impact of miscarriage is often more of an issue than the physical impact. If you were to review any maternity nursing text you would find comments that speak to the emotional impact of the experience and emphasize the importance of emotional care required in a miscarriage situation. For most women, remembering their miscarriage experience means remembering what happened in the hospital. So inevitably, the way they feel about the

hospital and the hospital staff colours their memories. Many women believe they did not receive adequate information at the time of their miscarriage leaving them disempowered and lacking control over their lives.

"...when you miscarry, you've still got the same anxiety [like women postnatally], you've still got all the same questions in a way, they are just directed differently. And they need answering. They need an answer by somebody that you think is sympathetic to your needs...and have all the knowledge that you are looking for[10]"

Women perceive that health care professionals were only concerned with their physical aspects of their care and did not appreciate what they were experiencing. If women feel that they were well cared for, they have at least some positive memories among their unhappy ones. But women who feel they were poorly cared for can be left with an additional, unnecessary distress. Women are likely to feel that distress every time they think about their experience, and often it clouds their memories and complicate their grieving.

"I was very uncomfortable and I used to cry because I can imagine I have a baby. I can imagine that he's still there. I was very uncomfortable (distraught) but they'd tell me it doesn't matter because I still have another chance to have another baby[17]"

Several studies have focused on the most helpful behaviours in working with families that experience perinatal loss. These include [11];

- Giving information in a straight forward manner that fosters a sense of control over the situation and alleviates many fears
- Providing competent care utilizing expert medical knowledge
- Giving special attention by facilitating a woman's partner or support person to be with her
- Making the patient a priority over other patients

Dissatisfaction with care during or following a miscarriage has been noted within the literature. As many of you are aware, the Winnipeg Regional Health Authority conducted focus groups with families who reported a situation related to the care provided within WRHA Emergency Departments during a potential or actual pregnancy loss. The focus group was designed to identify potential solutions related to the provision of care during the miscarriage experience. Fourteen participants were involved in two focus groups. The focus groups results were organized into four key concepts[12]. These findings are echoed within the body of literature addressing the miscarriage experience;

- I wanted to understand
- I wanted to be understood
- I wanted to be in control
- I wanted my needs met

I Want To Understand

"Don't make excuses for the problems, but do tell me how you will address the concerns[12]"

Open lines of communication are imperative when dealing with a woman experiencing a potential or actual miscarriage. When the first signs of miscarriage occur, the woman may become fearful for the well being of the fetus and herself. She may feel a sense of urgency and a need for emergent medical intervention in hopes of preventing the miscarriage from occurring. Due to the every-changing dynamics of the emergency department, the very nature of the environment may escalate these feelings.

You may be the first person that the woman encounters at the triage desk. It is important to convey a sense of priority to her experience and provide assurance that everything that can be done is being done. Unfortunately, time restraints and competing demands of other emergency department patients can lead to overlooking the needs of a woman experiencing a potential miscarriage. Providing clear direction about what to expect while waiting and her involvement in her care are important to address. Increasing bleeding, more intense and frequent abdominal pains along with feeling weak and dizzy are important indicators to disclose to the woman and re-enforce her need to communicate any changes in her physical status to you. She should understand what her role in this experience is along with the assurance that you are addressing her needs.

I Wanted To Be Understood

"Allow me to have a voice without fear of reprisal when staff treat me insensitively or with disrespect [12]"

The miscarriage experience can be a profound event that is best understood in the context of a woman's personal expectations and life experiences. Common themes are [13-16]:

- Uncertainty and dread in realizing impending loss
- Multiple meanings attributed to the loss
- Feelings of emptiness, guilt, grief and lack of control
- Need for information, recognition and support
- Failure of others, especially health care providers to recognize and validate the experience
- Fear and vulnerability in future childbearing

The Grieving Process

Grief can be an acute, overwhelming sense of loss, resulting in feelings of emptiness and a longing for what has been taken away. It can be a private and lonely experience. Only the grieving person fully understands what they have lost and what this means to them, and it is difficult and sometimes impossible to describe their feelings of loss to others. Even those who are very close to them may not be able to understand or share in their grief.

"It is hard. It's not easy. It's a very, very hard thing to go through. And unless you go through it yourself, you don't realize how hard it is. But it's like, you've got this baby, you know, it's a baby and it's growing there, from the first day you find out about it you sort of love this thing in there. You don't know what it is yet. You know, you love it to death and you just want to protect it. And then you wake up and are losing blood and spotting, it's a nightmare[17]"

" At the time it was just like, I don't want this to be happening, don't let this be happening, and as I say right up to the moment of the scan, even though it was fairly obvious that this was it, there was always that slightly irrational hope and denial of what's going on and um and the horrible sense of loss when you sort of come out there definitely knowing[18]"

- Women identify the nurse as their patient advocate who is instrumental in facilitating a positive experience. Facilitating and supporting a positive experience involves providing sensitive care and support.

- Acknowledgement of the loss and what the experience means to the woman, her family and her support system involved are fundamental. This concept is repeated within the literature countless times. If you are able to do only one thing, acknowledge the loss. It offers value to the experience and to the loss that has occurred.

- Focus on reassuring parents that their expression of grief are encouraged and accepted no matter what the form. You may offer to sit and listen to the woman and her partner and offer support. Take the time just to "be" with the grieving parents.

- You may feel more comfortable providing information about grief and what parents can expect about their own response. Feelings of sadness, anger, guilt, shock and denial are common grief reactions. Be available to answer questions.

- Not everyone will react to the experience like you expect them to, some couples may want privacy, but they should not be ignored or forgotten.

- During this experience, women need to know that their reactions are normal and there are no timetables for grieving. The loss may have multiple meanings for all those involved.

I Wanted To Be In Control

"I need to be part of the care team that is addressing my health issues and concerns. This includes the partnerships and relationships I have with those around me, present or not[12]"

With any potential loss or crisis, the person most involved needs a familiar face to help them make sense of the experience. They offer support, reassurance, and ensure their needs are being addressed. The person chosen in the case of a miscarriage might well be the partner to the woman, but could be a parent, sibling or friend. Support networks come in all different

packages. If possible, ensure the woman's support network is with the woman during their experience. If there is not someone immediately available, facilitate that process if the woman so desires. Perhaps, you will be the only support person available.

I Wanted My Needs Met

"I am able to participate in my care and access the technological and other supports I need to address my care needs in a holistic manner [12]"

The abruptness of loss may increase a woman's risk for psychiatric symptoms and disorders. While no obvious pattern has been identified, some themes are repeated in the literature. Most women experience an intense period of emotional distress following the loss characterized by grief, despair, guilt and anxiety[19]. The actual incidence of depression is unclear because of the failure in most studies to distinguish between symptoms of grief and clinical depression. Symptoms of grief after miscarriage are common, occurring in up to 90% of women[20]. There is increased risk of developing a depressive or anxiety disorder in the six months after loss and any pre-existing psychotic disorders can be precipitated [21]. Depression is more likely in women with a history of depression and in women who have had a previous pregnancy loss or have no other children[22].

Although men can be deeply affected by the loss, there has been little research addressing the impact of miscarriage on the partners of miscarrying women. The focus appears to be either on women's experience or on men only as part of a couple or within a family unit. Despite the limited literature on men's experience after early miscarriage, there appears to be parallels between the experiences described by men to that of women.

Here are some suggestions you may use when preparing a woman for discharge:

- Offer the woman and her partner written material on miscarriage and information about local perinatal bereavement resources. This information is found in the algorithm package. This information helps the woman and her partner realize that they are not alone and that other people have had similar experiences.

- Follow-up care for the woman who has experienced early pregnancy loss is important, therefore, encourage follow-up care with their obstetrical care provider. It will hopefully ensure woman have the necessary follow up and address any potential post miscarriage sequelae related to the loss.

- The hush that surrounds early pregnancy loss is considerable and leads to feelings of isolation among women who miscarry. Although caregivers are well aware of the frequency of early pregnancy loss, laypeople are often not cognizant that many of their acquaintances and even family members have probably experienced miscarriages. Additionally, a woman needs to know that others may not view her experience in the same way. Discuss how well meaning people may use clichés to minimize her feelings.

"People that I thought could be supportive, um, people that you think when they found out what had happened would say, you know, "Gee, I'm really sorry about what happened, you know if you need somebody to talk to let me know," didn't say anything…I thought, "Gee, I'm really feeling in the pits and why haven't you bothered to call."… I know everybody is different. But you know, I guess that when somebody has a loss of life, whether it's a life that they had not seen or bathed or fed or whatever… it's a loss. Whether you don't know the right thing to day, saying I don't know what to say is better than saying nothing.[23]"

Conclusion

Miscarriage is a common occurrence, affecting approximately 10%-20% of all confirmed pregnancies. Symptoms of psychological distress following miscarriage are common and may have long lasting effects. Dissatisfaction with care following miscarriage is noted within the literature and the WRHA Potential & Actual Pregnancy Loss Focus Group. These statements are concerning given that studies have been shown that satisfaction increases and well-being is improved by effective and relatively simple interventions such as providing information and being cared for by supportive and empathetic nurses. The purpose of this package is to provide you with a greater understanding and knowledge base about the miscarriage experience. It is hoped that this information will be immediately useful in your nursing practice.

Reference List

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Appendix K

Evaluation of Self-Learning Package

1. Was the self-learning package useful?

2. What components were most helpful about the self-learning package?

3. What components did you find least helpful about the self-learning package?

4. Did this learning package meet your needs?

5. Are there components of the package would you change or include if you could?

6. After completing this self-learning package, what if anything will you do differently in caring for women experiencing a miscarriage?